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## From the Editorial Desk

The world has been regarded as a global village with education, science, technology and public policies playing vital roles in the quest of several continents in the world striving for human and economic development. Africa is highly involved in global education targeting the improvement in policies on human, material resource and market economy. In this regard, educators, scientists, technology experts and policy makers involved in research are challenged daily to focus on the issues that could equip African learners with the necessary information and skills for survival in this millennium.

The International Journal of Education, Science and Public Policy in Africa (IJESPPA), therefore, introduced a forum for scholars and researchers in the field of Education, Science and Public Policy and other stakeholders in related fields to share information and knowledge on issues of concern to Africa and the global community. Furthermore, IJESPPA provides a forum for examining all local, national, regional and continental educational issues, policies, innovations, practices and challenges, experiments, and research in the field of science, technology, politics, governance, and public policy in Africa. Its primary audience includes international scholars, researchers, scientists, teachers, educators, administrators, stakeholders, and African governments.

IJESPPA, therefore, urges you to join her in the quest for sharing information, knowledge, and research outcomes in education, science, technology and public policy concerning Africa for the literate community across the globe. This maiden edition contains research articles, reports and position papers from different contributors in Africa, USA, Middle East/Asia, etc. These articles are qualitative, quantitative and mixed research - critical reviews, surveys, opinions, commentaries, position papers and essays, dedicated to your knowledge and reading/research delight.

Enjoy it!

Dr. Williams Emeka Obiozor  
Editor-in-Chief

# **Towards Free and Compulsory Education: Overcoming Barriers to Inclusion of Children with Diverse Learning Needs in Schools.**

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## **Introduction**

The recent times have witnessed dramatic increases in the general school enrolment right from early childhood to higher education across the world. The reasons for the increase in school enrolment in most developing countries include; the adoption of policy on free and compulsory education, investment in education of children as a source of national development, acceptance of education of children by families as an investment for the future. Education has also been recognized and acknowledged by various national and international organizations as a human right issue. The right of children were also raised at the world conference on Education for All (1990) held in Jomtein. Subsequent to the Declaration of Education for All, many developing countries honored this statement of declaration and tried to enhance access to education for typically developing children.

## **Evidence and Reason for the Increase in the Number of Children with Diverse Learning Needs in Schools:**

There seems to be noticeable evidence of increase in the number of children with diverse learning needs in schools. This may also account for the increase in the rate of failures in public examinations in many developing countries. However, the increase in the general enrolment of children in public schools come with it increase in the number of children with diverse learning needs. Other factors which could account for the increase of number of children special needs in schools include:

- (a) Frequent reforming and restructuring of educational system which results to over enrichment of the curriculum which children are unable to cope with.
- (b) Reduction of time for core subjects in order to accommodate subjects such as music, arts, drama, dancing, languages, etc.
- (c) Teachers have become burnt out with overload of school work due to extra responsibilities resulting to low morale, lack of motivation and dedication to teach effectively.
- (d) Large and overcrowded classes; an average class ranges from 25 to 45 pupils and some times more.
- (e) Poor administration and management of schools; many schools are headed by teachers who lack the relevant experience to support diverse needs in schools.
- (f) Lack of qualified teachers; many teachers lack training on how to identify children with special needs in the classroom.
- (g) Lack of adequate and relevant teaching and learning materials.

### **Categories of Children with Diverse Learning Needs in Schools:**

The diversity of children with special needs in schools also calls for the diversifications of efforts by the various governments in making relevant provisions in schools. The categories of children with diverse learning needs often seen in schools, include, but not all: visual impairment, hearing impairment, intellectually challenged, learning disabilities, behaviour problems physical and health impairment, speech difficulties, gifted and talented, street children, abused children, children with HIV/AIDS, children from poor homes (poverty). The presence of various children with diverse learning needs requires the government to take varieties of actions to meet their educational needs.

### **Plan of Action to Deal with Increased Number of Children with Special Needs in Schools:**

The various governments usually adopt a number of orthodox approaches in dealing with the educational and social needs of children with diverse learning needs in schools. In the past, the educational and social needs of children with diverse learning needs were provided by Non-Governmental Organizations. These needs were met and based on “Special School” or “Segregation” approach and later on “integration”

### **Special School Approach**

In the 1960s and earlier periods of special education, special schooling system was considered unique and successful because of the following benefits; low teacher ratio, specially trained teachers, individualized instruction in a homogeneous classroom and increased curricular emphasis on social and vocational goals (Kaval and Forness, 2000). Special school system is where children with diverse learning needs are educated separately in schools specially designed and equipped with special resources and teachers. However, the benefits notwithstanding, the special schooling system fails to meet the human right obligations.

### **Integration Approach**

The integration system followed the special school set up; although the special school system still exists in both the developed and developing countries. The integration approach focuses on the integration of children with special needs in regular schools. The concept of integration is referred to in a number of places, including, Britain as mainstream. The main aim of mainstream was to place children with or without special needs into regular schools for the purpose of social integration (Ballard, 1999; Pijl, 1997). Abosi (2007) defines integration as educating children with special needs in regular schools based on the individual needs of the children and available resources. He further explains that integration contains options such as total integration which is like the current inclusive system, unit system, and resource room system. Abosi maintains that some children could benefit from the total integration, while others will be better served in the unit or resource room system within the regular school.

Foreman (2005) refers to integration as placement, attendance, and participation of students with special needs in regular school system. Deno (1970) had proposed “cascade model” which was later called “*Continuum of Service Delivery*”(Hallahan and Kuffman, 2006). The concept of Continuum highlighted the concept of “Least Restrictive Environment” (LRE). The LRE concept is a flexible idea which lays emphasis on the needs of individual child. This means that the learners with mild special needs conditions could be placed in regular schools and on the other extreme situation, children



with severe conditions could be placed in custodial care with institutional supervision. The concept of *Least Restrictive Environment* has brought some structural changes in special education service delivery and concept of “Resource Room” or “Pull Out”.

*Resource Room System:* The Resource Rooms are generally known as “intense remedial education” provided by the special education teacher to learners with special needs whose primary placement is in the general education classroom. Children with diverse learning needs are fully placed in the regular classrooms but get extra support in the resource rooms.

*Unit or Partial Mainstreaming System:* The unit system is a concept which has been adopted by many countries based on the limited resources and individual child’s needs. It is considered useful and effective for children with severe special needs, such as hearing impairment, intellectually challenged, autism and Down syndrome. In this approach, separate specialized units are established in the regular schools where learners with these specific problems are trained by special educators. Children with diverse learning needs in these units receive the same curriculum and write the same test but with minor adaptations. In recent times, the suggestions have been made that children in these units be allowed to progress at their own rate rather than laying importance to the age of the children.

In the last few decades, the view of educational provisions for children with diverse learning needs has changed considerably. Instead of segregating children with special needs in special classes, and schools, they are now being educated in the ordinary classrooms in a system called “Inclusive Education” The emergence of inclusive education is influenced by the underlying philosophies on human rights, social justice and equality of opportunities. The concept of inclusive education is based on the principle that all children regardless of ability or disability have a basic right to be educated alongside their peers in their local schools (UNESCO, 1994). Inclusive education is a recent Western concept which started in the 1980s and generally became adopted by the globe.

It has been projected that over 80% of people with special needs live in the developing countries. UNESCO (1994) maintains that nearly 150 millions of the persons with special needs in developing world are children. It went on to state that only 2% of these children are receiving special needs support. The need, therefore, to find a way of providing support for these children cannot be over stressed. Peter (2004) perceives inclusive education to be the best mode of enhancing access to such large number of learners with special needs in the developing countries. Abosi (2008), Charema (2007) observed that policy makers in many developing countries have adopted the concept of inclusive education but have continued to struggle with the implementation of the practice. The implementation of inclusive education involves an extra ordinary commitment of the school and the community; a supportive and conducive environment that emphasize the acceptance of diversity, and promotion of the belief that all children are important for the success of general education.

### **The Concept of Inclusive Education:**

The concept of inclusive education has been perceived differently by different professionals. This perhaps accounts for the discrepancy in the kind of provisions that are being made by different governments/agencies or why some governments adopt the concept without proper planning. The consensus opinion of the meaning or definition of inclusive education is based on the idea of “where all children are educated together without discrimination” (Abosi & Koay, 2008). Culham and Nind (2003) highlighted that it is “not just people with disability, it compasses gender, ethnicity, poverty, sexuality” This means that inclusive education is all inclusive. However, Mitchell (2005) has tried to

summarize the meaning of inclusive education when he stated that “Although there is no universally accepted definition of inclusive education, there is growing international consensus as to the principal features of its multi-dimensional concept with regard to students with disabilities, these include the following; full membership in regular, age appropriate classes in their neighborhood school: access to appropriate aids, and support services, individualized programmes, with appropriate differentiated curriculum and assessment practices. Skidmore (2004) described inclusive education as a process whereby instructional accommodation, teaching practices and curriculum activities are geared towards building the capacity to accept all learners into the regular school system contexts. These views reflect the fact that inclusive education is more than mere placement of a child with special needs in the regular classrooms. In addition to curriculum activities, it involves attitudes, values and beliefs of the stakeholders and the extent beyond schools and community.

### **Caution in Adoption of Inclusive Education:**

The UNESCO (1994) Salamanca World Conference on Special Education marked the turning point; the Salamanca Statements on Principles, Policies and Practice in Special Needs Education were formulated. The conference paved the way to inclusive education as a solution to address the issues of lack of equity and participation in education for children with special needs. UNESCO (1994) further maintains that schools with inclusive orientation are most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving Education for All, providing an effective and conducive education to majority of children and improve the efficacy and ultimately the cost-effectiveness of the entire education system. These assumptions have been backed up by a number of studies showing that children who attended inclusive education settings improved or did better in the following areas: better literacy skills and academic performance (Ryndak, Morrison & Sommerstein 1999); the opportunities for learners to interact with peers with disabilities tend to improve self-esteem, social skills, positive affective and behavioural outcomes (Alper & Ryndak, 1992; Hunt, Alwell, Farron-Davis & Goetz 1996; Lee & Odom, 1996); inclusive education gives learners without disabilities the opportunity to learn many new skills, values, and attitudes related to human differences (Farrell 2000); the children without disabilities learn to tolerate human diversity (Katz & Miranda, 2000).

The opponents of researches in inclusive education have cautioned that these investigations should not be taken at its face value. They observed that there are some limitations in this line of research and stressed that most of the methodologies are flawed (Hallahan & Kauffman 2006). Other opponents of inclusion (Fuchs & Fuchs, 1994; Kauffman, 1993) argued that the needs of all children could not be met in the regular classrooms particularly in a full inclusion model. They outlined the following points to support their arguments:

- General education is not prepared for inclusion and therefore full inclusive education cannot be accomplished due to its inherent complexities.
- Empirical evidence has not sufficiently validated the effectiveness of inclusion
- Students with disabilities need more intensive interventions than can be provided in general education classrooms
- School wide inclusive education attitudes, adaptations, and accommodations for students with disabilities must be in place and highly supported by teachers and administrator before an inclusion model has a strong chance of success.

Abosi (2001), Engelbrecht (1999) maintain that the conceptual understandings of inclusive education focus much more than just the physical placement of learners with difficulties in the mainstream classrooms. It aims to achieve “Education for All” and promote diversity, participation, equity, and democracy. These observations call for deeper reflection and a look at the fundamental barriers to effective inclusive education.

**Barriers to Inclusive Education:** A number of factors have been identified as being responsible for the slow progress in the implementation of the policy of inclusive education system in many countries of the world especially in the developing world. These include:

*Ineffective Policies and lack of Legislations:* Many developing countries have developed and adopted policies, which strongly support education of children with diverse learning needs without considering the implications in terms of the needed provisions. There is also a conflict between socially desired intentions and the implementation of those intentions due to value placement on special needs education. For example, while the various government attitudes towards the education of children with diverse learning needs are enlightened, favorable and worthy of commendation, in reality, these laudable attitudes are hardly seen in the implementation of Special Education. Some of these conflicts are quite clear when it comes to budgetary allocation.

The allocation to Special Education is usually insignificant and does not reflect the expectation of the various National Policies on Special Education, which guarantee equal educational opportunities for all citizens. The following questions or issues should be addressed in the national policies on special education/ inclusive education;

1. Is the meaning and implication of inclusive education well understood?
2. Has provision been made for inclusive education in schools?
3. Are schools equipped with resource teachers?
4. Are children with special needs adequately assessed before being admitted into ordinary schools?
5. Do enough positive attitudes to accommodate children with special needs exist in ordinary schools?
6. Do enough financial resources to support effective inclusive education exist?
7. Are there avenues for experts to meet and discuss issues involved in inclusive education?
8. Are there plans in place to train teachers locally in the relevant areas of specialization based on the needs of the country?

*Large class size:* The issue of class size has become a matter of concern in developing countries. A typical class size in an average public schools could range from 25 to 40 pupils/students or even more usually made up of mixed ability children, e.g. below average, average, and above average children. This situation makes it difficult for children with diverse learning needs to be included or even receive the needed extra help. Many teachers in the school system have not received relevant training on how to identify children with learning problems and, hence, unable to give remedial assistance to children with diverse learning needs based on individualized educational programme. Despite this situation, no consideration is given at the end of the school year in determining how children progress from one class/standard to another. In many countries it is based on mass movement of children from one class to another.

*Lack of relevant and effective teachers:* The situation in schools today does not encourage effective teaching because teachers are not well paid, teaching resources are hardly available, and the classes are overcrowded. The children are hardly given individualized attention in order to deal with their specific problems. Most teachers in schools lack the basic knowledge of how to identify children with special needs in the classrooms. Specialist teachers are also in short supply as to go around to all the schools.

*Inadequate or lack of teacher training facilities:* The need for the development of training facilities in developing countries for teachers of children with special educational needs cannot be over-stressed. Teacher training programs in most developing countries for special educators have not been given proper attention and this has caused acute shortage of special educators and trained ancillary staff. Provisions for training for ancillary staff such as mobility instructors, speech therapists, ear mould technicians, school audiologists, physiotherapists and maintenance technicians have not been considered important at all. Many countries have relied on sending their teachers to Western countries for training. The limitation of such training is that in most cases it is not relevant to the local needs such as teaching materials, the curriculum does not reflect the cultural values and belief practices, it is expensive to train teachers overseas and in most cases there are limited spaces for qualified candidates.

*Limited Fund:* Special Education is expensive to run and yet it is part of general education. Its budgetary allocation is derived from whatever is given to general education. Special Education, therefore, survives on the kindness and understanding and the good will of whoever is in-charge of the relevant ministry at a particular time. In most cases, it is the leftover funds that are given to Special Education despite the high cost of its maintenance

*Attitudes of teachers due to traditional values, and beliefs:* The way a given community perceives people with diverse needs would affect the kind of provision that such community is likely to make for an inclusive education programme. In the developing countries, people in general are influenced by their beliefs, values and culture. An average person sees disabilities as a punishment for what one has done wrong. This accounts for why the children with special needs are sometimes hidden in some places. Mba (1987) observed that among the factors contributing to the general apathy and neglect of children with special needs in Africa are superstitions that regard disability as a curse from the gods. The situation in most other parts of developing countries is not different. In most developing countries, the child is his/.her parents' ego and therefore will regard disability as a stain in their social status. The teacher is part of his/her culture and therefore his/her traditional values and beliefs are likely to affect his/her attitude towards children with diverse learning needs in the classroom. Barnartt and Kabzems (1992) had asked 200 teachers whether children with range of disabilities should be in regular classroom and if they would teach in that class. Most teachers who were willing to accept the children with disabilities in their classes said that they would ignore them and go on with their teaching. Alur (2001) found that in India, families saw having a disabled as a question of "My karma, a result of past deeds, an individual responsibilities. "It's my fate and I have to bear it" and "it is my fault." The Indian community's flawed negative attitudes reflect on their feelings that "someday God will forgive them and their child will be normal again." The Indian society and the State had no role to play and never saw it as anyone else's responsibilities. Even at policy making level in India, disability was not seen as something normal or natural. It was seen as an "evil eye" Guilt, Stigma, and fear dominated the family. (Alur 2001) This is also a typical situation in Africa and other developing countries.

*Lack of statistics of the number of children with special needs:* It is reasonable that for a service to be provided to a given population, the number of the beneficiaries should be known. This implies that

resources are planned based on the actual and potential statistics. To get at this statistics, instruments of identification must be developed. One major problem facing education of children with special needs in developing countries is lack of statistics on the number of children with diverse learning needs. The exact number of children with special needs in most developing countries is unknown. Figures given by researchers in various countries are usually based on estimate using the UN formula. The United Nations maintains that where there is no definite figure of children with disabilities, the 10% figure of school-age children should be used as estimate. This kind of approach does not make for appropriate planning in terms of the required classes, teachers, teaching and learning materials or even in budgetary allocations.

*Lack of collaboration and consultations among experts:* The lack of collaboration and consultations among experts in special education is a major barrier in the development of an effective inclusive education. In some countries, personality clash and conflicts have resulted in delays in making relevant provisions for children with diverse learning needs. In some cases the schools and children are deprived of resources even when such resources are available and within reach. Consultants are sought from outside instead of looking inwards within the country. There is always a problem using consultants from outside because they leave as soon as they are done resulting to lack of follow ups and implementation of policies.

*Inflexible curricula:* School curriculum is pre designed and determined even for children with diverse learning needs. Children with diverse learning needs are to follow the normal curriculum without adequate modifications or consideration given to diverse needs. Children are sometimes admitted into schools based on age and competency. Assessment for academic progression is strict and based on high performance in public common examinations. Any adjustment is regarded as lowering the standard of education.

### **Overcoming the Barriers of Inclusive Education**

There is no doubt that based on the outcome of the UNESCO Salamanca Conference of 1994; the concept of inclusive education took a strong root in the educational system of all nations. The main aim of inclusive education was to restructure schools in order to respond to the learning needs of all children. Mittler (2000) has pointed out that the problem in learning does not necessarily originate from deficit within the child; it can arise from the social, psychological, economic, linguistic and cultural consequences. Hence, it is important to remove all the barriers which hinder the process of learning. The following steps, therefore, can encourage effective inclusive education:

*Effective policies and legislations:* The first task expected of any government toward children with special needs is a mapped plan which should reflect on the national policy on special needs education. Government preoccupation should be to work out a detailed scheme for attaining the objective of education for ALL children including children with special needs. This attitude embodies a systematic arrangement of the requirements for efficient education for children with diverse learning needs.

The second task to be accomplished by of the various governments is the unquestionable acceptance of the education of children with special needs as a legal obligation; this entails that the governments should take a more concrete step towards implementing the outlined commitment in their policies on education of children with special needs backed up by law. This includes unconditional commitment to equalizing educational opportunities for all children irrespective of their physical condition. However, the general requirements for effective inclusive education should include

identification of children with special needs, enabling programs and services, resources, funds, legislation, public education etc. The demands of each requirement should be properly understood, articulated into a system and used as a master plan in the education of children with special needs.

*Flexible Curriculum:* Education of children with diverse learning needs should aim at assisting the children to acquire survival skills. This means that any curriculum that is designed for the participation of children with diverse learning needs must be flexible and vocational oriented. Children with gifts and talents are to be encouraged to pursue education in line with their abilities while children whose special needs pose difficulties for excellent academic achievement should be encouraged to pursue a vocation of interest and ability. In an inclusive system, the curriculum should include such skill training in carpentry, sewing, telephone operating, computers, art work, home economics, music, the “normal” children will also benefit from such a curriculum.

*Positive Attitude and Attitude Change among teachers:* An ideal inclusive education must begin with ensuring that a positive atmosphere exists within the school. The school head, teachers and peers should all have right attitude; that they are welcoming and ready to make the necessary adjustment in order to accommodate children with special needs. The school must have been designed and re-designed to make allowance for the specific needs and the right personnel such as relevant resource teachers in place and the needed learning materials provided. The school community must be made to understand that diverse needs are not caused by any wrong that an individual committed in the past rather by medical and other physiological conditions existing before or during birth. The good news though is that attitudes are changeable. It should be noted that most of these attitudes are devoid of ill will and are expressed with a great deal of sympathy. People pick up these attitudes during the process of growing up without any conscious intention to perpetuate them. They become more organized in one's mind. Today, new information based on scientific knowledge of causes of impairments and the effect of impairments could alter already held attitudes.

New information can be boosted through propaganda in selected information, in the area of informal knowledge about diversities and their causes. It has also been observed that information-giving techniques improve expressed adult attitudes towards the people with diverse needs. This can be achieved through lectures, symposia, seminars, teach yourself leaflets and through persuasive appeals organized in a structured manner, radio and television programming.

*Appropriate Teacher Training Programmes:* The various governments should appreciate the need to train their own teachers locally based on the needs of the country. Training teachers locally is cheaper and takes into consideration the traditional values and beliefs and the uniqueness in adaptations of teaching and learning materials. For a long time, there has been difference of opinion on the type of education and training special educators should receive in terms of content. Any teacher who wishes to work with children with special needs should receive appropriate training in order to acquire the relevant skills. These skills can be divided into two. The generic special education content which equips a teacher with the skills of identification, general assessment of children, development of general teaching and learning materials, psychology of exceptionality, current issues in special needs education etc.; the second part is specializing in one's area of interest. This helps the individual teacher to have deeper knowledge of a specific need in terms pedagogy. This is very important and the choice of area of specialization should be based on the individual teacher's interest and the need of the country. Teachers are being constantly encouraged to specialize in more than one area of special needs.

*Funding Inclusive Education:* Special education must be budgeted and funded separately by various

governments. Some governments have in the past left the education and welfare of children with diverse learning needs in the hands of Non-Governmental Organisations (NGOs). This is not recommended. The NGOs can be helpful and supportive but should not be made to bear the financial burden of providing inclusive education. The NGOs should step-up their fund raising drive in order to support special education programmes such as training teachers in inclusive education. It is in the hands of various governments to decide which way special education takes in their country. Special Needs Education in general and Inclusive Education in particular are expensive.

*The need for Statistics of Children with Diverse Learning Needs:* The various governments should make fund available to relevant organizations, institutions and bodies to carry out census and research; specifically, to determine the exact number of children with diverse learning needs in category, education, gender, employment, and spread. This will help the government in planning and other logistics for the educational and social welfare of the children requiring special support.

*Collaboration and Consultations among Experts:* The need for collaboration in the management of special needs education is very important. The policy makers should work closely with academic staff in the universities, teachers in the field, the NGOs, parents, the children, other relevant professionals such as psychologists, health workers, and social workers. This will encourage collective responsibilities that will lead to the efficiency in the development of inclusive education in various countries. The ministry of education is expected to lead in the coordination of such effort.

### **Lesson from Practices of inclusive education in developed countries:**

There are always lessons to be learned by policy makers in developing countries from developed nations such as United States of America and Britain in terms of effective inclusive education programs; America in particular because the concept of inclusive education is said to originate from there. In the mid 1970s, most children with special needs were attending special schools or segregated system In United States of America. The United States congress passed the Education for All Handicapped Children Act 1975. In 1991 the Act was renamed as the Individual with Disability Education Act. This Law required American States to provide free appropriate public education for students with disabilities in the least restrictive environment. Many terms have been used to describe the practice of special needs education in America ranging from “special schooling” “mainstreaming” “the general education initiative” and now “inclusive education” The admission of children with special needs into the public schools have been growing rapidly and has reached almost 95% (US Department of Education, 2001). Kavale & Forness (2000) point out that although students with disabilities are having more success to general education classes, reports concerning the outcome and the effectiveness on inclusive practices have been vague. They also observed that special school system has continued to exist in America.

The situation in Britain is not very different from the American experience. The Special Needs and Discrimination Act (2001) and the Disability Discrimination Act (2001) further reinforced the agenda of British government for inclusion of children with special needs within the mainstream of education. At the same time “The Revised Code of Practice on the Identification and Assessment of Special Educational Needs” (DFES, 2000) was developed so as to preserve the sentiment of inclusive education. Although these policies promoted the idea of inclusive education for the majority of learners, it equally recognized that the education of some exceptional cases may not be possible in the mainstream classrooms; such children need to be educated outside the mainstream environment (Lloyd,

2008). These two situations have deliberately been reviewed here for the official from developing countries to revisit their policies of total integration. There are children whose special needs cannot be met in the inclusive setting based on the current resources available in schools.

## Conclusion

Special Needs Education is full of complexities in the planning and implementation. The design and adoption of any policy on inclusion of children with special needs into the mainstream must be done with care and serious planning. To effect a successful inclusive education in schools system, the conditions must be seen to be in place; such as committed head teacher, specialist/resource teacher, informed general education teacher, and well informed students, relevant teaching and learning material, cooperative and collaborative policy makers.

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# **Policies, Practices and Challenges of Integrating Information Technology in Teacher Education in Africa: The Case of Nigeria**

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## **Abstract**

*Many factors affect the use and successful integration of IT in the educational sector in Nigeria. One of such factors is government policies and support and their effective linkages to education. This paper examines policies, practices, and challenges of integrating IT infrastructures in teacher education in African nations, with Nigeria as example. The underlying premise is that effective IT policy and infrastructure that are linked to education are needed to lay necessary solid foundation for effective use and integration of IT at all levels of education in order for the country to achieve meaningful economic development.*

## **Introduction**

In a rapidly changing global market with increasing competition and democratization, basic knowledge and skills in Information Technology (IT) are absolutely necessary for accessing and effectively applying modern technologies to real-life challenges. It is obvious that IT has become pervasive and indispensable in the contemporary world. Because of this indispensability and the potentials of IT in bringing about educational, economic, social, and political changes several African governments met in Senegal in 2002 and adopted a continental program to accelerate the pace of information and communication technology development throughout the continent (Ofori-Attah, 2004; Parks, 2004). The meeting resulted in the creation of the New Partnership for Africa's Development (NEPAD) charged with the responsibility of ensuring that this becomes a reality for all countries in Africa (Okpaku, 2003). Today, all 54 countries in Africa have access to the Internet (Ololube, 2006) compared to as little as three that had it in 1995 (Economic Commission for Africa, 2003).

Individually, some countries such as Egypt, South Africa, Nigeria, Kenya, Libya, Ghana, Gabon, Algeria, and others made varying degrees of progress in developing and sustaining the use of IT in various spheres, including education (Ofori-Attah, 2004; Ololube, 2006). Some schools in the urban areas of these countries use technology tools such as the Internet for teaching and learning (Jensen, 2003). For example, several schools in Benin, Burkina Faso, Cameroon, Chad, Gambia, Ghana, Kenya, Mali, Namibia, Nigeria, Senegal, South Africa, and Uganda participate in a global Internet-based project aimed at improving mathematics and science education across the globe, raising environmental awareness, and contributing to a worldwide scientific database about the Earth (Haddad & Jurich, 2002). Although the use of technology in teacher education, elementary, and high schools is still at low levels in these Africa nations, reports from the schools that are using technology in teaching and learning make the case for a full-scale integration into all educational systems and at all levels of education on the continent (Ofori-Attah, 2004; Ololube, 2006; SchoolNet Africa, 2004). While multiple factors impact teacher education and development in Africa, this paper examines policies, practices, and challenges of integrating IT infrastructures in teacher education in African nations, with Nigeria as example. The underlying premise is that effective IT policy and infrastructure are linked to education

are needed to lay necessary solid foundation for effective use and integration of IT at all levels of education in order for the country to achieve meaningful economic development. This in turn will also help provide much needed manpower for public and private agencies to address economic, social, technological, and human resources development needs of the nation in ways that position Nigeria to be educationally and economically competitive in the global arenas.

Information Technology has changed education globally as well as how we see the world and how we live in it. However, this change is not widespread and needs to be strengthened to reach a larger percentage of the population, especially in African nations such as Nigeria. Improving the quality of education through diversification of contents and methods and promoting experimentation, innovation, diffusion, and sharing of information and best practices will be almost impossible without adequate and proper integration of IT. Many factors affect the use and successful integration of IT in the educational sector in Nigeria. One of such factors is government policies and support (Beebe, 2004; Mac-Ikemenjima, 2005). The result is severe lack of adequate IT infrastructure available in universities, colleges of education, and secondary and primary schools. This, in turn, causes very poor access to IT-related instructional materials and resources for teacher preparation programs, teachers and students. Yusuf's (2005a) study which investigated teachers' self-efficacy in implementing computer education in Nigerian secondary schools found that (a) most teachers in Federal Government Colleges in Nigeria do not have the needed experience and competence in the use of computers either for educational or industrial purposes, (b) a majority of male and female teachers in Federal Government Colleges do not have needed competences in basic computer operations, and (c) most of the teachers in Federal Government Colleges do not have needed skills and knowledge in the use of common computer software. These are due to the teachers' lack of exposure to knowledge and skills in IT during training.

Similarly, some government officials in Nigeria have indicated that it is worried by persistent low access to cutting-edge IT resources among Nigerian students at all levels (tertiary, secondary and primary). For example, a Minister of State in the Information and Communications Ministry, Mr. Ikra Bilbis, recently stated that the government has realized the importance of Internet Services in its tertiary institutions as well as the role IT will play in the government's effort to develop and improve infrastructure (Gusau, 2009). While commissioning an "Internet Viewing Center" built in collaboration with the Universal Service Provision Fund (USPF), the minister stated that the Nigerian government has resolved to establish free universal Internet services and viewing centers across tertiary institutions in the country. The government, having realized the importance of making Internet services available to students, built viewing centers with the aim of "putting information at the finger tips of Nigerian students and their school communities in order to equip them to meet global challenges" (Gusau, 2009, p. 1). According to the minister, "Viewing Centers" are being constructed by the government in all the six geo-political zones of the country. The government has realized that for its citizens to leverage on existing and emerging information technologies for personal, group or national development (educationally, economically, socially, politically, and technologically), the government must provide IT facilities in all tertiary institutions as well as in secondary and primary schools throughout the country. The first and most important step in accomplishing this goal is the development of effective and enabling IT policies for the country and for the different levels of education (tertiary, secondary & primary). This may require reviewing and updating existing IT policies that have outlived their usefulness and replacing them with relevant and effective ones.

## **Nigerian Teacher Education Program**

Teacher education is the process of training that deals with the art of acquiring professional competencies and growth for teachers at the primary through secondary levels of education. It is an essential exercise that enhances the skills of teaching and learning in and outside the classroom. Teacher education is designed to produce highly motivated, sensitive, conscientious and successful classroom teachers who will effectively and professionally help students perform at their optimum levels as well as become life-long learners (Ololube, 2005). As in most nations, including the United States of America, Britain, and others, the need for well qualified teachers has become pre-eminent than ever before (Osunde & Omoruyi, 2004). There is even more urgent need for teachers who are knowledgeable and skilled in using and integrating IT in their professional practices in ways that significantly improve teacher and student performances. The inability of teachers to demonstrate adequate and meaningful knowledge and skills in the use and integration of IT in schools is as a result of inadequate preparation in teacher training in universities, colleges of education (including technical), and/or institute(s). Teacher education programs in Nigeria are under the supervision and control of the governments and designated agencies.

For example, the National Commission for Colleges of Education (NCCE) has responsibility for teacher education in colleges of education. Of more than 61 colleges of education, about 30% are controlled and funded by the federal government, about 55% by state governments, and about 15% by private agencies (JAMB, 2007). The National Commission for Colleges of Education was created in 1990 to establish minimum standards for all programs of teacher education in colleges of education and accredit their certificates and other academic awards after obtaining the prior approval of the minister of education. The commission is also given the responsibility to approve guidelines and set criteria for accreditation of all colleges of education. Universities are under the National Universities Commission (NUC) and the polytechnics and technical teacher colleges are under the National Board for Technical Education (NBTE). Nine of these polytechnics run National Certificate of Education (NCE) programs (JAMB, 2007; Mac-Ikemenjima, 2005). There are three categories of pre-service teacher training institutions in Nigeria: (a) the National Teachers Institute (NTI), the colleges of education, and the universities.

The National Teachers Institute (NTI) was established to provide refresher and upgrading courses for teaching personnel; organize workshops, seminars and conferences; and formulate policies and initiate programs that would lead to the improvement in the quality and content of education in the country. In pursuit of these responsibilities, the institute has initiated training and training programs for helping unqualified primary school teachers become trained and certified, as well as provides refresher courses in teacher training colleges. Recently, the institute embarked on the National Certificate in Education (NCE) program through a Distance Learning System (DLS). The institute also provides training for the Pivotal Teachers Training Program (PTTP) through distance learning. The PTTP was introduced in 2002 as a means of producing teachers to fill the gap in teacher supply for the newly introduced Universal Basic Education (UNBE) program by the Federal Government (Osunde & Omoruyi, 2004).

Colleges of education offer post-secondary National Certificate in Education training programs. The NCE is also the qualification required for teaching in junior secondary schools and technical colleges. Colleges of Education used to train teachers for junior and senior secondary schools, but now they also train primary school teachers. The NCE became the minimum qualification for

primary school teaching in 1998. Some of the colleges also offer NCE pre-primary courses in order to produce teachers for the pre-primary level of education. Universities in Nigeria offer the Bachelor of Education degree programs to both senior secondary school graduates and senior secondary school teachers who already have NCE qualifications. They also offer Master's and Doctorate degree programs to teachers and other school personnel who already hold bachelors and masters degree, respectively.

The requirements for admission to teacher training differ from one category to the other in terms of academic qualifications. For admission into Colleges of Education, prospective candidates must have at least three credits in the senior secondary school exit exam and two other passes. At the university level, the entry requirement is five credits which must include the major teaching subjects. Prospective colleges of education and polytechnic students are required to sit for and pass the Polytechnic/College of Education Matriculation Examination, while prospective university students are required to pass the Joint Admission and Matriculation Board Examination (JAMB, 2007; Mac-lkemenjima, 2005).

### **Educational Importance of IT**

The ability to access and effectively utilize information is no longer a luxury but a necessity for educational, social, political, and economic development (Economic Commission for Africa, 2003). Culp, Honey and Mandinach (2003) stated three major reasons for information technology in education: (a) it is usually a tool for addressing challenges in teaching and learning, (b) it acts as a change agent, and (c) it is a central force in economic competitiveness. Capper's (2003) research on the integration of technology in curriculum suggests that the use of technology improves students' attitudes and confidence and is especially beneficial for "at risk" students, provides instructional opportunities otherwise not available, increases student collaboration on projects, significantly improves students' problem-solving skills, increases the preparation of students for most careers and vocations, and tends to shift teaching styles from traditional direct approaches to a more student-oriented approach. Similarly, Norton and Sprague (2001) noted that integrating technology into the curriculum makes students active, constructive, collaborative, intentional, conversational, and reflective in the learning process. They argued further that technology can contextualize learning and promote the learning of tasks in case- or problem-based learning environments.

A tool for addressing challenges in teaching and learning, technology has capabilities for delivery, management, and support of effective teaching and learning; it is equally good for geographically dispersed audiences; it helps students to collect and make sense of complex data; it supports diverse and process-oriented forms of writing and communication; and it broadens the scope and timeliness of information resources available in the classroom (Yusuf, 2005a, 2005b). As a change agent, it reinforces various other changes in the content, methods, and overall quality of teaching and learning, thereby ensuring constructivist inquiry-oriented classrooms. As a central force in economic competitiveness, it creates economic and social shifts that have made technology skills critical to future employment of today's students (Yusuf, 2005b). It has also brought about rapid social, political, and significant economic transformations (Ololube, 2006; Yusuf, 2005a, 2005b). It enhances teaching and learning through dynamic, interactive, and engaging content and it can provide real opportunities for individualized instruction (Newhouse, 2002a). It has the potential to accelerate, enrich, and deepen skills; motivate and engage students in learning; help relate school experiences to work practices; help create economic viability for tomorrow's workers; contribute to radical changes in school; strengthen

teaching; and provide opportunities for connection between school and the real-world (Davis, 2003; Lemke & Coughlin, 1998). Information Technology makes schools more efficient and productive, thereby engendering a variety of tools to enhance and facilitate teachers' professional activities; provides opportunities for schools to collaborate and communicate more efficiently and effectively with one another as well as have easier access to more extensive and current information; and provides researchers with a steady avenue for the dissemination of research reports and findings (Kirschner & Woperies, 2003; Yusuf & Onasanya, 2004). No matter how isolated or poor, a child with connection to the Internet and the World Wide Web can have access to the great museums and libraries of the world. Perhaps, more than any other statement, this point sums up the case for developing and/or redefining IT policies in African nations to improve its integration in schools and school systems throughout the continent.

### **National Policy on Information Technology**

Like most African countries, Nigeria arrived late in the IT world and is slowly beginning to embrace its integration as is the case in more developed countries. The seeming backwardness of the African continent in IT necessitated a continent-wide initiative, the African Information Society Initiative (AISI), which had its origin in the African Regional Symposium on Telematic for Development, held in Addis Ababa in April, 1995. The symposium organized by the Economic Commission for Africa (ECA), the International Telecommunication Union (ITU), UNESCO, the International Development Research Centre (IDRO), and Bellanet International, urged the ECA Conference of Ministers to consider the importance for Africa of the global information revolution (Ajayi, 2002; Yusuf, 2005b). Based on this recommendation, the Economic Commission for Africa Conference of Ministers in May 1995 passed resolution 795 (XXXI) titled 'Building Africa's Information Highway', which called for work on national information and communication networks for planning and decision making as part of an African information highway, and for the establishment of a high level working group made up of African experts in IT, to prepare Africa's entry into the information society. Subsequently, in May 1996, the Economic Commission for Africa Conference of Ministers through its resolution 812 (XXXI) approved the plan of action prepared by the high-level working group entitled the African Information Society Initiative (AISI), an action framework to build Africa's information and communication infrastructure (Ajayi, 2002). The AISI action plan framework called for the formation of National Information and Communication Infrastructure (NICI) plans and strategies. This was to be an on-going process through planning, implementation, and regular evaluation of programs and pilot projects, developed according to the needs and priorities of each country.

In what seemed to be a full embrace of the promise IT holds for improving education in addition to shaping workforce opportunities, if used properly, the Nigeria government, in 1998, enacted a policy on computer education (Aduwa-Ogiegbaen & Iyamu, 2005). The plan was to establish pilot schools and thereafter diffuse the innovation, first to all secondary schools and then to the primary schools. Unfortunately beyond the distribution and installation of computers in Federal Government Colleges, the project did not succeed and IT has not been properly integrated into the school systems. This and other efforts by federal and some state governments to encourage infusion of IT into various levels of the education system were incapacitated by fundamental problems such as lack of adequate IT equipments, infrastructure, and manpower at various levels of the education system (universities, colleges of educations, teacher training colleges, and secondary and primary schools) (Mac-Ikemenjima,

2005).

At the beginning of 1999, Nigeria did not achieve much on the NICI plan and strategies. A significant leap was made when the Nigerian government in October of 1999 issued a document on telecommunications development strategy and investment opportunities in Nigeria and the National Policy on Telecommunication was approved (Ajayi, 2002). The document contained policy statements on objectives, structure, competition policy, satellite communication, management structure, finance and funding, manpower development and training, internet, research and development, safety and security, international perspectives, and policy implementation and review (Federal Republic of Nigeria, 2000, 2001). The national policy on telecommunication was seen as a key step in the development of an infrastructural base for IT. In 2001, the federal government approved the Nigerian National Policy for Information Technology, and followed this up with the establishment of the National Information Technology Development Agency (NITDA), which was charged with the implementation of the policy.

To address several objectives in the Nigerian National Policy for IT relating to human resources development, some strategies targeted at building and/or improving knowledge and skills in information technology were developed. These include (a) encouraging IT companies to invest in education; (b) providing study grant and scholarship on IT; (c) implementing a “training-the-trainer” scheme for National Youth Service Corp members; (d) developing IT capacity at zonal, state, and local levels; (e) encouraging the growth of private and public sector dedicated IT in primary, secondary, and tertiary educational institutions; (f) working with international and domestic initiatives for transfer of IT knowledge; (g) using IT in distance education; and others (Ajayi, 2002). In spite of these objectives and strategies, the policy and subsequent implementation efforts remain inadequate in meeting the needs of the country’s education systems, particularly in all teacher education programs. For example, the policy has no specific special application to education. While there are sectoral applications for health, agriculture, art, culture, tourism, and governance education is subsumed under human resource development (Clope & Sharif, 2001). Also the objectives and strategies related to education as reflected in the sectoral application for human resource development are market-driven. This limits the potential of IT in education to become a central force in economic competitiveness. Its potentials as a tool for addressing challenges in teaching and learning and as change agent are thus neglected (Culp, Honey & Mandinach, 2003). Students need not learn about computers only; IT should be integrated for the development and management of teaching and learning in Nigerian schools.

There is no doubt that teachers are indispensable for successful learning of IT and its effective use and application in various sectors of the nation’s economy. In fact, computer education introduced into the Nigerian secondary school since 1988 has largely been unsuccessful as a result of teachers’ incompetence (Yusuf, 1998). Empirical studies show that teachers’ ability and willingness to use IT and integrate it into their teaching is largely dependent on the training and professional development they received (Davis, 2003; Pearson, 2003; Selinger & Austin, 2003; Watson, 2001). The Nigerian national IT policy is silent on teacher education and teachers’ IT professional development (Culp, Honey & Mandinach, 2003). Also, learning through IT entails the development of nationally relevant context software for school use. The policy does not recognize the need to create quality software. There should be emphasis on the creation of more high quality content and software. Currently, software available in Nigerian schools is imported with no local content. The policy document does not address this issue. The policy is also short on research, evaluation, and assessment. None of the issues relevant to IT application in the Nigerian education system address the issue of research,

evaluation, and assessment, all of which are critical to ensure success in education. Research, evaluation, and assessment should address access, professional development, use and competence, attitude, licensure, among other concerns.

In addition, the document has no specific direction on IT or technology plans at institutional levels. Advanced countries have specific plans for IT at higher institutional levels. For instance, in Britain the National Grid for learning initiatives and the Strategy for Education Technology specifically addressed IT issues in United Kingdom and Northern Ireland institutions (Selinger & Austin, 2003). The Nigerian national policy does not give any guidelines on school technology plans. The implication of these inadequacies is that the national policy cannot adequately take care of the need of the Nigerian education system. Its educational focus is limited to the market-driven goal. The need for integration in teaching and learning; the need for quality professional development programs for pre-service and serving teachers, research, evaluation and development; and the development of local context software are not addressed (Yusuf, 2005b). These issues are some of the major components of quality IT applications in education.

In view of these inadequacies, there is a need to revise the Nigerian national policy for information technology. Such revisions should be undertaken to involve stakeholders in the area of education so that they can ensure that the policy covers issues related to learning about IT and learning with IT. Furthermore, the objectives in sectoral application areas should address education specifically in order to broaden the market-driven objectives. The integration of IT into every aspect of teaching and learning should also be a key focus. Although the issue of infrastructure is implicit in the present policy, it should be reviewed in such a way that access issues are addressed in concrete terms, since this is important in IT integration. Infrastructural needs must be addressed across zones and school levels. Because teachers are vitally important to IT integration in education, the national policy on IT should address the issue of teachers' professional development. This should incorporate issues relating to teacher training institutions and IT, pre-service teacher education, in-service teacher education, and standards for teacher competence and certification in IT. Since research, evaluation, and assessment are critical for IT usage in education, the national policy should identify a frame of reference for gauging the success of IT applications in education. Such a frame of reference will encourage refinement of school practices relating to IT integration.

### **IT in Teacher Education**

Effective teaching in all areas in the 21st century classroom requires the services of teachers who are capable of using and integrating information technology in the delivery and management of instruction and learning (Darling-Hammond, 2000a, 2000b, 2005, 2010). But a great number of teachers in Nigerian schools (primary through secondary) are unable to use and integrate technology in their classrooms and in other professional practices (Osunde & Omoruyi, 2004) because they are not better trained to effectively use IT in the classroom (Ololube, 2006), notwithstanding the specifications in the National Policy of Education by the Federal Government of Nigeria (1998, 2004). The unavailability of modern IT equipments, very poor internet connectivity, and inadequacies in the use of different kinds of information retrieval systems in teacher education programs are barriers to effective professional development of teachers in Nigeria (Ololube, 2006). There is evidence that secondary school students in Nigeria are already farther behind their peers in developed countries, thus widening the global digital divide (Aduwa-Ogiegbaen & Lyamu, 2005).



The teaching profession is evolving from emphasis on teacher-centered, lecture-centered instruction to student-centered interactive learning environments (Darlin-Hammond, 2005, 2010; Newhouse, 2002a, 2002b; UNESCO, 2002, 2003, 2005). Therefore, designing and implementing successful IT-enabled teacher education program is the key to fundamental, wide-ranging educational reforms. Consequently, teacher education institutions in Nigeria must either assume a leadership role in the transformation of education or be left behind in the swirl of rapid technological changes. For Nigerian education to reap the full benefits of IT, it is essential that pre-service and in-service teachers are able to effectively use these tools for teaching, learning and research. Teacher education institutions and programs must provide the leadership for pre-service and in-service teachers and model the new pedagogies and tools for learning through effective strategic plan. Leadership in higher education should be visionary about conceiving a desired future of IT in teacher education programs, without being constrained by such factors as funding and resources (Anyamele, 2004). However, a successful and effective strategic plan depends on the extent to which proper implementation and monitoring are carried out.

### **Who Provides IT to Schools?**

After many years of foot-dragging, many African governments have started developing educational policies that target uses and integration of technology in the school system. One of such countries, Nigeria, has set up an agency, National Information Technology Development Agency (NITDA), charged with promoting information communication and technology in all sectors of the economy, including education (National Information Technology and Development Agency, 2001). Some governments and a few private agencies collaborate to make integration of technology into education possible. In many cases, contributions made by the private sector appear to be greater than those of national governments. Agencies such as the *United States Department of State, World Links, Schools Online, and Africa SchoolNet* make huge contributions by way of equipping classrooms, libraries, and computer labs. At the beginning of 2004, the United States had 40 sponsored schools in Africa. Many classrooms in these schools have access to state-of-the-art technology resources. One example in Nigeria is the American School in Lagos, where each classroom has multiple networked computer workstations and printers as well as portable computer carts containing sets of wireless-capable laptop computers (United States Department of State, Office of Overseas Education, 2004).

Another non-governmental agency actively involved in the development and promotion of IT in Africa is *World Links*. In tune with its mission of improving educational outcomes, economic opportunities, and global understanding for youth in developing countries through the use of technology and the Internet, *World Links* has established a number of schools in African countries such as Botswana, Burkina Faso, Gambia, Ghana, Mozambique, Rwanda, Senegal, South Africa, Uganda, and Zimbabwe (World Links, 2004). World Links collaborates with other non-profit agencies such as the International Education and Resource Network (IEARN) to promote its educational activities. In Nigeria, another private agency, *SchoolNet Africa*, has as one of its primary goals assisting Nigerian schools create opportunities for their students to cross the “digital divide” and use IT to enhance their learning experiences (Cossa & Cronjé, 2004).

### **The Challenge of Integration**

While educational policymakers and implementers in Nigeria recognize the important role

technology plays in enhancing the quality of education of its citizens (primary through higher education) as well as accelerating the pace of literacy, several economic and political factors stand against their effort. These factors include poor infrastructure, poverty, none or unreliable telecommunication systems, poor energy supply, corruption, etc (Otuka, 2003).

In rural settings, many schools do not have secure buildings to house school property, let alone technology equipment and resources. In such unsecured and poorly erected schools, it is difficult to integrate IT into curriculum, instruction and learning. In some other schools where the buildings meet minimum security standards, there are no electricity or telecommunication facilities. Such buildings require huge capital investment by local, state and federal governments to develop and implement technology in the school systems.

There are none or very limited funds to wire the schools with fiber optics and other necessary telecommunication cables or to extend electricity to all the classrooms (Cawthera, 2001). Start-up costs for these technology facilities demand a large share of the education budget, which most times are the first to suffer budget cuts during financial crisis or even normal budgeting cycles. Most of the time, parents and other significant people within a school community are asked to bear the full burden of refurbishing school infrastructures so as to make them modern enough and to meet the minimum standards required for effective technology integration (Cossa & Cronje, 2004; Ofori-Attah, 2004). In urban areas, parents and other stakeholders in the school community have come together to assist schools become equipped with technology tools to facilitate teaching and learning.

### **IT as Teaching, Learning and Management Tool**

In addition to reading and writing, computer is part of the basic skills students need to succeed in a technologically dynamic world. Through simultaneous use of audio, text, multicolor images, graphics, motion, video, and other technologies provide ample and exceptional opportunities for students to develop capacities for high quality learning and to increase their ability to innovate. Educational administrative functions such as governance, supervision, support services, finance, budgeting and accounting, personnel selection and training, personnel monitoring and evaluation, facilities procurement and management, equipment maintenance, research, and so on can be significantly improved using technology.

### **IT as Instrument of Economic and Technological Development**

The importance of information and communication technology in Nigeria's economic development is not in doubt. As a result of globalization, industrial competition is increasingly harsh and companies must not only come up with innovative products and services for the global market, they must do so with unprecedented speed. To be able to do this, the companies need technologically literate intellectuals and creative employees whose novel ideas, to a certain extent, guarantee the companies' existence (Aduwa-Ogiegbaen & Iyamu, 2005). Unfortunately, Nigeria lags considerably behind other developed nations in the development of small and medium-scale enterprises, which are the mainstay of modern economy and society.

In today's world, not only are individuals surrounded by technology, but also their primary means of reaching others in far and near places are mediated by technology. More than ever before, humans have stronger need to know and use modern technology as part of social life, the economy, the business and education. New and sophisticated breakthroughs in high technology encourage

companies to introduce technological innovations rapidly into their business practices. Cellular technologies became popular in Nigeria a little over 6 years ago and this has revolutionized the communication industry in the country, though many Nigerians are yet to benefit from the services due to high cost. There is need for the country to re-strategize and expand its vision so as to cope with the challenges of a technological society (Aduwa-Ogiegbaen & Iyamu, 2005).

### **Specific Policy Actions Recommended**

In order to properly address the problem hindering effective technology integration in Nigerian schools, the governments (federal, state and local) should, in collaboration with all interest groups and/or international organizations (1) revise the national policy for information technology to include vision and specific mission statements on technology in schools; (2) prepare school and business leaders for information technology; (3) invest in information and communication technology infrastructures; (4) revise the teacher education curriculum, at all levels of education, to include relevant information and communication technology; (5) review fiscal policy to favor educational and nonprofit use of information technologies; (6) deregulate telecommunication monopolies while protecting educational use of telecommunications; (7) reorient funding policies to serve students, rather than institutions; (8) fund technology-mediated projects directly or encourage these projects through tax relief and other benefits; (9) fund projects that ensure access to technology for underrepresented populations; (10) encourage all school administrator and teacher training programs to train teachers, school leaders and other school personnel to become familiar with using and integrating information technology into instruction and into various school functions; and (11) plan and implement improved policy, guidelines, and quality standards for distance education.

### **Conclusion**

Though Nigeria came a little late into the IT world, its 2001 national policy for information technology—document designed to ensure that Nigeria as a nation recognized the strategic importance of IT for national development—is a step in the right direction. Teachers and students in schools in Nigeria will have incredible resources available if IT is properly and effectively integrated into the school curriculum, instruction, learning, assessment, and administration at all levels of education; and a fundamental shift in the way teachers teach and students learn will evolve.

There is a need to recognize the importance of IT to education for sustainable development by federal, state and local governments through making useful policies and providing enough funds to educational institutions, especially at the primary and secondary school levels. Examples and experiences exist demonstrating what is possible, how it is done, and what tools could be applied to the task (Aduwa-Ogiegbaen & Iyamu, 2005; Economic Commission for Africa, 2003; Ofori-Attah, 2004; SchoolNet Africa, 2004; UNESCO, 2002; Yusuf, 2005b). Education policy planners and implementers in Nigeria and other Sub-Saharan African countries should not take a detour but stay the course to create enabling infrastructures and environments that will enable its schools become more effective and responsive to the needs all students (at all levels of the education system) in the digital age. Primary and secondary school students in Nigeria are already farther behind their peers in developed countries, thus widening the global digital divide. Though Nigeria's Federal Executive Council approved a national IT policy in March 2001 and the implementation started in April with the establishment of the National Information Technology Development Agency (NITDA), it is however overdue for review due to

changes and advances in IT globally and in Nigeria. The government should ensure that the existing IT policy, which is not aligned with its education needs, is updated to realign manpower development, IT Infrastructure Backbone, and implementation strategies with economic and social needs. NITDA should create strategic alliances, collaborations, and joint ventures with the private sector for the actualization of the IT vision.

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## **Teacher Education in Nigeria: The Challenges and Way forward**

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### **Abstract**

*The importance of teachers and the roles they play in the educative process cannot be over emphasized. Indeed, they are regarded as the hub of any school system and their productivity is a function of the quality of training received during teacher education program and other variables intervening when on the job. However, the production of quality teachers in Nigeria is faced with a lot of challenges. This paper, therefore, examines the meaning of teacher education in Nigeria, its goals, challenges, and recommendations on the way forward towards achieving quality teacher education in Nigeria. This, includes admission of quality candidates, adequate funding of the programs, etc.*

### **Introduction**

The importance of teachers and the roles they play in the educative process are central to the development of key sectors of the economy of the country. And the success of any education system depends largely on the quality of its teacher. The quality of training of teachers makes or mars the effectiveness and efficiency of a teacher. Since teachers are regarded as nation builders, it means the future of a nation rests on their hands because the qualities they possess today will inevitably be reflected in the citizens of tomorrow. In other words, good teachers would beget good students from which the system can get a replenishment of its teaching stock while poor teachers will beget poor students and consequently poorer future teachers (Kolawole, 1999, Afemiekhe in Olakulehin, 2007). Little wonder teachers are regarded as the hub of any school system. Likewise, in recognition of the importance of teacher in the education system, the Federal Government of Nigeria asserts in the National Policy on Education that no education system may rise above the quality of its teachers, teacher education shall continue to be given major emphasis in all educational planning and development, (FRN, 2004).

Fafunwa (1974) argued that teacher education continues to be the key to educational development in Nigeria and elsewhere, for without adequately trained the teaching cadre; Nigeria cannot hope to expand her educational facilities. However, researchers have observed that out of all the educational problems that beset the African continent today, none is as persistent or as compelling as the one relating to the training of competent teachers who, directly and indirectly are bound to influence the quality and quantity of services provided by all other teachers and professors (Fafunwa, 1967; Afe, 2002 in Olakulehin, 2007). Likewise, World Bank (2001) and NISER (2001) on the status of Nigerian graduates have confirmed the fear of educators, parents and the general public about the degeneration of the country's tertiary education. The World Bank listed among other causes, irrelevant curriculum, poor preparation and presentation of lesson notes by teachers as being responsible for the poor quality of graduates. Babalola, (2000); Obanya, (1999); Ajala (1986); and Fafunwa (1983) in Ajala (2002) concluded that the problem with our graduates is largely rooted in their past. That is, for most of them, poor quality education was received at the primary and secondary level.

## **Meaning of Teacher Education in Nigeria**

Teacher education is defined as the provision of professional education and specialized training within a specific period for the preparation of the individuals, who intend to develop and nurture the young ones into responsible and productive citizens (Oyekan, 2002: 12). It is a formal and systematic process of preparing would-be teachers for the task ahead. It also includes all programs specifically designed to help teachers already in service to continuously update their knowledge, skills, and attitude in order to meet up with continuing changes in methods, course contents and resources used in teaching (Izuagba and Obiefuna, 2005: 1). The professional training shall be offered by the following institutions: Colleges of Education; Faculties and Institutes of Education; National Teachers' Institute; Schools of Education in the Polytechnics, National Mathematical Centre (NMC), among others, to achieve the goals of teacher education (FRN, 2004).

## **Goals of Teacher Education in Nigeria.**

FRN (2004) Section 8B, sub-section 71 a-e states that the goals of teacher education shall be to:

- a. Produce highly motivated, conscientious and efficient classroom teachers for all levels of our educational system;
- b. Encourage further the spirit of enquiry and creativity in teachers;
- c. Help teachers to fit into social life of the community and the society at large and enhance their commitment to national goals;
- d. Provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations;
- e. Enhance teachers' commitment to the teaching profession (P.33).

The policy further stated inter alia in sub sections 74 and 75 that: teacher education shall continue to take cognizance of changes in methodology and in the curriculum. Teachers shall be regularly exposed to innovations in their profession; in-service training shall be developed as an integral part of continuing teacher education and shall also take care of all inadequacies (P.34). At this point, it should be noted that the achievement of the above lofty goals requires developing a curriculum for quality teacher production with due cognizance of innovations in curriculum and its implementation.

In order to do this, efforts have been made by successive government to expose teachers to in-service training, regular workshop, seminars, etc. Government (at various states and federal level) has also embarked on the drive to increase teachers' salary. In some states, government elevated some teachers to the level of permanent secretaries (Kolawole, 2006). Unfortunately, these measures have not impacted favorably on the quality of our teachers at all levels of education because of the challenges facing teacher education programs in Nigeria. This was also reiterated by Federal Ministry of Education, after the conduct of Operation Reach all Schools (ORAS). The Ministry disclosed that 56, 294 (27.0%) secondary school teachers are not qualified to teach out of a total population of 208, 497 secondary school teachers (The Guardian, May 20, 2007). This implies that despite their numerical strength, a good number of them lack pedagogical and technical skills and these have impacted negatively on their products.



## **Challenges of Teachers Education in Nigeria**

The teacher education program in Nigeria is facing a lot of challenges among which are:

### *The Quality of the Candidates*

A majority of the candidates admitted into teacher education programs in Nigeria are not genuinely interested in teaching as a career. They possess weaker passes or fewer credits in Senior Secondary Certificate Examination (SSCE), yet they were recruited into the program. Admitting candidates that could not gain admission for courses of their choice in the university or those who enrolled in the *education program* as a last option, is not in the best interest of the system. In fact, the apathy towards choosing teaching as a profession has led to shortage of candidates who are genuinely interested in Education faculties. The trend in most teacher education institutions is to admit any willing candidate; consequently, academically weak students have flooded teacher education programs in Nigerian colleges and universities. To this extent, those who have no business to be in such institutions are admitted (Okebukola in Nnachu, 2008) for teacher training.

### *Student Population Explosion*

This is one of the most serious challenges that affect quality assurance in teacher education programs. Since colleges and faculties of education have become a ‘dumping ground’ or last resort for rejected candidates seeking admission to other faculties, the number of teacher-trainees in these institutions have increased despite shortage of teacher educators, and this has adversely affected effective implementation of teacher education curriculum. The minimum standard provided by National Universities Commission and National Commission for Colleges of Education specified a standard for student-teacher ratio in the system. Unfortunately, in many teacher-training institutions in Nigeria, the class sizes are too large, coupled with the inadequacy of available infrastructural facilities, such as libraries, teaching faculty rooms, lectures halls and rooms, scientific laboratories, computer labs, etc; thereby making effective implementation and evaluation of the curriculum difficult. Because of the drive to produce many teachers for the public schools system, admission is given without reference to available facilities. This creates large class sizes and makes monitoring of teacher-trainees difficult.

### *Quality of the Teacher-Educators*

The politics and issue of godfatherism and other discriminatory practices that color employment process in Nigeria, have given way to the employment of unqualified teachers even in our teacher education institutions, thereby sacrificing /forgoing merit for mediocrity. This is what Lassa, (2000) refers to as paucity in the midst of glut. The issue of pedagogy/teaching qualification of teacher-educators is another challenge to teacher-education in Nigeria. It is generally believed that you cannot give what you do not have, hence, teacher-educators should be pedagogically sound and employers should insist on academically sound candidates if teacher education programs are to produce quality teacher.

### *Inadequate Funding*

Funding of teacher education programs in Nigeria have been a major problem. It is a fact that high quality teacher education programs could not be provided cheaply as funds are needed for human and material resources for curriculum implementation (Ojebiyi, 2005). Other problems of teacher

education in Nigeria, such as poor infrastructural facilities, poor equipment, unstable industrial relations, poor reading culture and examination malpractices, all seem to hinge on poor funding of teacher institutions. Indeed, poor funding of teacher education since the nineties have become a cause for concern to educationists, as it affects the standard of the certificates, diplomas and degrees awarded to education graduates. Under funding has also affected the provision of current textbooks and journals whose cost have become prohibitive and insufficiency of workshop equipment and laboratory materials. Regrettably, teaching as a career is not such that teacher institutions can charge tuition fees and still expect to remain afloat (Lassa, 2000). This situation is compounded when institutions find it difficult to increase their Internally- Generated Revenue (IGRs) which has also become a drop of water in the ocean.

#### *The Duration of Professional Training*

This professional training is popularly called teaching practice. It is the only aspect of teacher training that leads to professionalism. The organization and conduct of teaching practice determines the standard of practical experience acquired by the student-teachers (Kanu, 2008). Unfortunately, teacher education programs in Nigeria have revealed a lot of inadequacies, especially, in the area of professional practice for the pre-service teachers. In medicine, pharmacy, engineering and law, a would-be doctor, pharmacist engineer or lawyer requires at least one year of housemanship, internship, industrial training experience or law school, respectively; while in teaching, a pre-service teacher requires only 12 weeks of teaching practice. No matter how well groomed the pre-service teacher may be, these 12 weeks duration of teaching practice is not only professionally unacceptable and grossly inadequate but also contrary to the provision of section 8B, sub-section 78c of FRN (2004) policy on education. Furthermore, the high levels of indiscipline among teacher trainees on teaching practice, and the ineffective supervisory practices are included in the author's concerns.

#### **Problems Associated with the Efficient and Effective Integration of Information, Communication Technology Systems (ICTS) in Teacher Education Programs in Nigeria.**

These problems include, lack of technically-experienced instructors, limited ICTS facilities, problem of accessibility, electricity problem, lack of access to ICTS in trainee-teachers' field experience, among others (Abolade and Yusuf, 2005). These issues have been visible in many Nigerian institutions of higher learning for years, and they require government's immediate attention and solutions, for the country's teachers to be well-trained, highly qualified and skillful, and possess the ability to compete globally in the educational sector. Other problems in the system include:

#### *Low Morale in the Teaching Profession*

Teachers' morale is dampened due to non-payment of salaries, delay or non-implementation of institutional agreements reached as regards teachers incentives, wages, benefits; as well as the poor societal attitude to teaching, little or no respect for the classroom teacher, as the word 'teacher' has become synonymous with poverty, rejection, deprivation and never-do-wells. Such situations are seriously affecting the motivation, commitment, efficiency and effective production of teachers (Kolawole, 1999), as well as contributing to the low morale of teachers. The teacher-trainees are also affected by these variables. It also affects teachers' discipline because principals of some schools have

been reported to the Board of Education or ministries for financial improprieties even to the extent of not registering students who have paid for national school certificate (NECO/WASSCE) examinations.

Other challenges include problem of professionalism of instruction/teaching, numerous number of institutions with different curriculum/producing teachers, crash programs and sandwich/summer programs, poor remuneration for teachers and teacher-educators, ancillary staff, among others.

## **Conclusion**

Based on the foregoing, it is apparent that teacher education in Nigeria needs a total overhauling in the area of the quality of intakes, duration of teaching practice, provision of ICTs and ICTs capacity building, among other areas of deficiencies. In other words, to produce highly qualified, efficient and creative teachers and enhance their commitment to the teaching profession, the existing teacher education programs in the Nigerian institutions of higher learning should be overhauled to eliminate the deficiencies discussed.

## **The Way Forward**

If the lofty goals of teacher education in Nigeria will not be a mirage, efforts should be made to address some of the issues highlighted; including, the recommendations made below:

1. Admission into teacher education program should be based on high standard: possession of the required academic qualification, positive attitude towards teaching, sound moral status, creativity, positive self concept and a genuine concern for the welfare of children. Having passed the Unified Tertiary Matriculation Examination (UTME), the candidate for teacher education program should also be subjected to an oral screening test to determine their genuine interest in teaching before being admitted. Watts in Lassa (2000) suggests that a high standard of teacher education should start with placing a high value on the criteria guiding the selection of those 'most likely to be excellent teachers'. Teacher-educators (lecturers) must be employed on the criteria of intellectual ability, integrity, moral probity, stable personality, good health and so on (Awoniyi, 1999). Also, the commitment of teacher-educators to their onerous task of moulding future professional teachers is one way of ensuring a high standard of teacher education (Lassa, 2000).
2. One year duration of teaching practice with adequate monitoring and effective supervision in collaboration with the public schools system practices. Also, teachers on practice should be remunerated adequately.
3. Provision of environmental-friendly school atmosphere to enhance effective teaching and learning in teacher education institutions.
4. Provision of ICT facilities and effective and efficient integration of ICT systems in teacher education programs.
5. Adequate funding of teacher education programs in Nigeria by government, private companies, multinationals, not-for-profit organizations (NGOs) and philanthropists. Award of scholarships to aspiring education students with outstanding academic performance and bursary provisions

- for education students nationwide.
6. Improvement in the research methodology courses being offered in the institutions offering teacher education programs.
  7. Provision of effective and sound curriculum reflective of our changing society (Kanu, 2008). Such curriculum should contain components of global education in line with the millennium development goals (MDGs).
  8. Practicing teachers should be provided with regular in-service training opportunities to keep them abreast with contemporary knowledge, technology and discoveries in the teaching profession. Such training assists them to acquire the needed skills. They should be encouraged to enroll for post graduate studies.
  9. Payment of teachers' salaries as at when due and provision of adequate incentives/ more pleasant working condition for teachers, goes a long way in supporting the boosting of teachers' morale and services.

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# **Integrating Global Issues in Teaching Language Education Curriculum.**

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## **Abstract**

*English language as a unique subject in the curriculum has substantive content which can be used to teach any other subject. This paper sets out to identify these emergent global issues and explore if they can be integrated in to language teacher education curriculum for the production of quality language teachers. The study was guided by four research questions and 90 English language teacher educators were drawn from three colleges of education in the South East; using a structured questionnaire for data collection drawn and mean for data analyses, the results show that a majority of the teachers agree that some of these emergent global issues should be integrated into the curriculum. Among the recommendations include; the need to review the curriculum of English language teachers in order to integrate these emergent issues and capacity building for in-service teachers.*

## **Introduction**

The world faces serious global issues of terrorism, ethnic conflicts, social inequality, religious fanaticism, abject poverty, HIV/AIDS pandemic, militancy, corruption and environmental degradation. As language teachers in the 21st century how can we prepare our students to adequately face these challenges? As English language teachers, do we assess our performance in the classroom by only equipping learners with linguistic and communicative competence in English? What is our global responsibility as language teachers, in creating a peaceful world devoid of diseases and human problems?

Global education is a new approach to teaching which tries to use the curricular to equip learners with knowledge and skills to solve global problems. In relation to the English language it aims at making learners to acquire linguistic and communicative competence in English while empowering them with the knowledge, skills and commitment required by world citizens to solve global problems. Global education consists of efforts to bring about changes in the content, methods, and social context of education in order to prepare learners for citizenship in a global age [kniep, 1985].

The rationale for global education are based on the fact that our planet faces serious global issues or problems and hardly a day passes without news of terrorist activities, civil wars, racism, prejudices, diseases and disaster. The second reason stems from the interdependency of our modern world due to the effects of globalization which has eliminated geographical boundaries of nations. It becomes impossible to ignore the problems that our planet faces, given the crucial role of the education to adequately prepare young people for the challenges of life. Unfortunately, the curricular of several nations' education system are limited and restrictive as they do not include these emergent problems,

as well as knowledge of cultures and people in other parts of the world which are important for survival in the 21st century. It is in this light that the researchers assert that for Nigeria to build a strong reliant economy and to realize the ideals couched in Vision 20: 20:20, it requires quality teachers, given their crucial roles in an education-led development, especially as the socio-economic and socio-cultural development of any nation depends on their education. Unfortunately, there seems to be a mismatch between the expected and actual knowledge base and pedagogical skills of teachers in our society. This calls for an urgent need to review teacher preparation programme in order to adequately prepare teachers for the 21st century. Issues to be integrated should be those that are potentially harmful to man and the planet such as:

Environmental issues, peace education issues, human rights, language rights, gender issues, education rights, socio-economic issues, health issues and technological issues – especially digital divide. Cates (2000) supports this and adds that integrating these global issues in education ensures that learners acquire:

- a. Knowledge about different countries, have good understanding of cultural diversities, develop empathy and problems solving skills to be able to address life changing challenges.
- b. It would equally develop in learners' critical thinking; ability to solve societal problems cooperatively, ability to resolve conflict amicably and the ability to view issues and problems from different perspectives, as well as learning to accommodate the perspectives of others.
- c. Learners would be able to take responsible actions that will lead to the evolution of peaceful and harmonious living.

From another dimension, the integration of these emergent global issues in teacher education curriculum will facilitate the achievement of the millennium development goals, if they consider the goals we hope to realize by integrating these issues as 'inculcating in learners standard crucial for living in an interdependent world'. Subsumed in the standard to be indicated include; justices, freedom, peace, healthy living, dignity equality, rights, democracy, social responsibility interdependence, environmentalism, tolerance, multiculturalism and anti consumerism (Nadezhda, 2008; p 33).

Confirming the need to update teacher education curriculum in order to make it relevant and functional, Nwosu (2005) suggests the adoption of the developmentalist teacher education model which aims at integrating emergent socio-cultural problems into the curriculum for human resource development. Nwosu's demand for this, stems from the prevailing problems in the society ranging from cultism, bullying, cyber crime, lack of good roads, corruption, theft in schools, and gross lack of facilities among many others ills. He asserts that the philosophy of developmentalism evolves from the Nigerian "native" philosophy (FRN, 1977; NERDC 1980) and such the curriculum if adopted and well implemented, will develop in teachers strategies for using the teaching-learning process to solving societal problems, promoting personal advancement of learners, poverty eradication, cultural and political harmony and socio-economic development (p.140). The need to integrate these issues into the curricular has become expedient when we realize that education in the 21st century requires practical demonstration by the learners of what they have learnt in solving real life problems, (Izuagba & Afurobi, 2009).

## **Why Integrate Global issues in Language Teacher Education Curriculum?**

These researchers hold the view that the ideal English language teacher in Nigeria is one who in addition to equipping learners with communicative competences, equally helps them to understand the similarities and differences between them and people in other cultures, develop interest and curiosity in them about contemporary issues. All these are possible because language is one subject that can be used to teach learners about the world they live in and about emergent problems (Izuagba & Nwigwe, 2009). In this regards, Rivers (1976) asserts that the language teacher is the most fortunate of all the teachers as he/she could integrate into the English language curriculum any thing worth learning. In addition, when we consider the fact that the school curriculum could be used to correct societal ills, it then makes some sense to integrate emergent national and global problems in the English language curricular.

If we also consider the fact that learners are members of the society and must have imbibed cultural biases, prejudices and inter-ethnic antagonism that are rife in the society, there is then the need to re-teach and relearn in order to re-condition their behaviours in the right direction using the school curricular. The researchers believes that using the school curricular would be more effective than using the pages of the newspapers, creating billboards, or propaganda in the news media, as these may not have wider reach and audience.

This paper stems from the fact that many educators including language teachers strictly adhere to the content of the textbooks and the content of the curriculum without referencing societal issues and problems while teaching in the classroom. It is our belief that language-teaching “profession” could be achieved if we succeed in developing in the learners we teach, some sense of social responsibility. The researchers’ choice of the English language for this discussion is because English has been a major subject at all the levels of Nigeria education system; this implies that it could be used to reach every learner unlike subjects like geography or history which are electives. Furthermore, English is taught more than any other subject except Mathematics in the school curriculum and one of the implications of this, is that opportunities for learning and practicing the language abound. Notwithstanding, these issues would provide authentic context for language learning; integration is our only option of teaching these crucial global and social problems since our curriculum is already over loaded (Obanya, 2006).

In the light of the above, this study sets out to determine if English language teacher educators consider these global issues necessary to be integrated into the curriculum of teachers of English.

The study is guided by the following research questions:

1. Is there a need to integrate the emergent global issues in the curriculum of language teachers?
2. How could these global issues be integrated?
3. What teaching strategies could be used in teaching these emergent issues?
4. How could the teaching materials and resources be sourced?

## **Methodology**

The study is a survey design that sets out to find out from teacher educators in colleges of education in Southeast Nigeria if there is a need to integrate some of the emergent global issues into the curriculum of teachers of English language. Educators and teachers of the English language were



chosen randomly because they would implement the curriculum, and as language teachers, they provide useful information on areas of learning needs, as well as areas of the English language that could be used to teach these issues.

Ninety language teacher educators were selected from three out of the six colleges of education in the South eastern part of the country. A 43-item structured questionnaire was developed using a four point scale of Strongly Disagree, Disagree, Strongly Agree, and Agree. A hypothetical Mean of 3 was used for decision; any Mean from three and above indicates agreement while any one below 3 indicates disagreement.

**Results:**

**RESEARCH QUESTION 1**

Table1: Response on the need to infuse these emergent issues into the English language teacher education curriculum

S/N		1	2	3	4	Total	X	SD	Remarks
	ITEMS	SD	D	A	SA				
1	Ends of terrorism	5	10	52	23	90			
		[5]	[20]	[156]	[92]	[273]	3.0	0.8	Agree
2	Nuclear disarmament	10	26	40	14	90			
		[10]	[54]	[120]	[56]	[240]	2.7	0.9	Disagree
3	Problems of refugee	2	15	23	50	90			
		[2]	[30]	[69]	[200]	[301]	3.3	0.8	Agree
4	Consequences of war	2	2	20	66	90			
		[2]	[4]	[60]	[264]	[330]	3.7	0.8	Agree
5	Racism	15	27	40	8	90			
		[15]	[54]	[120]	[32]	[221]	2.5	0.9	Disagree
6	Nepotism	4	7	20	69	90			
		[4]	[14]	[60]	[276]	[354]	3.9	1.0	Agree
7	Interdependency of countries	6	30	38	16	90			
		[6]	[60]	[114]	[64]	[240]	2.7	0.9	Disagree
8	Conflict resolution	1	6	63	20	90			
		[1]	[12]	[189]	[80]	[282]	3.1	0.8	Disagree
9	Inter cultural understanding	2	4	4	80	90			

		[2]	[8]	[12]	[320]	[342]	3.8	0.8	Agree
10	Co-operative problem solving	17	21	32	20	90			
		[17]	[42]	[96]	[80]	[235]	2.6	0.9	Disagree
11	Gender equality	9	12	39	30	90			
		[9]	[24]	[117]	[120]	[270]	3.0	0.8	Agree
12	Education right	-	2	12	76	90			
		-	[4]	[36]	[304]	[344]	3.8	0.6	Agree
13	Language right	-	17	41	32	90			
		-	[34]	[123]	[128]	[285]	3.2	0.6	Agree
14	Respect for diversity	10	17	41	32	90			
		[10]	[34]	[57]	[176]	[277]	3.1	0.8	Agree
15	Environmental pollution	-	6	65	19	90			
		-	[12]	[195]	[76]	[283]	3.1	0.8	Agree
16	Deforestation	18	28	34	20	90			
		[18]	[56]	[102]	[80]	[256]	2.8	0.9	Disagree
17	Global warming	-	27	42	21	90			
		-	[54]	[126]	[84]	[264]	2.9	0.7	Disagree
18	Endangered animals	-	26	13	51	90			
		-	[52]	[39]	[204]	[295]	3.3	0.5	Agree
19	Poverty	-	2	61	27	90			
		-	[4]	[183]	[108]	[295]	3.3	0.5	Agree
20	HIV/AIDS	-	-	19	71	90			
		-	-	[57]	[284]	[341]	3.8	0.5	Agree
21	Religious	-	-	27	63	90			
		-	-	[81]	[252]	[333]	3.7	0.5	Agree
22	Militancy	-	-	48	42	90			
		-	-	[144]	[168]	[312]	3.5	0.5	Agree
23	Corruption	-	-	60	30	90			
		-	-	[180]	[120]	[300]	3.3	0.5	Agree

From the data analysed (Table 1), it shows that majority of the respondents agreed on the global issues as terrorism. This had a mean of 3.0 which indicates that the respondents agreed that such emergent issues should be integrated in the school curriculum. Other global issues that were accepted for integration by the respondents includes: the issues on the problems of refugees 3.3 , wars 3.7, nepotism 3-9, conflict resolution 3.1, intercultural understanding 3.8, gender equality 3, right to education 3.8, language rights 3.2; respect for diversity 3.1 , environmental pollution 3.1, endangered animals 3.1, poverty 3.3, HIV/AIDS 3.8, religious fanaticism 3.7, militancy 3.5 and corruption 3.3, while global issues like, nuclear disarmament 2.7, racism 2.5 , interdependence of countries 2.7, co-operative problem solving 2.6, deforestation 2.8 and global warming 2.9 were not accepted for integration the curriculum.

## RESEARCH QUESTION 2

Table 2: Responses on how the global issues can be infused in the curriculum using items 24-28

S/N ITEMS	1 SD	2 D	3 SA	4 A	TOTAL	X	SD	REMARKS
24 Teaching them as topics/concepts is adequate	30	41	-	14	90			
	[30]	[92]	-	[56]	[178]	2.0	1.0	Disagree
25 Use English text books	18	27	20	25	90			
	[18]	[54]	[60]	[100]	[232]	2.6	1.0	Disagree
26 As subject matter of reading comprehension passage/literary works	5	-	18	67	90			
	[5]	-	[54]	[268]	[327]	3.6	1.0	Agree
27 As essay topics	-	28	10	52	90			
	-	[56]	[30]	[204]	[290]	3.2	1.0	Agree
28 As subject matter of summary exercises	7	20	17	46	90			
	[7]	[40]	[51]	[184]	[282]	3.1	1.1	Agree

Table 2 sought to find how these issues should be integrated: It indicates that the respondents overwhelmingly agree that these issues be integrated in literary works/reading comprehensive passages 3.6; essay topic 3.2 and summary exercises 3.1 in the language curriculum. While they disagreed on teaching them as a distinct subject 2.0; and using English textbook 2.6.

S/N	ITEMS	1 SD	2 D	3 A	4 SA	- TOTAL	X	SD	REMARKS
29	Lecture method	31 [31]	20 [40]	20 [60]	19 [76]	90 [207]	2.3	1.2	Disagree
30	Discussion method	-	15 [30]	19 [57]	56 [224]	90 [311]	3.5	1.0	Agree
31	Jigsaw	3 [3]	21 [42]	20 [60]	46 [184]	90 [289]	3.2	1.0	Agree
32	Collaborative learning	-	12 [24]	18 [54]	60 [240]	70 [318]	3.5	1.0	Agree
33	Active learning strategies	-	10 [20]	19 [57]	61 [244]	70 [321]	3.6	1.0	Agree
34	Project	-	30 [60]	10 [30]	50 [200]	90 [290]	3.2	1,0	Agree
35	Field trip	32 [32]	33 [66]	5 [15]	20 [80]	10 [193]	2.1	1.0	Disagree
36	Songs and jingles	33 [33]	-	26 [78]	31 [124]	90 [235]	2.6	1.0	Disagree
37	Futures wheel	31 [31]	-	18 [54]	41 [164]	91 [249]	2.8	1.0	Disagree

Table 3 sought to find out the teaching strategies/methods that could be used in teaching these issues; the respondents disagreed on the use of the lecture method as it had a mean of 2.3, field trip 2.1; songs and jingles 2.6 and futures wheel 2.8. On the other hand they accepted the use of the discussion methods 3.5; jigsaw 3.2; collaborative learning strategies 3.5; and the project method 3.2 as their mean exceeded the decision level.

#### RESEARCH QUESTION 4

∴Responses on how resources for teaching be sourced? using items 38-43

S/N	ITEMS	1 SD	2 D	3 A	4 SA	- TOTAL	X	SD	REMARKS
38	Teacher develop teaching material	42 [42]	20 [40]	-	28 [112]	90 [194]	2.2	1.3	Disagree
39	From the internet	19	-	10	61	90			

		[19]	-	[30]	[244]	[293]	3.3	1.2	Agree
40	Development of local content software	25	40	15	10	90			
		[25]	[80]	[45]	[40]	[190]	2.1	1.0	Disagree
41	Magazines	-	18	31	41	90			
		-	[36]	[93]	[164]	[293]	3.3	1.0	Agree
42	Newspaper	11	-	50	29	90			
		[11]	-	[150]	[116]	[277]	3.1	1.0	Agree
43	Government agencies for curriculum development	5	17	18	50	90			
		[5]	[34]	[54]	[200]	[293]	3.3	1.0	Agree

The data analysed in the table above sought to find out how resources for teaching these issues would be got. The respondents agreed that resources could be got from the internet 3.3, magazines 3.3, newspaper 3.1 and government curriculum agencies should develop material/ resources for teaching 3.3. They all disagree on relying on language teachers to develop teaching resources 2.2 and the use of local content software 2.1.

## Discussions

The analysis shows that language teacher educators agree on the integration several global issues in the school curriculum, as they overwhelmingly agreed to the integration of 17 issues out of the 23 investigated in this research. This agrees with Rivers (1976) who says that the language teachers can integrate any emergent issue or concept in the language curriculum. Such inclusion in the classroom instruction is vital to the development of broad knowledge and diverse learning of the students. The respondents also agreed that these issues should be integrated into literary works and reading comprehension passages, used as topics for essay and summary writing. This is in line with Izuagba & Nwigwe (2009); Obanya(2006) thesis that suggested the use of integration rather than introducing new subjects in the curriculum because of the view that the school curriculum is already over loaded.

On strategies and methods to be used in providing students with language instruction; the respondents agree on the use of variety of instructional methods: discussion methods, jigsaw, collaborative and active learning strategies and the project method. These ideas relates to the current practices in classroom teaching which advocates the use of different methodologies and strategies to teach sensitive and value laden societal issues, and for effective student learning.

On the sources of text and non-text materials for teaching, the respondents agree that classroom materials and resources should be sourced from the internet, newspapers and magazines, as well as those to be developed by the school boards or government curriculum development agencies. This decision is in line with best practices which encourage the use of current teaching materials which can always be found in the net. It further shows the recognition which the respondents have for

resource materials developed by curriculum agencies in Nigeria. In fact, those current issues could more easily be found in newspapers and magazines (locally, nationally and internationally) than in textbooks. The result also shows that the respondents are not sure of the quality, relevance, commitment or the ability of language teachers in developing resources for teaching these societal issues in the classroom.

## Conclusions and Recommendations

The study concludes that there is need for some of these emergent social and global issues to be included in the curriculum of English language teachers to adequately prepare them to produce learners that can contribute to the global economy and make the world habitable. The results show that these societal issues should be integrated into student English language skills and learning components; among others.

Based on the findings, the researchers recommend the following:

The curriculum of English language teachers should be reviewed to integrate the several emergent global issues identified in the study.

Education policy makers tasked with developing school curriculum should not encourage the teaching of those emergent issues as separate subjects in the school system rather they should be integrated across disciplines to avoid curriculum over load.

Fund is crucial to effective curriculum implementation; consequently, adequate provisions should be made in this direction so that human and material resources needed for implementation are provided. The government should fund and support cultural diversity and provision of periodic orientation and training of teachers.

There is a need for the capacity of language teacher educators to be developed vi-a-vis content and methods for effective teaching-learning implementation in the school system.

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# Issues and Challenges in Female Education in Nigeria: Implications for National Development

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## Abstract:

*This paper sought to identify the challenges in female education in Nigeria with a view to highlighting their implications for national development. The population of the study is the 3993 (277 male and 3716 female) secondary school teachers in the 6 education zones of Anambra State of Nigeria. Multi-stage sampling procedure was used. A random sample of 5 schools was drawn from each of the 6 education zones, out of which 50% of the male and female teachers were sampled randomly. The Questionnaire was the instrument used to collect data. The findings of the study reveal among others that: gender discrimination at home and community, low parental income negative traditional and cultural practices are some of the challenges that are affecting female's education. Implications of the identified challenges were discussed and recommendations based on the findings of the study were made.*

## Introduction

Education has been viewed as an instrument for national development (Federal Republic of Nigeria (FRN) 2004). It is a powerful tool that develops in man the ability, attitude and skills with the aim of improving his potentials for optimum self-development for the common goal of the individual and the society at large. Even in times past, education had remained a tool for national development. For instance, in the 1970s, Fafunwa (1974) maintained that Education referred to the aggregate of all the processes through which a person developed his ability, attitude and other forms of behaviour of positive values in the society he live which lead to national development.

The importance of education in human and national development has been the concern of the entire globe with greater emphasis on gender parity in education. This is because; women by their position in the family have been realized to be a very powerful force through which development can be attained. No wonder, Ozigboh, (1998) points out that women are closer to their children, and as such they need general education to inculcate essential virtues in children during the formative stage. He further maintains that if the literacy level of women continues to be low, invariably, the illiteracy cycle will remain self-perpetuating. Implicit in the above view point is the fact that children who are future leaders may be adversely affected by the kind of training they receive from illiterate parent and this will have serious negative impact in national development. This is one of the reasons UNESCO (2000) affirms that the world has reached consensus that no country's development can be judged satisfactory if women do not fully participate in community life, in society and in work. Implicit in the above is the belief that there is strong relationship between women education and participation in community life. In this study the concept: women, female and girl would be used interchangeably, hence they have the same contextual meaning in terms of gender.

Educated women have the skills, ability, value and all that it takes to take proper care of their children's wellbeing including their education. They are involved in politics; They know their rights, and they contribute meaningfully to the development of their communities. In fact, the importance



of women in development has been recognized by many academics. Vickers (1991), Nwagwu (1995), Nwafor and Ezegebe (1998) were of the opinion that educated women occupy central position in family and society with regard to their political, economic and social roles. Despite the Federal government's decisive actions to ensure gender parity in education which has been a primary objective of Jomtien (1990) World conference on Education for All, the Dakar Frame-work of Action (2002) and the 2000 United Nations Millennium Development Goals (MDGs), gender gap in Nigerian educational system still persists. Gender gap in Nigerian educational system can be attributed to such factors like: gender structure, socio-economic reasons and lack of gender responsive education policies. Using economic factor as an example, in Nigeria homes where a woman is illiterate and had to depend on her husband for every need of the family. The fathers' choice of whom to send to school when there is limited fund are usually the boys as girls are being regarded in some communities as "commodity" that would soon be sold out to become another man's property. The world has so advanced especially in the flow of information and knowledge to explore the parity in gender in different life spheres. No gender group (girl or boy) can be isolated as superior to other, and more useful for national development. The purpose of this study, therefore, is to find out the specific challenges confronting female education in Nigeria. Moreover, the implication of those challenges will be explored and recommendations made for enhancement of pace of national development. The following research question and null-hypothesis guided the study.

*Research Question:* What are the challenges facing female education in Nigeria?

*Hypothesis:* There is no significant difference in the mean perception scores of the male and female teachers on the challenges facing female education in Nigeria?

## **Methodology**

The design for the study is survey; hence the study is aimed at eliciting information from the research subjects on the issues of female education in Nigeria. The area of the study is Anambra State. Anambra State has six education zones.

*Population of the Study:* The population of the study comprised all the secondary schools teachers in the six education zones in Anambra State. There are 3993 secondary school teachers in the 6 Education Zones. The number of male teachers is 277, while the number of female teachers is 3716. The rationale for choosing teachers for this study is due to the experiential knowledge on the values of education in national development.

*Sample and Sampling Technique:* Multi-stage sampling procedure was used. A random sample of 5 schools was drawn from each education zone. This means that 30 schools were sampled from the 6 education zones. In all the sampled schools, 50% male and female teachers were sampled using stratified random sampling technique, giving a sample size of 138 male and 1858 female teachers. The total number of the sampled subjects is 1996.

*Instrument for Data Collection:* Questionnaire instrument was used to collect data. It consists of two sections, sections 'A' and 'B'. Section 'A' consists of personal data of the respondents, while section 'B' consists of 10 items which sought information on the challenges in female education in Nigeria. The instrument was rated on a modified 4 point rating scale of Strongly agree (4 points), Agree (3 points), Disagree (2 points), and Strongly disagree (1 point).

Validation of the Instrument: The instrument was face validated by two experts in Social Science Education Department, University of Nigeria, Nsukka.

*Reliability of the Instrument:* The validated instrument was trial tested on 20 teachers who were not part of the research subjects. Trial testing was carried out in order to ascertain the internal reliability of the instrument using Cronbach Alpha co-efficient. The result of the test reveals internal consistency co-efficient of 0.78. This shows that the instrument has a high reliability.

*Method of Data Collection:* The researcher used 5 trained research assistants who helped her in the distribution and collection of the instrument. Out of 1996 questionnaire distributed, only 1968 were retrieved, while 28 belonging to female teachers were not returned. However, the number retrieved was considered good enough to be used for the study.

Data were analyzed in relation to the research question and null-hypothesis stated for the study. Mean was used to answer the research question, while 't' test was used to test the null hypotheses at 0.05 level of significance.

## Results:

The data obtained were presented in tables 1 and 2 below. Table 1 contains information that answer the research question, while table 2 contains information for testing the null-hypothesis.

**Table I: Mean Perceptions of Male and Female Secondary School Teachers on the Challenge to Female education in Nigeria**

S/N	ITEM	MALE (138)								FEMALE (1830)							
		SA	A	D	SD	X1	SD1	DEC	SA	A	D	SD	X2	SD2	DEC		
1	Gender discrimination at home and community	65	23	42	08	3.05	1.00	A	1008	820	2	-	3.55	0.50	A		
2	Low parental income	42	28	33	35	2.56	1.17	A	821	1000	09	-	3.44	0.51	A		
3	negative traditional and cultural practices	56	29	30	23	2.86	1.13	A	991	209	529	101	3.14	1.02	A		
4	absence of a gender sensitive school environment	69	26	04	39	2.91	1.29	A	721	1008	100	1	3.34	0.58	A		
5	Religious factor	12	14	69	43	1.96	0.87	D	208	100	993	529	1.99	0.89	D		
6	girls low-self image of themselves	62	44	16	16	3.10	1.01	A	1003	705	100	22	3.47	0.66	A		
7	females adherence to cultural norms	72	30	22	14	3.16	1.03	A	1009	700	115	06	3.48	0.63	A		
8	inadequate funding to address gender and female specific needs	61	45	12	20	3.07	1.05	A	701	1020	69	40	3.30	0.65	A		
9	corporal punishment in the school	05	03	98	32	1.86	0.62	D	08	100	122	1600	1.19	0.54	D		
10	Governments' inability to analyzed and monitor gender issues in education policies and programmes	68	30	32	08	3.14	0.97	A	1112	400	208	110	3.37	0.91	A		
	<b>Grand mean</b>					<b>2.78</b>	<b>1.03</b>						<b>3.03</b>	<b>1.13</b>			

Key: SA – Strongly Agree A - Agree  
 D - Disagree SD - Strongly Disagree

The mean ratings of male teachers in table 1, reveals that all the identified items on the challenges in women education, with the exception of items 5 and 9, have the mean scores range from 2.56 to 3.16 with the standard deviations range from 0.62 to 1.29 respectively. However, items 5 and 9 have the mean scores of 1.96 and 1.86, with the standard deviations range from 0.87 and 0.62 respectively. Similarly, the mean ratings of female teachers reveal that all the items with the exception of items 5 and 9, have mean scores range from 3.14 to 3.55 with the standard deviations ranging from 0.50 to 1.22 respectively. The mean score of item numbers 5 and 9 are 1.99 and 1.19 with the standard deviations of 0.89 and 0.54 respectively.

**Table 2: ‘t’ test Analysis of the Male and Female Teachers’ views on the Challenges of female Education**

Source	N	X	SD	Df	‘t cal’,	‘t’ crit (0.95)	Dec
Male	138	2.78	1.03	1966	8.33	1.96	Sign
Female	1830	0.03	1.13				

Result in table 3 shows that the ‘t’ test statistic computed for the difference in the two mean scores at 0.05 level of significance is 8.33. The computed ‘t’ is greater than the critical ‘t’ value of 1.96. The null hypothesis is therefore rejected.

**DISCUSSION:**

The findings in table I, reveal that male teachers and their female counterparts were of the opinion that gender discrimination at home and community, low parental income, negative traditional and cultural practices, absence of a gender sensitive school environment, girls’ low self image of women fold, females adherence to cultural norms, inadequate funding to address gender and female specific needs, and governments’ inability to analyze and monitor gender issues in education, are challenges facing women education in the country. The items which the two groups disagreed that are not hindering women education in Nigeria are item numbers 5 and 9 relating to religious factors and corporal punishment respectively. The finding that religious factors do not hinder women’s education is contrary to Adama (1987) who maintains that religion is one of the greatest problems in women education in Sokoto. Contrary the finding in this issue could be attributed to religious ideological differences which are likely to be affected by their value system on female education.

The findings that gender discrimination at home and community, negative traditional and cultural practices and female adherence to cultural norms hinder female education agree with Ozigboh (1998:71) who opines that traditionalism has been the main impediment in the provision of education for girls. In line with the findings include, Lifanda (2007:71) who in his own view states that, “at home and community levels gender-discrimination hinders the full participation of girls in schools. Preference is given to educating boys, while girls are used as family care-givers and income earners”.

Results form table I, which reveal that low parental income and inadequate funding to address

gender and females specific needs shows that funding is a very significant factor for effective policy implementation of educational policy. This finding is in line with FRN (2005:20) which points out that, “The decrease in percentage share of female enrollment might be due to the hidden cost in education (cost of uniform, feeding, transportation fare, etc) and opportunity cost of sending girls to school”. This finding negates the 1990 World Declaration on Education for All which states that the most urgent priority is to ensure access to and improve the quality of education for girls and women and to remove every obstacle which hampers their active participation. The absence of a gender sensitive school environment and Governments’ inability to analyze and monitor issues in education policies and programmes revealed in this study were pure indication that funding is a very serious factor in achieving the goals of education. These findings however is in line with Lifanda (2007) who maintains that, inability to analyze and monitor gender issues in education policies as well as lack of adequate funding to address gender and girls’ specific needs are major constraints in achieving gender parity in education.

The finding that females’ low image of themselves hinder their participation in education is in line with Ozigboh (1998) who states that, women have low self-image and that they also lack motivation and are satisfied with lower social status.

In table 2, the mean scores of the two groups of respondents were tested for significant difference and the result shows that the calculated ‘t’ (8.33) is higher than ‘t’ critical (1.96) and so the null hypothesis of no significant difference was rejected. This shows that the perceptions differ with gender, while the males were mainly agreeing with the suggested challenges, the female teachers were strongly disagreeing with them. Moreover, the overwhelming proposition of the sample involved in the study would influence the result lead to rejection of the hypothesis.

### **Implications of the findings of the study**

One obvious implication in gap in female education is its adverse effect in national development hence; women were endowed with great virtues and potentials that when properly channeled and tailored through education will help a great deal in the development of the nation. Any nation that does not take education of girls or women serious suffers in the wheel of development. Naturally, women are closer to their children. For our children to function effectively in the society, women need general education as to empower them socially, economically and politically. This invariably enables them inculcate essential virtues in their children who by implication are future leaders. Education by implications guarantees women opportunity to exercise their political rights as well as participating in political change.

The saying that a healthy nation is a wealthy nation has far reaching implications in the education of females who are future mothers. Women with more schooling have healthier and more vigorous children (UNESCO 2000). Children of educated mothers have ample opportunity to formal education than their counterparts whose mother is illiterate. This is because education is a critical weapon against poverty. Women education has improved standard of living in many homes. It is important to note that for national development to be fully attained education of women must be given priority attention hence they constitute more than half of the entire nations population.

### **Conclusion and Recommendations:**

Since women occupy a central position in the family and the society and since development is

hardly attainable without their full involvement in education, female education should be encouraged. They should not be seen as second class citizens in their own land. Education of girls is very critical and stands to be the major factor in national development.

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

1. The study calls for dismantling of gender discriminations and some cultural practices in our homes and communities. Equal opportunities should be given to both girl and male child by their parents.
2. To achieve the above objective it is of utmost importance that school environment should be girl-friendly, taken into considerations girls from poor homes and those with special needs as this will reduce the rate of girls' drop-out.
3. Awareness campaign on the significance of female education, need to be strengthened. This invariably will help females not to look down on themselves it will also help them to appreciating virtues and potentials that God endowed in them.
4. All stake holders in education industry, private, governmental and non-governmental organization should ensure that female education do not suffer in this country. This means that all hands should be on deck in financing education to ensure effective participation of females in the new wave of Education For All (EFA). Education for all is the business for all. It is not the exclusive affair of the government.

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# Churches and Mosques Partnership in Tanzania: A Historical Perspective on Secular Education Development

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## **Abstract**

*This article is aimed at establishing the extent to which churches and mosques have contributed to the development of secular education in Tanzania. After more than two decades of being barred from playing a major role in education provision due to the country's 1960s nationalisation policy, both Christian and Islamic institutions have picked up the gauntlet and contributing meaningfully in developing secular education at all levels, from early foundational to higher education in the country. Using documentary and historical analysis, this paper examined how churches and mosques are in the vanguard of complementing government efforts in developing secular education and helping to mitigate unemployment. The paper further argues that because of the far-reaching implications of the involvement of churches and mosques in the provision of secular education, there is an urgent need for these partners to play a role in education policy and planning issues to further enhance their participation in education development.*

Keywords: church, mosque, partnership, secular education development, Tanzania

## **Introduction**

Religious institutions have made notable contributions in the field of service delivery in different parts of the world. The scope of religious institutions in welfare provision is currently further expanding through the rapidly-growing activity of Islamic non-governmental organisations (NGOs) throughout sub-Saharan Africa (Ter Haar, 2006, p. 361). This is a fact that must be taken into account even as a small segment of these religious institutions threatens to blot the enormous contributions these institutions have made historically and continue to make in the contemporary period.

Indeed, the dramatic rise of religious fundamentalism has led to some misgivings about religions and their role in society considering that the cardinal principle of all these major religion has been to promote peace, love and harmony. Many people today generally agree that religious fundamentalism is a global problem affecting countries in both the North and South. In the United States, for example, in the 1980s innocent people belonging to the Branch Davidians Sect under David Koresh died tragically due to fundamentalist religious teachings (Giddens, 2006). In fact, as this paper was being written, calamities caused by religious affiliated movements are mounting in Africa and elsewhere. In Uganda, for example, there is one of the Africa's longest-running civil wars led by the Sectarian Christian militant group—the Lord's Resistance Army (LRA). Many atrocities, such as the loss of human lives and property in Uganda and neighbouring countries have resulted from this protracted civil strife. In war-torn Somalia, the emergence of religious fundamentalist groups have complicated an already intractable conflict, with a destabilization influence that is also causing instability in that country as well as neighbouring ones.

In Tanzania, for six consecutive six months from June to December in 2009, one Sectarian Christian (“Seventh Day Adventist”) had its followers engaged in actions that shocked many

Tanzanians. Without air tickets or making proper travel arrangements, the followers of this sect (including both adults and children) from Mwanza, Shinyanga, Mbeya regions and other parts of the country gathered “in faith” at the Mwalimu Julius Kambarage Nyerere International Airport, waiting for a flight to Iraq with the sole mission of taking the Word of God to the Iraqis. This was an example of religious fanaticism at its worst since adults abandoned their productive activities to embark on a sham mission; children were denied an opportunity to be in school. But this was only the extreme downside of religious institutions, which cannot discount the major strides religious institutions are making in Tanzania.

On the whole, religious institutions have strategically served as development partners, especially in the provision of social services. Evidence of the positive contribution of these religious institutions in the provision of social services, including secular formal education, abounds. In Tanzania, President Jakaya Kikwete in his 14 May 2010 speech to the clerics acknowledged the contribution of religious institutions to the development of education, health and other social services (Agola, 2010; Athumani, 2010). This notable contribution followed the dramatic twists of the 1990s when Tanzania revisited its 1967 decision that resulted in the nationalisation of the private educational institutions under the ideology of Socialism and Self-Reliance. This policy forced Christian and Islamic institutions as well as other religious bodies on the sidelines in the provision of secular education for three decades. However, the government realised that it could not go it alone any longer due to financial constraints and thus made a u-turn and re-invited non-governmental partners, including religious organisations, to invest in education:

Enhancement of partnership in the provision of education and training, through the deliberate efforts of encouraging private agencies to participate in the provision of education, to establish and manage schools and other educational institutions at all levels (United Republic of Tanzania (URT), 1995, p. xii). This paper attempts to establish the extent to which Christian and Muslim institutions have partaken in the development of secular education in Tanzania from both a historical and contemporary point-of-view.

### **Methodological Reflections and Information Sources**

This article is largely historical in nature and character. Information contained in this article results from the analysis of documents on the engagement of Churches and Mosques in secular educational practices (Sharma, 2000). The documents or records that were relevant to this paper were of two main qualities. The first one contained information on the contribution of voluntary religious organisations to the development and practices of secular education in Tanzania. These included policy documents, books, journal articles, and newspapers. Also, empirically-based research reports were critically investigated and documented. More specifically, research reports included Master’s degree dissertations. These documents were accessed in the main and education libraries at the University of Dar es Salaam. In addition, some important documents were accessed in research units such as the Research and Education for Democracy in Tanzania (REDET) office. More importantly, offices and/or personal libraries of academic members of staff in the School of Education also served as sources of information.

The information from these hard-copy sources were complemented from electronic sources. This latter source mainly provided information on the experiences of voluntary religious institutions in the development of secular education development in other parts of the world (Cohen, Manion &

Morrison, 2007). The Internet was, therefore, very instrumental in accessing and tapping such type of soft document information (Booth, Colomb, & Williams, 2008). These documents were critically examined for their relevance and reliability of the information they provided. On the whole, their information on the contribution of Churches and Mosques to the development of secular education subjected to criticism (Cohen et al. 2007). Although largely qualitative in character, the article has a few aspects of quantitative information especially on statistics relating to educational institutions owned by these religious institutions.

## **Results and Discussion**

### *Conceptual and Definitional Issues: Religion and Partnership*

For consistence and a better understanding of this article, three key concepts are defined — religion, education, and partnership. Scholars have been unable to come up with a consensus on what constitutes religion (Kirkland, 1976; Williams, 1962). The Oxford Advanced Learner’s Dictionary defines “religion” in different ways, including as a “belief in the existence of a god or gods, esp. the belief that they created the universe and gave human beings a spiritual nature which continues to exist after death of the body” and as “a particular system of faith and worship based on religious belief” (Hornby, 1995, p. 988). Generally, the notion of religion is not limited to just one particular faith as it is a general term that embraces different belief systems, both traditional and modern in character. This article focuses on organised religions and its institutions —Churches and Mosques—and their involvement in the provision of social amenities such as education as part of their drive to attain their spiritual goals. Hence, discussions on the nature and character of partnership of Churches and Mosques in education draws on the modern view of religion as imposed on African from other parts of the world.

The notion of “partnership” is not novel in the education industry in Tanzania. The Oxford Advanced Learner’s Dictionary defines: “the state of being a partner or partners, esp. in business” and as “a group of two or more people working, playing... together as partners which is owned by two or more people” (Hornby, 1995, p. 844). In this sense, partnership is about collaboration towards a certain course of action. However, the notion of partnership as it applies to this paper draws on Draxler (2008, p. 31) who treats the concept in terms of “an arrangement whereby partners pool their competencies and commitments, manage a venture jointly and share equally in risk, benefit and losses”. In the context of the education sector, Draxler looks at partnership as “the pooling and managing of resources, as well as the mobilization of competencies and commitments by public, business and civil society partners to contribute expansion and quality education” (p. 16). From literal and technical perspectives, and/or as a concept and practice, partnership in this paper refers to joint mobilisation of resources to bring about people’s development. In the Tanzanian context, partnership—or simply the participatory approach—in the provision of education has become indispensable since the government is no longer singularly able to provide its people with quality education due to financial constraints (Maliyamkono & Mason, 2006). Key partnership features in Tanzania as they relate to education provision include the following:

- a. Working together in a complementary fashion to produce harmony and optimise the quality of the final product made up of education services.
- b. Having common objectives such as making and sharing of profits, which, in the case of



education, is the production of a well-equipped future generation, and satisfying current clients (parents, pupils, and employment).

- c. Co-operation and the pooling together of resources for common goals.
- d. Multiplicity of players bounded by common interest and goals (Omari, 2002, p. 88).

The partnership in education provision of interest in this paper primarily focuses on the post-1995 policy, which strategically and deliberately encouraged the evolution of such a partnership. Partners in education development include individuals, communities, and both governmental and non-governmental organisations (URT, 1995). Churches and Mosques are among the NGOs that are actively partaking in the development of secular education in Tanzania.

### **The Need for Involvement of Religion in Education**

The fact that religious activities in education in Tanzania are historical in nature and character is indisputable. The paramount question here is why churches and mosques get involved in the development of secular education when their primary goal is to promote matters of faith: Historically, education was considered as an important means through which missionaries could realise and achieve their objectives of bringing the supposedly barbaric ethnic groups from the “dark” into the “light” in Africa. In the 1860s, the main concern of the Christian missionaries in Africa was primarily limited to spreading of the Gospel or Christian Culture (Lawuo, 1978). Education was therefore a means through which to get new converts and a few lead persons who could help the missionaries spread the Gospel. In this regard, circumstances necessitated the need to provide education to Africans. Education was also seen as an agency of socialisation aimed at initiating Africans into the Western modern culture. The process was necessary at this material time to facilitate the realization of both Christianisation and colonisation..

According to Lawuo, the Christian missionaries also used education as a means of rehabilitating freed slaves in the 1860s. The freed slaves far-removed from their original homes, with some hardly able to trace their way back were natural converts and beneficiaries of the education that missionaries engendered. These were hosted in mission centres where they were taught reading, writing and counting (3Rs). The recent government policy factor has rejuvenated the involvement of religious organisations in the provision of education. The Tanzania’s Education and Training Policy of 1995 states that: “[E]nhancement of partnership in the provision of education and training, through the deliberate efforts of encouraging private agencies to participate in the provision of education, to establish and manage schools and other educational institutions at all levels” (URT, 1995, p. xii). Indeed, giving the private sector an opportunity in education was a inevitable shift of emphasis in the education sector, resulting from the economic crises of the 1980s (Maliyamkono & Mason, 2006).

### **Voluntary Religious Agencies engaged in Education Programmes**

The establishment of formal education in Tanzania owes much to the activities of different religious agencies. These activities date as far back as the 12th century when the Arabs are believed to have introduced formal education on the East African coast: “Koranic schools were attached to mosques and were designed to promote Islamic religious education for boys” (Jimenez & Lockheed, 1995, p. 31). The incremental involvement of Islamic non-governmental organisations in the provision of education in East Africa has been widely documented. In 1947, the East African Muslim Welfare Society was formed to address amongst other things education related issues (Leurs, Tumaini-Mungu

& Mvungi, 2011). According to Leurs et al, the All-Muslim National Union of Tanganyika (AMNUT) was formed in 1957 to address concerns regarding the advancement of Muslims in education. Recently, the number of NGOs in Sub-Saharan Africa increased from 138 to 891 in the 1980s and 2000s (Ter Haar, 2006). In Tanzania, the Muslim Council of Tanzania, BAKWATA by its Kiswahili acronym has been augmenting initiatives by individual mosques in providing Tanzanians with education. BAKWATA's involvement in education development has a long standing history, dating back to the 1960s. In fact, the establishment of BAKWATA was preceded by the closure of the East African Muslim Welfare Society in 1968. Today, schools and colleges run by BAKWATA are found in almost every region of Tanzania. There are also several Islamic agencies operating in Tanzania. These include the African Muslim Agency (Direct Aid), which is directly involved in education provision:

As for education in East Africa, the agency has opened a faculty of Islamic law in Thika (near Nairobi) in Kenya, and a college of education in Zanzibar. Education and vocational training constitute the agency's main thrust toward building stronger foundations for the participation of Muslims in politics and civic life in these countries. The education provided for by the agency's institutions differs from the standard curricula offered elsewhere in the region only in so far as it provides, apart from secular teaching, an education in Islamic religious knowledge. In up-country districts the agency has been particularly active in constructing mosques and primary schools, as well as in digging wells and providing medical care [to] local communities (Ahmed, 2009, p. 429).

On Tanzania Mainland, this African Muslim Agency has had its educational influence in Korogwe District. Also, the African branch of al-Haramayn and the Bilal Muslim Mission are involved in education development in different parts of the country. Of most notable Muslim agency deeply and extensively involved in secular education development is the Aga Khan Foundation. Since the 1900s, the Aga Khan foundation has been involved in all levels of education, from the early childhood education (ECE) to higher education through the Aga Khan Education Services (AKES). The Aga Khan established schools virtually in every region in Tanzania. Some of its schools such as Azimio Primary school in Mbeya, Lugalo Secondary school in Iringa, Tambaza Secondary School in Dar es Salaam were nationalised by the government.

The role of these Christian agencies in the secular education development dates back to the 1860s. Christian agencies that were involved in provision of secular education included the Holy Ghost Fathers (HGF) and French Roman Catholic Missionary Society (FRCMS), belonging to the Roman Catholic Church, the Universities Mission to Central Africa (UMCA) for the Anglican Church. Another high profile early Christian agency was the Leipzig Lutheran Society that guided the Lutheran Church in the provision of secular education. These agencies were pioneer Christian agencies in the provision of secular education in the country. Today, the Christian agencies appear in many other forms.

### *Education Development Initiatives*

As noted earlier, the education that religious institutions have provided in Tanzania over the years have been both religious and secular in character. Many people in the country look back and appreciate the contribution of religious movements to the development of education in the country. In fact, the current socio-economic development in Tanzania owes much to the rudimentary efforts of religious organisations that developed the educational foundation that subsequent governments in the country were able to build upon. This section outlines the involvement of religious organisations in two major historical periods.

### *Pre-formal Colonial Era (1800 -1884)*

Before the introduction of religions from abroad, African societies had indigenous beliefs that determined their cultural dispensation. As Mukandala (2006, p. 1) puts: “Indigenous belief systems prevalent in Africa were joined first by Islam, [sic] and later Christianity”. These traditional beliefs governed everyday social, cultural, economic and political activities (Lawi & Masanja, 2006). These religious values were explicitly reflected in the African indigenous education, primarily informal education. Thus, when the foreign religions were introduced into Africa, they did not find a void.

The general misconception is that religious activities in Africa began with the early contacts with the external world from as late as the eighth or ninth century AD, when evidence of such activities data back to pre-historic times: “On different occasions and missions, people especially along coastal areas of the Indian Ocean, came into contact with others, mainly traders from the Middle and Far East” (Anangisye, 2008). Traders played a dual role as economic and religious emissaries. The African coast along the Indian Ocean fell largely under the influence of Islam, with Arab traders establishing aspects of formal education long before the advent of Christian missionaries. Through Koranic schools, Tanganyikans learned the 3Rs in Kiswahili. This was the case for virtually all regions along the East African coast, including Zanzibar and other islands in the archipelago. Other areas that benefited from such early Islamic schools included caravan routes and trade centres in the interior of the present-day Tanzania, including areas in Tabora and Kigoma regions. This kind of education was necessary in the perpetuation of spiritual values.

This when Christian missionaries stepped in, there were already Islamic educational structures in place. These missionaries were instrumental in introducing Western-type of education and modernity in Africa. The European interests that also sustained missionary interests as well were also tied to economic interests: “European economic interest in East Africa was largely responsible for the appearance of missionary activities in East Africa which was accompanied by the introduction of western education” (Lawuo, 1978, p. 43). It became evident from the outset for both the missionaries and the colonial administration that they had to provide formal education to Africans to achieve their objectives, whether religious or economic. In some cases, religious societies mainly from Europe began spreading the Word of God long before the establishment of formal colonial structures in the country. Indeed, the Roman Catholic, Anglican, Moravian and Lutheran missionaries had penetrated the interior of Tanganyika prior to formal colonial rule, setting up churches, schools, workshops and trading centres (Mbilinyi, 1979, p. 77). The establishment of “formal education” by these missionaries in pre-colonial era was a blessing in disguise. Notable early pace-setters in starting schools included, as mentioned elsewhere, the French Catholic Holy Ghost Fathers (FCHGF) and Universities’ Mission to Central Africa (UMCA). These Christian agencies “used education as their tool” to win over “converts and making entry into new areas to pave the way for Western socio-economic and political structures” (Lawuo, 1978, p. 43).

On the whole, it was in the best interests of the Arab and Europeans to provide some education to African to realise their religious and socio-economic ambitions in East Africa. The early education inroads by both the Koranic and Christian missionary schools laid the educational foundation which contributed appreciably to the process of formal colonisation in Africa. The next section explores the place of religion in the development of education in Tanganyika.

### *Colonial Era (1885 – 1961)*

The contribution of religious organisations to the development of education in Tanzania during the colonial period can be examined from a comparative perspective because Tanzania was literally ruled by two colonial powers, each with its own colonial legacy. Tanganyika was colonised and occupied, first by Germany (from 1884 to 1919) and later by the British as a protectorate following the defeat of the former in the First World War (from 1919 to 1961).

1885 – 1919:

During the 35 years of German rule in Tanganyika, religious societies (missionaries) continued their efforts to invest in education. The Roman Catholic, Anglican and Lutheran churches were all in the vanguard in developing formal education institutions in the country. In the 1890s, the missionaries were executing their education activities alongside the colonial efforts of the German administration in German East Africa (which included now Burundi, Rwanda and Mainland Tanzania, then Tanganyika). During this period it was difficult to distinguish between the motives of the missionaries and those of the colonial administrators. Much of the available literature indicate that the missionaries, much like the colonial administrators, established and limited their activities or settlements to areas that were economically viable. These areas included agricultural areas included Arusha, Iringa, Kilimanjaro, Songea, Tukuyu, Masasi, and Lushoto to mention but a few. The legacy of missionary education activities in these areas is still evident. Many popular schools in today's Tanzania such as Tosamaganga in Iringa were established during this period.

1919 – 1961:

During about 42 years of British occupation in Tanganyika, many more religious institutions, especially churches, joined the efforts that further enhanced the development of education in the country. Like under the German rule era, the traditional power-houses—the Roman Catholic, Lutheran, Anglican and Moravian churches—continued with their efforts of establishing schools in different parts of the country. New entrants in the provision of education during this period were other Christian denominations, albeit on a smaller scale. In the 1950s, the Assemblies of God Church, for example, had established schools in Mbeya Region (in Mbeya Municipal and Rungwe districts). The contribution of religious organisations to the development of education in the country during pre-colonial and colonial periods cannot be underrated. According to the All Africa Churches Conference (AACC) (1963), the census of schools made in the 1920s showed that in 1923, with the exception of South Africa, the English-speaking colonies has about 6, 200 Christian mission-run schools as opposed to only just over 100 government schools. In the 1930s, Tanganyika had 2, 668 denominational schools as opposed to the 84 schools owned by the Government and the Native Authority; and of these schools had enrolled about 155,069 (96,755 boys and 58,314 girls) and 7, 979 (7599 boys and 420 girls) respectively (Mushi 2006). On the whole, more than 95 per cent of all pupils were enrolled in Christian mission-run schools.

### *The Post Independence Era (1961 onwards)*

The contribution of religious institutions to the educational development of the country during the post-independence era was brought to a sudden halt after a rather promising start. The 1967 Arusha Declaration, which put Tanzania on the path to the ideology of egalitarianism, also marked a turning point in the education sector, especially with regard to the role the religious institutions would continue playing. Under the newly-adopted philosophy of Socialism and Self-Reliance (Ujamaa na Kujitegemea), the government subsequently nationalised all privately-owned schools. The nationalization policy, which

touched virtually all sectors, in education was aimed at making education accessible to every Tanzanian. As a result, schools owned by Muslims and Christians were all taken over by the government in the 1960s.

#### *Basic Education:*

Basic education refers to early childhood education (ECE), primary education and adult and non-formal education. To a large extent, ECE in Tanzania is largely an innovation of religious institutions. So far there is little or no scholarly proof of organised ECE before independence in Tanzania (Anangisye & Ishumi, 2010; Mtahabwa, 2009). For a long period, the ECE in Tanzania was largely a prerogative of the churches and mosques. Basic education was, in fact, much more widespread in the country than other levels of education. At independence in December 1961, Tanganyika had about 3,238 schools nationwide (Mbunda, 1978). Most of these schools were run by religious institutions, an indication that these religious institutions would continue playing a significant role even in the post-independence period.

This new era also entailed implementation of new reforms in the education sector to address the imbalances that had brought about inequities in accessing education resources. Initially, at least for a few years, schools run by religious institutions continued to operate alongside government schools. The dramatic twist did not come until after the 1967 Arusha Declaration. After the enactment of the 1969 Education Act, the Tanzania Government extended its newly adopted Philosophy of Socialism and Self-Reliance to the education sector as well. With the mass nationalisation that saw all primary schools owned by the religious institutions nationalised and integrated in the government school system, the religious institutions were left in the cold. Their dominance and proactive participation in the provision of secular education in the country was now a thing of the past. In fact, primary education provision became the sole responsibility of the state.

The offering of non-formal education (NFE) by religious institutions did not start with the introduction of the 1995 Education and Training Policy in Tanzania, but rather a continuation of missionary endeavours started during the colonial period. Indeed, various religious institutions, mainly Christian, established centres that equipped Tanzanians with various trade-crafts. Non-formal education in Tanzania includes extension and income generation activities, life skills, and basic literacy (URT, 2010). The religious organisations have been good at providing non-formal education to people in their parishes since they can easily identify with the immediate needs of their parishioners. The Roman Catholic Church, for example, through CARITAS runs such non-formal education programmes in different parts of the country. These activities are usually loosely organised, targeting groups with needs relevant to their immediate environment (Forojalla, 1993).

#### *Secondary Education:*

The secondary education sector did follow more or less the same fate at the one described above for basic education in so far as the contribution of religious institutions were concerned. One can also further note the changes that affected the growth of secondary education in the 1980s and 1990s. During this period, the government instituted policies in favour of further expansion and growth of secondary education (Lassibille, Tan and Sumra 1999; Galabawa, 1999). These policy changes acknowledged the importance of introducing more secondary schools outside the state system. In his

paper entitled, “Non-Government Secondary Schools in Tanzania: Issues related to their Characteristics, Financing, Unit Costs and Selection”, Galabawa (1995, p. 70) explains succinctly:

... due to high social demand for secondary education, and also because of a crisis brought about by low transition rates between primary and secondary levels coupled with fiscal gaps in financing education in general, the government had to give in political and social pressure by allowing the opening up of non-state secondary school in the 1980s.

Since then, different religious agencies alongside other private agencies have taken an active role in the provision of secondary education. These schools are scattered all over the country, operating alongside government-run schools. One can also note here that the low transition rates from primary to secondary education attests to the impact of the EFA campaigns since independence that laid a strong foundation that could not be ignored in subsequent years.

Table 1. Registered Secondary Schools (SS) in Tanzania Mainland, by region,

SN	Region	Government	Community	Non-Govt	Seminary	Total
1	Arusha	3	63	34	3	103
2	Cost	5	78	17	4	104
3	Dar es Salaam	8	24	93	20	145
4	Dodoma	5	78	17	4	104
5	Iringa	7	95	32	5	139
6	Kagera	5	85	19	4	113
7	Kigoma	2	59	17	2	80
8	Kilimanjaro	9	125	76	12	222
9	Lindi	1	43	1	2	47
10	Manyara	1	57	5	1	64
11	Mara	4	107	16	1	128
12	Mbeva	4	124	46	2	176
13	Morogoro	7	73	16	10	106
14	Mtwara	7	65	5	2	79
15	Mwanza	6	133	26	4	169
16	Rukwa	2	42	7	2	53
17	Ruvuma	4	79	13	5	101
18	Shinyanga	3	99	17	2	121
19	Singida	2	62	8	3	75
20	Tabora	4	54	13	2	73
21	Tanga	4	95	27	5	131
		93 (4%)	1,640 (70%)	505 (22%)	95 (4%)	2,333 (100%)

Source: Tanzania Education and Information Services Trust (2006)

Statistically, Community-based Secondary Schools (CSS) constituted a larger percentage of registered secondary schools than other categories in 2006. This category is a very recent phenomenon introduced as it was in the 2000s as a reaction to the Universal Primary Education (UPE) through the Primary Education Development Plan (PEDP) without a concomitant universal secondary education.

The number of CSSs is on the increase as the government targets to have at least one such secondary school in every ward. The mushrooming of these schools, however, has come at a price. There is a dire shortage of classroom space, teachers, teaching aids and other amenities that make teaching and learning a productive and enjoyable experience. Unlike these hurriedly set-up schools, the secondary schools run by religious institutions are offering the quality education that most of these CSS are unable to provide. Thus, the 22% of non-government secondary schools largely owned and run by religious agencies have come in handy in terms of providing the quality education that Tanzanians of every social background crave. It is widely acknowledged that “nonprofit religious and community schools rather than profit making enterprises now dominate the sector” (Jimenez & Lockheed, 1995, p. 34).

#### Teacher Education - Religious-Owned Teachers Colleges:

The nationalisation of missionary and NGO run schools in the 1960s also extended to privately-owned teacher training colleges. Most of these colleges had hitherto belonged to Church and Mosque-related organisations. With the government shift in policy, the churches and mosques have picked up the gauntlet again and have been building and opening new colleges as secular education development partners. By October 2010, the country had about 64 non-government run colleges of teacher education spread all over the country. Of these, about 30 (47%) were owned by organizations affiliated with either the church or the mosque. In addition, churches and mosques are increasingly being involved in the professional development of teachers. The Agha Khan Development Network (AKDN), for example, has been working with the Ministry of Education and Vocational Training (MoEVT) to improve teacher training and the quality teacher-learning methods. The agency has been providing pre-service and in-service teacher training courses in social science subjects. These programmes have to-date benefited about 100,000 students and more than 850 teachers on Tanzania Mainland and Zanzibar (AKDN, no date).

Similarly, Teacher Training Colleges registered under the Christian churches offer teacher consultancy services. They visit schools to observe and offer advice on teaching and learning as part of concerted efforts aimed at facilitating the emergence and adoption of new academic standards of teaching and learning. They also offer in-service seminars to upgrade the skills of the teachers. In addition, Christian Teacher Resource Centres have been established.

Higher and/or University Education: Like in most countries in the Sub-Saharan Africa, the higher education sector offering university education in Tanzania has a relatively short history. In particular, the conception of Tanzania’s premier university dates back to the 1960s. In 1961, the University College of Dar es Salaam was established as one of the constituent colleges of the University of East Africa. Others included Makerere University College in Kampala, Uganda, and University College of Nairobi, Kenya, established in 1922 and 1954, respectively. The University College was reconstituted as the University of Dar es Salaam (UDSM) in 1970 following the dissolution of the University of East Africa and the enactment of Act No. 12 of 1970 by Tanzania’s Parliament. The University of Dar es Salaam had remained the only institution that offered university education in the country until its Faculty of Agriculture, Forestry and Veterinary Sciences based in Morogoro was transformed into a full-fledged university, Sokoine University of Agriculture (SUA). However, these two state-run institutions were unable to satisfy the ever-increasing demand for university education provided freely since 1961. Cost-sharing had to be introduced as part of reforms aimed at reducing the government burden.

The government formulated the Education and Training Policy (ETP) in 1995, a national

guideline that opened doors wide for partners from the private sector within and out the country to provide higher education in the country. Like at the lower levels of education, the religious agencies responded positively to this challenge and started investing in higher education. A quick transformation of the higher education sector followed with the burgeoning universities owned by religious agencies. There were about 20 non-government universities and university colleges in the country by 2010 (BEST, 2010). Over 80 % of these institutions recognised by the Tanzania Commission for Universities (TCU) were owned and run by religious organisations (Anangisye & Ishumi, 2010). These universities and colleges include the St August University of Tanzania (SAUT), Tumaini University, Makumira University, Mount Meru University, Mwenge University, Muslim University of Morogoro. These higher learning institutions have helped to increase the number of people matriculating in universities. These universities and colleges affiliated with religious institutions are complementing efforts by public universities to achieve the government's major aim for providing higher education in the country:

The aim of higher education in the country is to enable Tanzanian citizens or youth [to] become well-educated, knowledgeable and well-versed [in] perspectives, skills and developments in social, economic, cultural, scientific and technological fields. Higher education enables youth and all people in any cadre [to] face the challenges of development that require immediate and long resolutions, especially, in the eradication of poverty individually and [collectively] at national level (URT, 2010, p. 91). The contribution of both private and public universities to the churning out of high level manpower in the country takes different forms.

Figure 1. Enrolment in Government and Private universities and university colleges

Figure 1 shows that the private or non-government universities and university colleges have increased the number of opportunities for people to get a university education in the country. Student enrolment in non-government universities and university colleges is on the upswing.

#### *Involvement in Special Needs Education*

Special needs education sector is also a beneficiary of efforts and initiatives of non-governmental organisations. Scholars in education acknowledge the strong affinity between the mission of religious institutions and the establishment of special needs education in Tanzania. The involvement of religious institutions in special needs education has a short history in Tanzania, dating back to only six decades ago. The first school to cater for children with special needs was Buigiri School (then, The Wilson Carlile School for Blind Boys) which was established in Dodoma Region in 1950 (Tungaraza, 1994). This was about 85 years after the first regular school had been. This early inaugural special needs education facility in Tanzania was a brainchild of the Anglican Church missionaries who saw the urgent need of catering for the special needs of handicapped children. More religious institutions were to follow suit by investing in special needs education but this was years after this nascent effort. Consequently, the Swedish Free Mission established a school to cater for blind in present-day Tabora Region as part of their efforts to provide the neglected disabled children with education, a basic human right. This school was established by Kristine Strinberg. Initially, it was meant to cater for only blind girls, but blind boys were also allowed to benefit from its education in 1964. In 1963, the Lutheran Church also established what was known as Irene School, which catered for blind girls in Lushoto District.



Much of the available literature on facilities catering for children with special needs suggest the need to establish more such schools specifically designed to cater for other children with disabilities such as the mute, physically disabled, and intellectually disabled children (Tungaraza 1994; Possi 1996; Karakoski & Strom, 2005). The Roman Catholic Church, for example, established the Tabora Deaf-Mute Institute (TDMI) in Tabora Region in 1963. Similarly, the Salvation Army Church established a school for children with special needs in 1967. This is one area where churches and mosques can flourish by providing education to people with special needs as doing so is very much in line with their goodwill mission. In fact, religious voluntary religious organisations are in the forefront in providing children with special needs with education, something to further build on.

*Challenges Churches and Mosques encounter in the education provision mission:* Despite their zeal to be partners in the provision of education in Tanzania, Churches and Mosques face several different challenges:

The nationalisation policy phobia: Having had their educational institutions (schools and colleges) nationalised in the 1960s following the Arusha Declaration of 1967, some Churches and Mosques seem reluctant to invest seriously in secular education development. This partly explains why some of the participation of some of the churches and mosques in the provision of education has been rather hesitant or gradual. Understandably, some of the Churches and Mosques are still nursing hangovers over the 1967 Nationalisation Policy as Omari (2002) puts, “once bitten twice shy”. In this light, Omari (2002) further remarks: “[O]bviously that act of the nationalisation of schools was so annoying to the church that it totally killed [off] the motivations of religious organisations in providing the needed funding and entrepreneurial skills which was so vibrant then, creating such good schools as Minaki, Pugu, and Ilboru” (p. 90).

Church constitutional dilemmas in secular education: The primary preoccupation of practically all religious institutions in Tanzania has been mainly spiritual in nature and character. In fact, the constitutions of some churches, for example, do not have any provisions for basic social services such as education as a major concern. Spreading the Gospel remains the only preoccupation for some of these churches. This is the case with KLPT (Mligo, 2009). In light of this lacuna, such churches engage in provision of secular education without any legally-binding commitment. In any case, the appeal to individuals, communities and NGOs to invest in education by the Tanzania Government through the Tanzania’s Education and Training Policy of 1995 is liberal and the partnership in the investment and development of education a voluntary exercise.

Financial constraints: Churches and Mosques, just like other NGOs, face financial constraints, which in turn curtail their full participation and engagement in the provision of secular education. Writing from the experience of Pentecostal Churches, Mligo (2009) found that inadequacy of financial resources limited their resolve to engage fully in the development and provision of secular education. For some of the churches and mosques, they deploy the few available resources mainly in the fulfilment of religious agenda or activities. It must be understood that lack of finance to invest in secular education development is not a new challenge as it is historical in nature and character (Gottneid, 1976). In fact, some of the religious institutions that actively engage in the provision of secular education even seek external financial assistance to execute their projects.

Bureaucracy in the school registration process: Bureaucracy in getting schools registered is another area which challenges Churches and Mosques in their efforts to invest in the development of secular education. In Tanzania, the school registration process is problematic and tedious, with cases

of corruption common (Anangisye, 2006). In his recent study, Mligo (2009, p. 80) established that “the government bureaucracies discouraged the churches [from] engag[ing] in secular education provision” and that “Church ministers complained over unnecessary delays and bureaucratic attitudes of government officers during the process of registration of new schools” with “some officers sometimes demand[ing] illegal payments (corruption)”.

Exclusivity problem: Access to educational institutions owned by religious institutions is often restrictive, especially at the lower levels of education. Although the education on offer in these institutions is largely secular, access tends to be based on the conversion model and this often tacit. On the surface, these religious-affiliated schools are open to every Tanzanian regardless of his or her religious background, but in reality preferential treatment is given to children with religious connection to the church or mosque running those educational institutions. Leurs et al. (2011) explains the reality as follows:

Although they are not permitted to discriminate and most do not, according to informants, most users belong to the provider, allegedly because potential beneficiaries fear that the provider has a conversion agenda. The religious composition of the population is the main explanation where there are exceptions (p. 46).

The challenges listed above suggest that there is an urgent need to address them in order to heighten and enhance the involvement of churches and mosques in the provision and development of secular education in the country. History and experience shows that they have the will and commitment to make a difference in the provision of social services such as education.

## **Conclusions and Recommendations**

The main purpose of this article was to establish the historical profile of the contribution of churches and mosques so far to the development of secular education in Tanzania. Different conclusions can be made from these discussions. Firstly, the involvement of churches and mosques in the provision of education is historically determined and actually laid the foundation upon which today’s secular education has evolved. As TCU (2009) notes over 80 per cent of all non-government universities and university colleges are owned by churches and mosques. One the whole, their contribution has eased the pressure on the government whose financial constraints limited its ability to expand educational opportunities in the country (Maliyamkono & Mason, 2006). Secondly, the remarkable contribution by churches and mosques, much more needs to be done to address the current inequalities and inequities in the provision of secular education, with roots in history as well. Thirdly, the establishment of educational institutions—schools, colleges and universities and university colleges—run by churches and mosques has helped to mitigate the critical unemployment situation in the country.

On the basis of these conclusions, it is recommended that the involvement of churches and mosques in secular education should not only be limited to the development and provision aspect only but also extended to inclusion in educational policy formulation and planning as stakeholders.

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# Administration of Non-Formal Vocational Education Programmes in Nigeria Towards meeting the Challenges of 2020

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## **Abstract**

*The study was carried out to evaluate the administration of non-formal vocational education programmes in Cross River state. Calabar was used as the study area. Taking 22 randomly selected staff 98 learners of non-formal vocational education as the sample for the study. Questionnaire was adopted for data collection. While the data collected for the study were analysed using frequency and simple percentage statistical tools. It was discovered that non-formal vocational education programmes exist in Cross River State. And course taught include the computer skills, though without enough facilities for effective teaching. Crafts making is also taught in non-formal education in Cross River state, others are fashion design/ hair dressing, extension education. Business studies and consumer education are not adequately taught; the courses taught are relevant to the needs of the learners. The major problem facing the non-formal vocational education in Calabar as discovered by the study is lack of qualified vocational education teachers, lack of facilities/ equipment. A few recommendations were proffered by the researcher among which includes: that non-formal education programme should be equipped with modern technologies to ensure effective functional education in Nigeria.*

Keyboard: administration; non-formal education vocational education.

## **Introduction**

As an aspect of life-long learning, non-formal vocational education, which goes by a variety of other names such as out-of-school education, complementary education, supplementary education, extension education, and Apprenticeship, Conferences, Workshop, Extramural studies; depending on the clientele and mode of operation, has for the past several decades, attracted the attention of education planners and practitioners in the area of technical and vocational education. Vocational education is the training and retaining of technical or non-technical given in school or in non-school setting expert. It is an education meant to prepare individuals to enter all occupations both professional and non-professional for livelihood.

Osuala (1981) defined vocational education as training and retraining, which prepares individuals as semi-skilled workers or technicians or sub-professionals including programmes designed for professionals who require a Bachelor degree or higher degree. Rogers (2000) defined non-formal vocational education as the instruction that is not obligatory, structured and is mainly carried outside in the context of formal school. Non-formal education generally, according to professor Klers of Michigan State University as quoted by Nwagbo and Ebiringa (1997) in Ogwo and Oranu (2006) is any intentional and systematic enterprise (usually outside of traditional schooling), in which content, media, time unites, admission criteria, staff, facilities and other components are selected/adopted for particular students, population or situations in order to minimize attainment of the learning mission and minimize constraint on the system.

Combs (1974:II) defined non-formal education as any organized educational activity outside the

established formal system whether operating separately or as an important feature of some broader activity that is intended to serve identifiable learning clientele and learning objectives. Administration as put by Denga (1986) involves the process of directing, coordinating and modifying the efforts of people, and in several cases, machinery, towards the achievement of organizational goals. To ensure effective administration of non-formal vocational education, efforts should be geared towards directing, coordinating and modifying not only the efforts of the people but also the machineries that are involved in working towards the achievement of non-formal vocational education goals.

Vocational education programme in a non-formal environment requires an effective implementation of the stated out of school education, complementary and supplementary education before the goals and objectives could be achieved. It has been discovered that serious problems arising from both tiers of government of the country (state and federal) have contributed to retard the progress of the programme in Non-formal environment. Most non-formal education programmes face a lot of hindrances that had attracted the complaints from the public and the recipients Ogwo and Oranu (2006) discovered that most graduates of non-formal vocational education hardly acquire any skill that will lead them to formal world of work due to some organizational problems.

This paper therefore, is designed to evaluate the administration of non-formal vocational education programmes in Cross River State of Nigeria.

### **Purpose of the study**

The major purpose of this study is to ascertain the extent of the management and administration of non-formal vocational education programmes carried out in Cross River State.

- 1) The study is to: specifically identify the vocational education course taught in non-formal vocational education programmes in Cross River State.
- 2) Determine the quality of teachers in non-formal education programmes in Cross River State.
- 3) Determine the relevance of non-formal vocational education programmes to the needs of the learners in Cross River State.
- 4) Determine the adequacy of instructional facilities for teaching non-formal vocational education programmes in Cross River State.
- 5) Ascertain the problems of administration of non-formal vocational education programmes in Cross River State.

### **Research Questions**

- 1) What are the vocational education courses taught in non-formal vocational education programmes in Cross River State?
- 2) What are the qualifications of non-formal vocational education teachers in Cross River State?
- 3) How relevant is the non-formal vocational education programmes to the needs of the learners in Cross River State?
- 4) How adequate are the instructional facilities for teaching in non-formal vocational education programmes in Cross River State?
- 5) What are the problems in the administration of non-formal vocational education in Cross River State?

## **Delimitation of the study**

This study is delimited to the non-formal vocational education programmes in Cross River State. It involves the investigation into various non-formal vocational education programmes, as well as the qualifications of the teachers, relevance of the programmes to the needs of the learners, instructional facilities and administrative problems.

## **Literature review**

In modern times, serious non-formal education activities, particularly in developing countries, revolve around the 1960s, and traceable to three main routes, namely, practitioners of non-formal education, the international education planners, and the critics of formal education or schooling. The foundation of the present state of knowledge about the discipline seems to have stemmed from the practical effort of the practitioners. These practitioners and their various non-formal education activities have been assigned a variety of nomenclatures such as adult education, literacy education, functional literacy, cooperative agricultural extension, population education, family life education and the apprenticeship.

The second route to the development of vocational education in a non-formal environment dates back to conference activities of the 1960s. Specifically, the publication of a conference document by Philip Combs (1974) titled: *The World Education Crisis: a systems analysis*, drew the attention of the world to the inability of formal education to meet the needs of the underprivileged groups, particularly in Africa and Latin America, due to its huge cost implication.

The world interest in vocational education in non-formal environment as a veritable instrument for combing socio-economic imbalance and poverty in the developing countries has attracted the attention of some international donor agencies and local non-governmental organizations which have continued to support such programmes through personal and financial supports. Apart from finance, the intellectual contributions of specialists from the universities, research institutions and various ministries of education have continued to expand the frontiers of knowledge in non-formal education.

The third route through the study of vocational education in non-formal environment received its impetus from the opponents of schooling. Prominent among these are Ivan Illich (1973) and Paulo Freire (1972). Their respective publications: *“Deschooling the society”* and *“pedagogy of the oppressed”* have sought to portray the deficiencies inherent in formal education (or schooling). Their alternative propositions have drawn strong support for vocational education in a non-formal environment as exemplified in the work of Freire (1972).

Out-of-school education for young people

- a) Preparation for occupations: Courses intended for those with little or no formal schooling, that is, out of school courses for literacy numeracy, school studies and vocational education. Also courses, which extend general or pre-vocational schooling. These included post-primary or post secondary institutions in non-official business school and technical workshops: military technical training, pre-work training provided by commercial firms or voluntary organizations, and correspondence courses.
- b) On the job training: here, we have apprenticeship training in low or intermediate productivity enterprises eg carpentry, mechanics, tailoring, hairdressing, printing and building trades. Also courses for junior workers, usually short-term, which extend pre-vocational education and/or apprenticeship training and settlement programme.



- c) Education for community development: this included group activities out of school such as youth clubs, young farmers clubs, apprentice guilds which are directed toward the improvement of vocational education. Also the National Youth Service programmes provide general, civic or technical education while allowing for organized disciplined contributions by youths to national development through community services, chiefly in rural areas. Examples are Rurale in Senegal, movement dela jeunesse, and Actionale Renovation.

Out of school education for adults

- a. Specialized and continuing of administrators and field workers in the areas of agriculture, business extension services, health fishing, forestry. Other courses are usually short-term, designed to upgrade management and other professional abilities and technical skills.
- b. Education for adults with little or no formal school: This category includes courses designed to make up for educational literary and numaracy, civil education, functional literacy programmes. Also extension services for agriculture and small business-meant to teach farmers, craftsmen and artisans at their places of work, for the purpose of meeting problems.

Management and administrative problems according to Ogwo and Oranu (2006), include school organization, services, contacts with industry, relationship with administrators/teachers. To them, school organization as well as the non-formal training management is one of the most complex, important and sensitive areas in the system. The teacher as the administrator, carried out many other services and functions in the educational system which invariably poses problem for him.

## Methods

The study was carried out in Calabar in Cross River State of Nigeria. Calabar is known by the people's rich cultural background/inheritance. This is equally recognized as one of the promoters of crafts-making as an occupation. The area is dominated by the Efiks. The population for the study consisted of a total of 300 staff and learners in non-formal vocational education programmes in Cross River State of Nigeria. A total of 22 staff and 98 learners making a total of 120 respondents were randomly selected from the population and were used as the sample for the study. The simple random sampling techniques were adopted. The main instrument employed for data collection in this research is questionnaire. The instrument used was given to professionals with knowledge and experience in non-formal vocational education to validate. Corrections and modifications were made before the administration of the instrument to the respondents. The reliability of the questionnaire used was established through test retest method. The instrument was administered to a group outside the respondents for the study and was found reliable. The researcher administered the instrument directly to the respondents personally. All the copies of questionnaire distributed were retrieved. The frequencies and simple percentages were the statistical tools adopted for the analysis of the data collected for the study.

## Results

From table one, it is revealed that a lot of vocational courses are being taught in non-formal vocational education programmes in Cross River State. It revealed that computer skills are taught in non-formal vocational education in Cross River State, with 50% percent; crafts-making has 58.3% fashion design/hair dressing have 683% respectively. Business studies have 63% consumer education 35% as the least course taught in non-formal vocational education in Cross River State.

Table two showed that non-formal vocational education programmes in Cross River State is relevant to the needs of the people having scored 53% it revealed also that it helps to provide employment which raises the standard of living of the people. These were shown with 57% and 55% respectively.

Table three shows that the available instructional facilities for non-formal vocational education programmes in Cross River State are inadequate. None of the items scored up to 50%. Table three also indicated that there are inadequate qualified teachers to teach computer skills, consumer education, business studies and extension education respectively in non-formal vocational education programmes in Cross River State. It scored 25.5% on the table.

In table four, it was indicated that less than 50% of the respondents said that there is lack of competency on the part of administrators, contacts with industries and conducive environment for learning. While inadequate facilities/equipment and funding had 50% and 52%, indicating that there are inadequate facilities/equipment and funding for non-formal vocational education administration in Cross River State of Nigeria. And finally lack of qualified teachers with 58.3%.

## **Discussion**

The finding from the study showed that non-formal vocational education programmes though available but not sufficiently and effectively offered in Cross River State. However, it was revealed that a lot of vocational courses are being taught in the state such as computer skills in few established computer centres. Others include: crafts-making, fashion design, hair dressing, business studies, consumer education and extension education.

It was further revealed that these courses taught in non-formal vocational education in Cross River State are relevant to the needs of the learners. Evidences showed that it has helped to provide employment thereby raising the standard of living of the people. This finding agreed with education commission of Fuji Government (2000) report, which states that an estimated 4,000 young people enter the labour market every year and more than half of them find jobs. In fact one of the aims of non-formal education policy is to make effective contrive contribution to poverty alleviation by enhancing the economic well-being of the population.

Also revealed in the study, is that there are inadequate facilities and equipment for effective teaching of the courses in non-formal vocational education in Cross River State. Whereas Adesina (1981) emphasized that the quality of education received by learners bear direct relevance to the availability or lack thereof physical facilities. Adequate provision of equipment/facilities is a necessity for an effective educational programme.

Another problem of the non-formal vocational education programmes in Cross River State is lack of qualified teachers to teach in the vocational centres. Most teachers found there were untrained vocational education teachers with little or no vocational teaching experience.

The study further revealed that there is lack of competency on the part of administrators of non-formal vocational education in Cross River State in terms of school organization, school services, contacts with industries. This finding is contrary to Ogwu and Oranu (2006) who stated that school organization as well as non-formal training management is one of the most complex, important and sensitive areas in the educational system. Also revealed by the study is inadequate facilities/equipment, inadequate funding and lack of qualified teachers in non-formal vocational education programmes in Cross River State. These definitely hampers the smooth management and administration of the

programme. This agrees with Asuquo (2005) who said that poor funding, inadequacy of qualified vocational education teachers and shortage of laboratory facilities/equipment are likely problems of vocational education.

### Conclusion and Recommendations

It could be noted that despite the potentialities of vocational education in a non-formal environment and the undoubted place of vocational education in the development of the nation, the programmes are insufficiently made available for people in Cross River State. It is necessary to state here that in the present age, vocational education programme in a non-formal environment has overshadowed the primitive manner in which people's developments and innovations can present enormous opportunities for individuals and government in Cross River State. In a non-formal form, the rapid pace of change in this field does also mean that, unless individuals are careful, they can find the services of non-formal vocational education becoming obsolete very quickly. It is vital therefore for the Cross River State Government to pay more attention to the programme of vocational education in a non-formal environment with the view of proving the people who were deprived of formal education in one way or the other the latest models of functional education if the state must survive the taste of time. Among the recommendations include:

- a) The non-formal education programme in Cross River State should be equipped with latest modern techniques to ensure efficiency and the achievement of functional education objectives in the state.
- b) Research must be seen as integral part of promoting individuals in non-formal vocational education in Cross River State.
- c) The government of Cross River State should make provisions for retraining of teachers of non-formal vocational education in the state.

**TABLE I**  
**Vocational education courses taught in non-formal vocational education programmes in Cross River State.**

S/N	ITEMS	NO	F	%	REMARKS
1.	Business studies is taught in non-Formal vocational education Centers in Cross River State	120	75	63	Taught
2.	Computer education is taught in non-formal vocational education centers in Cross River State.		120	60	50 Taught
3.	Consumer education is taught in Non-formal vocational education In Cross River State		120	42	35 not taught

4.	Crafts-making is taught in non-Formal vocational education in Cross River State	120	70	58.3	Taught
5.	Learners learn fashion design/hair Dressing in non-formal vocational Education in Cross River State	120	82	68.3	Taught
6.	Extension education is being offered in non-formal vocational education in Cross River State	120	33	28	Not Taught

**TABLE II**

**The relevance of non-formal vocational education programmes to the needs of the learners in Cross River State**

S/N	ITEMS	NO	F	%	REMARKS
1.	Non-formal vocational education Programmes in Cross River State Is relevant to the needs of the Learners	120	63	53	positive
2.	Non-formal vocational education Programmes in Cross River State Provides employment to the people	120	68	57	positive
3.	Non-formal vocational education Has raised people's standard of Living in Cross River State	120	66	55	positive

**TABLE II**

**The adequacy of the facilities available for teaching in non-formal vocational education in Cross River State**

S/N	ITEMS	NO	F	%	REMARKS
1.	There is enough computer sets Available for teaching in non-formal Vocational education in Cross River State	120	40	33.3	Inadequate

2.	There is adequate teaching equipment for fashion design and hair dressing in non-formal vocational education in Cross River State	120	45	38	Inadequate
3.	Materials for teaching crafts-Making are adequate in non-Formal vocational education in Cross River State	120	46	38.3	Inadequate
4.	There is adequate qualified Teachers in non-formal Vocational education in Cross River State	120	25	20.8	Inadequate

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## **Digital Divide and the Challenges of Cyber Continent in Africa**

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### **Abstract**

*Poverty of leadership has become very devastating in Africa. It has gone beyond occasioning mass poverty in naturally well-endowed nations to crippling infrastructural development. The global as well as intra-continental information and communications split on the continent cannot be unconnected with development crisis in Africa. Thence, this paper sought to examine the level of ICTs development and access disparity in Africa. It also explored veritable options through which the continent can benefit from the revolution in information and communications technologies. It is a product of careful examination of statistical surveys on issues of African development in the information age. It therefore surmised after an in-depth and careful review of related literature that the level of broadband development, number of fixed telephone lines, ownership and access to computers, internet penetration and usage are very poor. The paper finally submits that concerted efforts of African governments with effective monitoring could serve as frameworks for technology adaptation and development in Africa.*

### **Background to Study**

The contribution that communications play in the development process has been clearly demonstrated. Improving access to Information and Communications Technologies (ICTs) has significant socio-economic implications which are why improved connectivity to close the gap between the haves and have-nots is such an important step towards socio-economic and political development of any society. ICTs and their contributions to areas such as distance learning, telemedicine, and e-governance result in healthier, more literate populations better positioned to actively participate and advance national economies (ITU, 2008).

While Europe and North America as well as some countries of Asia and Pacific have taken advantage of these developments in information and communication revolutions to improve their economies and governance process, Ning (1999) aptly observes that Sub-Saharan Africa has remained either passive or in the periphery, often reduced to a consumer for reasons related to its history or its system of governance or lack of one. This situation has invariably resulted in yawning information and communication split between the countries in Africa and the developed countries of the world. It has also given rise to wide disparity in access to ICT among countries on the continent.

This paper, which started with an introduction into the revolution in the information and communication technologies followed by a review of related literature on the concept of digital divide, seeks to examine the level of ICT's access disparity in Africa and ways through which the continent can benefit from the revolution in information and communication technologies while analyzing the challenges the split is posing to socio-economic and political development of the continent.

## **The Concept of Digital Divide**

The term digital divide was first coined by Lloyd Morrisett, President of the Markle Foundation (Hoffman, et al, 2001) when he vaguely conceived a gap between the information-haves and have-nots. While Morrisett is credited with the term, the coupling of ICT and inequality is not new as confirmed by Compaine (2001) when he claimed that before there was a digital divide there were the information haves and the have-nots.

What is more, the marked gap between the number of countries that are high-level ICT participants and the number that are low-level ICT participants has been referred to as the global digital divide (World Economic Forum, 2001). This serves as a pointer to the existence of this divide across the world: industrialized and less developed countries witness differentials in the access, use, production/manufacture and ownership of ICTs components. So, an uneven pattern or gap of ICT diffusion between industrialized countries and least developed countries exists as measured by the number of phone lines per inhabitants (i.e teledensity), the number of internet hosts, the number of internet users, the number of households that own computers, and the number of cell phone users (Campbell, 2001).

Speaking from the perspective of technological advancement, Rice (2001) perceives the correlation between global digital divide and digital divide within countries as a result of technological divide. This invariably implies that technologically advanced nations have greater access to ICTs since they have acquired more science and technological skills. This position could be related to even the North-South dichotomy wherein the world is polarized into developed and less (under) developed nations.

In the same vein, according to an ITU (2002) report, the digital divide is not only defined in terms of lack of access to telephone services, but also in terms of lack of access to ICT. On their own, OECD (2001) frames the divide as “the gap between individuals, households, businesses and geographical areas at different socio-economic levels with regard both to their opportunities to access ICT and to their use of the internet for wide variety of activities”. To that end, it is realized that digital divide reflects various differences among and within countries.

Moreover, Alcantara, (2001) sees the concept as an integral part of a much broader and more intractable development divide. People in low-income countries are limited not only by their lack of access to modern means of communication and sources of information, but also by a complex network of constraints ranging from unresolved problems of poverty and injustice in their own societies.

This term refers to the gap between people with effective access to digital and information technology and those with very limited or no access at all. It includes the imbalances in physical access to technology as well as the imbalances in resources and skills needed to effectively participate as a digital citizen (Wikipedia Free Encyclopedia). In other words, it is the unequal access by some members of society to information and communication technology and the unequal acquisition of related skills. The term is closely related to the knowledge divide as the lack of technology causes lack of useful information and knowledge. Thus, emphasizing the imperativeness of the revolutions in the information and communications sectors where information and knowledge are easily transmuted in a contracted world; thereby, leaving the economy to be fully driven by knowledge and information.

The digital divide may be classified based on gender, income and race groups and even locations (Rice, 2002:105-129). Mehra et al (2004:781-802) see it as the troubling gap between those who use computers and the internet and those who do not. This gap initially referred to differentials in the

ownership of, or regular access to, a computer. As internet access came to be seen as a central aspect of computing, the term's usage shifted to encompass gaps in not just computers but also access to the internet and telephones. Recently, some scholars have used the term to refer to gaps in broadband network access. The term can mean not only unequal access to computer hardware, but also inequalities between groups of people in the ability to use information technology fully (Wilhelm, 2004).

### Digital Divide in Africa

Infrastructure has been repeatedly recognized as critically lacking on the continent. Data provided by ITU depicted chilling statistics on ICT's development in Africa. Despite the fast growth in the last few years, ICT in Africa has barely taken a foothold. Connectivity illustrates the global divide with only 54, 171, 500 (3.4%) internet users and 5.6% internet penetration on the continent (ITU, 2009). Thus, the following facts about Africa may be very illuminating

- The continent has some 280 million total telephone subscribers, of which some 260 million (over 85%) are mobile cellular subscribers, representing the continent with the highest ratio of mobile to total telephone subscribers of any region in the world.
- Africa is the region with the highest mobile cellular growth rate. Growth over the past 5 years averages almost 65% year on year.
- She accounts for about 14% of the world's population, but for only around 7% of all fixed and mobile subscribers worldwide.
- She also has some 50 million Internet users, for an Internet penetration of just 5.6%. Europe's Internet penetration is 8 times higher.
- Africa has a broadband penetration of more than 1% in only a few countries. Broadband penetration in OECD countries exceeds 18%.

Source: ITU World Telecommunication/ICT Indicators, 2007 on [www.itu.int/newsroom/features/images/subscribers\\_2006.jpg](http://www.itu.int/newsroom/features/images/subscribers_2006.jpg).

The above fact is better illustrated on the table below which shows the latest data on internet usage statistics for Africa.

<b>INTERNET USERS AND POPULATION STATISTICS FOR AFRICA</b>						
<b><u>AFRICA REGION</u></b>	<b>Population (2008 Est.)</b>	<b>Pop. % in World</b>	<b>Internet Users, Latest Data</b>	<b>Penetration (% Population)</b>	<b>Use Growth (2000-2008)</b>	<b>% Users in World</b>
<b><u>Total for Africa</u></b>	975,330,899	14.5 %	<b>54,171,500</b>	5.6 %	1,100.0 %	3.4 %
<b><u>Rest of World</u></b>	5,734,698,171	85.5 %	<b>1,542,098,608</b>	26.6 %	332.6 %	96.6 %
<b><u>WORLD TOTAL</u></b>	6,710,029,070	100.0 %	<b>1,596,270,108</b>	23.8 %	342.2 %	100.0 %

Source: *Internet World Stats - www.internetworldstats.com – March 2009*

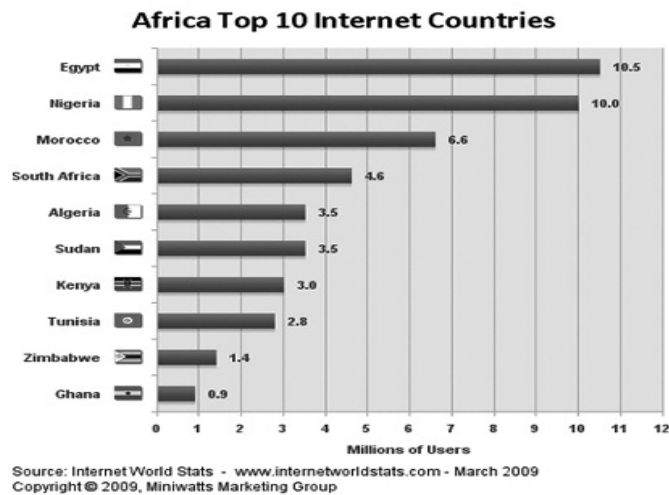
The data as presented above shows the continent's peripheral position in the global political



economy. Africa with a population of about 98 million (amounting to 14.5%) has 54 million internet users, 5.6% penetration with only 3.4% users across the continent out of the total world population put at 6.7 billion showing that the rest of the world has 96.6% internet users and 26.6% penetration. However, socio-economic realities have over time shown disparities in global access to the devices and components of information and communications technologies (ICTs). Eliminating the distinction between the information-rich and information-poor is also critical to eliminating economic and other inequalities between North and South, and to improve the life of all humanity (Wilson, 2004:1).

Connectivity in Africa illustrates the global digital divide. Disparities also exist within the African region. For example, Egypt has 3 times the fixed line penetration of Nigeria and three quarters of the continent's fixed lines are found in just 6 of the continent's 53 countries (ITU, 2008). This picture was clearly painted by Mutume (in African Recovery, Vol. 17, No 3), when he observed that penetration and usage of ICTs is most extreme in Africa, where in 2001, out of 800 million people, only 1 in 4 had a radio, 1 in 13 a television set, 1 in 40 a telephone and 1 out of 130 a computer. The observation shows that the divide widens on the continent countryside, where lack of roads, telephone lines and electricity separates the rural majority from their urban counterparts. Still emphasizing the poor access to ICTs on the continent, the US Internet Council (2001 cited in Onu, 2006) posits that most African states are still below the world minimum in accessibility to telecommunications, saying that Africa has only 13% share of world population out of which only 1% has total global telephone lines, 1% of internet users, 1.2% of total world internet sites and account for almost zero percent of global ICT production. He further observed that out of an estimated hosts of 274,742 in 2001, Africa had 0.19% of the total global internet hosts, while its share of personal computers stood at 7,558, 000 representing 1.53% of the world total.

Moreover, internet use and penetration on the continent brings startling statistics with 10 countries constituting the top users at very low rates. It shows North Africa topping the table with Egypt having 10.5%, closely followed by Nigeria at 10.0%, Morocco (6.6%), South Africa at 4.6%, Algeria and Sudan at 3.5%, Kenya (3.0%), Tunisia at 2.8%, Zimbabwe – 1.4% and Ghana at paltry 0.9%. This shows Northern and Southern Africa as having more access when compared on the basis of sub-regions. West Africa parades only Nigeria and Ghana on the table. This information is clearly shown below:



Furthermore, information from Internet World Statistics ([www.internetworldstats.com](http://www.internetworldstats.com)) reveals much lacuna in access to the internet and its usage on the continent of Africa. Whereas, Egypt, Nigeria, Morocco, South Africa, Algeria, Sudan, Kenya, Tunisia, Zimbabwe and Ghana record some access, penetration and usage, some countries like Sao Tome and Principe, Sierra Leone, Saint Helena (UK), Liberia, Equatorial Guinea, Djibouti, Comoros and Central Africa Republic are without access, penetration and usage.

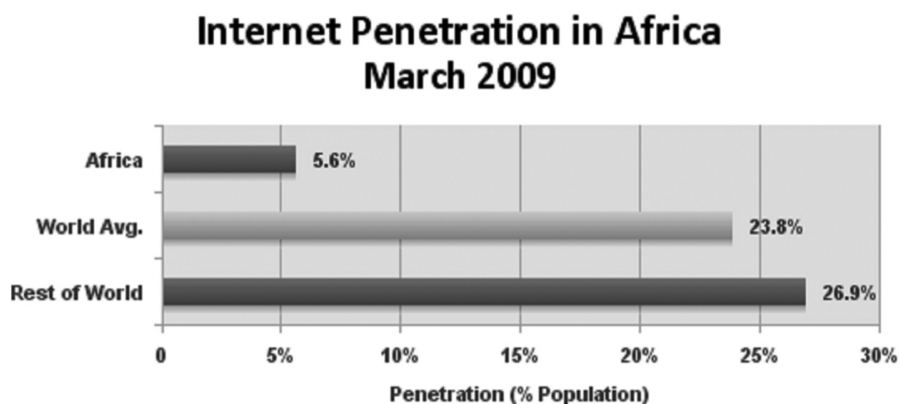
The statistics goes further to show that twenty six (26) countries on the continent have less than 0.5% usage of the internet; nine others with rates ranging from 0.5% to 0.9%. Hence, out of the fifty three (53) countries surveyed, thirty five (35) have internet usage that is below 1%, with only three countries having percentages at 1.0% to 1.5%. We however, have two countries: Mayotte (FR) and Western Sahara, whose record were either not obtained or do not have records at all. This is shown on the table below:

<b>AFRICA</b>	<b>Population (2008 Est.)</b>	<b>Internet Users Latest Data</b>	<b>Penetration (% Population)</b>	<b>User Growth (2000-2008)</b>	<b>% Users in Africa</b>
<b>Algeria</b>	33,769,669	<b>3,500,000</b>	10.4 %	6,900 %	6.5 %
<b>Angola</b>	12,531,357	<b>498,000</b>	4.0 %	1,560.0 %	0.9 %
<b>Benin</b>	8,532,547	<b>150,000</b>	1.8 %	900.0 %	0.3 %
<b>Botswana</b>	1,952,048	<b>100,000</b>	5.1 %	566.7 %	0.2 %
<b>Burkina Faso</b>	15,264,735	<b>80,000</b>	0.5 %	700.0 %	0.1 %
<b>Burundi</b>	8,691,005	<b>60,000</b>	0.7 %	1,900.0 %	0.1 %
<b>Cameroon</b>	18,467,692	<b>370,000</b>	2.0 %	1,750.0 %	0.7 %
<b>Cape Verde</b>	426,998	<b>37,000</b>	8.7 %	362.5 %	0.1 %
<b>Central African Rep.</b>	4,444,330	<b>13,000</b>	0.3 %	766.7 %	0.0 %
<b>Chad</b>	10,111,337	<b>60,000</b>	0.6 %	5,900.0 %	0.1 %
<b>Comoros</b>	731,775	<b>21,000</b>	2.9 %	1,300.0 %	0.0 %
<b>Congo</b>	3,905,010	<b>70,000</b>	1.8 %	13,900.0 %	0.1 %
<b>Congo, Dem. Rep.</b>	66,514,506	<b>230,400</b>	0.3 %	45,980.0 %	0.4 %
<b>Cote d'Ivoire</b>	20,179,602	<b>300,000</b>	1.5 %	650.0 %	0.6 %
<b>Djibouti</b>	506,221	<b>11,000</b>	2.2 %	685.7 %	0.0 %
<b>Egypt</b>	81,713,517	<b>10,532,400</b>	12.9 %	2,240.5 %	19.4 %
<b>Equatorial Guinea</b>	616,459	<b>8,000</b>	1.3 %	1,500.0 %	0.0 %
<b>Eritrea</b>	5,502,026	<b>120,000</b>	2.2 %	2,300.0 %	0.2 %
<b>Ethiopia</b>	82,544,838	<b>291,000</b>	0.4 %	2,810.0 %	0.5 %
<b>Gabon</b>	1,485,832	<b>82,000</b>	5.5 %	446.7 %	0.2 %
<b>Gambia</b>	1,735,464	<b>100,200</b>	5.8 %	2,405.0 %	0.2 %
<b>Ghana</b>	23,382,848	<b>880,000</b>	3.8 %	2,833.3 %	1.6 %
<b>Guinea</b>	9,806,509	<b>50,000</b>	0.5 %	525.0 %	0.1 %
<b>Guinea-Bissau</b>	1,503,182	<b>37,000</b>	2.5 %	2,366.7 %	0.1 %
<b>Kenya</b>	37,953,838	<b>3,000,000</b>	7.9 %	1,400.0 %	5.5 %
<b>Lesotho</b>	2,128,180	<b>70,000</b>	3.3 %	1,650.0 %	0.1 %
<b>Liberia</b>	3,334,587	<b>20,000</b>	0.6 %	3,900.0 %	0.0 %
<b>Libya</b>	6,173,579	<b>260,000</b>	4.2 %	2,500.0 %	0.5 %
<b>Madagascar</b>	20,042,551	<b>110,000</b>	0.5 %	266.7 %	0.2 %
<b>Malawi</b>	13,931,831	<b>139,500</b>	1.0 %	830.0 %	0.3 %
<b>Mali</b>	12,324,029	<b>100,000</b>	0.8 %	431.9 %	0.2 %

<u>Mauritania</u>	3,054,933	<b>30,000</b>	1.0 %	500.0 %	0.1 %
<u>Mauritius</u>	1,274,189	<b>340,000</b>	26.7 %	290.8 %	0.6 %
<u>Mayotte (FR)</u>	216,306	-	-	-	0.0 %
<u>Morocco</u>	34,343,219	<b>6,600,000</b>	19.2 %	6,500.0 %	12.2 %
<u>Mozambique</u>	21,284,701	<b>200,000</b>	0.9 %	566.7 %	0.4 %
<u>Namibia</u>	2,088,669	<b>101,000</b>	4.8 %	236.7 %	0.2 %
<u>Niger</u>	14,752,080	<b>40,000</b>	0.3 %	700.0 %	0.1 %
<u>Nigeria</u>	146,255,306	<b>10,000,000</b>	6.8 %	4,900.0 %	18.5 %
<u>Reunion (FR)</u>	803,209	<b>220,000</b>	27.4 %	69.2 %	0.4 %
<u>Rwanda</u>	10,186,063	<b>100,000</b>	1.0 %	1,900.0 %	0.2 %
<u>Saint Helena (UK)</u>	7,601	<b>1,000</b>	13.2 %	n/a	0.0 %
<u>Sao Tome &amp; Principe</u>	206,178	<b>23,000</b>	11.2 %	253.8 %	0.0 %
<u>Senegal</u>	13,343,424	<b>820,000</b>	6.1 %	1,950.0 %	1.5 %
<u>Seychelles</u>	86,595	<b>32,000</b>	37.0 %	433.3 %	0.1 %
<u>Sierra Leone</u>	6,294,774	<b>13,000</b>	0.2 %	160.0 %	0.0 %
<u>Somalia</u>	9,558,666	<b>98,000</b>	1.0 %	48,900.0 %	0.2 %
<u>South Africa</u>	48,782,755	<b>4,590,000</b>	9.4 %	91.3 %	8.5 %
<u>Sudan</u>	40,218,455	<b>3,500,000</b>	8.7 %	11,566.7 %	6.5 %
<u>Swaziland</u>	1,128,814	<b>42,000</b>	3.7 %	320.0 %	0.1 %
<u>Tanzania</u>	40,213,162	<b>400,000</b>	1.0 %	247.8 %	0.7 %
<u>Togo</u>	5,858,673	<b>320,000</b>	5.5 %	220.0 %	0.6 %
<u>Tunisia</u>	10,383,577	<b>2,800,000</b>	27.0 %	2,700.0 %	5.2 %
<u>Uganda</u>	31,367,972	<b>750,000</b>	2.4 %	1,775.0 %	1.4 %
<u>Western Sahara</u>	393,831	-	-	-	0.0 %
<u>Zambia</u>	11,669,534	<b>500,000</b>	4.3 %	2,400.0 %	0.9 %
<u>Zimbabwe</u>	11,350,111	<b>1,351,000</b>	11.9 %	2,602.0 %	2.5 %
<b>TOTAL</b>					
<b>AFRICA</b>	<b>975,330,899</b>	<b>54,171,500</b>	<b>5.6 %</b>	<b>1,100.0 %</b>	<b>100.0 %</b>

Source: Internet World Stats - [www.internetworldstats.com](http://www.internetworldstats.com) – March 2009

The summary of the above information is presented in the chart below:



Source: Internet World Stats - [www.internetworldstats.com](http://www.internetworldstats.com) - March 2009

54,171,500 estimated Internet users in Africa for March 2009

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However, poor records and unauthorized access to the internet in Africa complicate issues in the measurement of usage, accessibility and penetration on the continent. Ordinarily, previous statistics portray South Africa as having greater access, usage and penetration without recourse to illegal and unauthorized consumption. For instance, the number of persons that surf the net without proper registration via MTN network in Nigeria cannot be wished away. There is what hackers and illegal users call freedom line with which they access the internet using MTN mobile network. To this end, records cannot adequately measure and determine the amount of access enjoyed by such persons. Hence, using number of Internet Service Providers (ISP), level of broadband development, fixed telephone lines and others actually cannot tell the real amount of access across countries on the continent.

Moreover, the divide is both rural-urban and generational (Onu, 2006). African youths are more literate with greater tendencies to access, acquire and use ICTs components than the elderly ones, who perceive the technology and its revolution more as part of the wonders of the nuclear age. While fixed telephone lines only obtained in cities, rural dwellers, who lack relatively all infrastructure like roads, electricity among other basic amenities have very little or no access to ICTs. One TV set services a handful of villagers who gather at telecenters or any other place where such facility is available to see the wizardry of the Whiteman. This trend also has gender perspective.

African women have lower access and usage percentage to ICT than their men counterparts. This position was presented by (UNFIP, 2003) on the realization that the statistics describing the growing digital divide on the continent demonstrate that women and girls are at particular risk for exclusion from opportunities presented by ICT to secure better livelihoods and other rights. The report portends that more men access and use ICTs components than women in Africa.

### **The Challenges of Cyber Development in Africa**

Given the speed with which Information and Communications Technology (ICT) is developing and the breadth of their socio-economic impact, it is imperative that Africa is not excluded from the technological revolution (DDN-A, 2002). The use of ICT has been integrated into virtually every aspect of finance, civic activity in developed countries and has become a critical factor in wealth acquisition worldwide. Yet, in Africa, ICT has barely taken a foothold. Computer literacy and lack of access to ICTs are widely recognized as an increasingly powerful obstacle to the economic, civic, and political development of the continent.

One of the biggest developments in expanding access to information and communication technologies (ICT) in Africa involves building communications infrastructure. The lack of basic infrastructure is historical in the region with the percentage of fixed telephone lines being the lowest worldwide with an average of 4 main lines for 100 people. This in turn constrains the deployment of broadband access via ADSL, which is the main method of fixed broadband access in most countries across the world. Annual mobile growth rates of over 48 per cent over the last five years further lend to Africa being dubbed "the least wired region in the world" (ITU, 2008).

The foregoing observations were aptly noted by Norris (2000:3) when he succinctly posited that the benefits of the internet have failed to reach most of the poorer nations in Sub-Saharan Africa, South Asia and the Middle East saying that the gap between the information-rich and poor countries has sharply increased in the emergent years of this new technology.

Since the mid 1990s, the explosion of the internet has been prompting intense speculation about its ultimate impact upon the economy, society and politics of nations (Norris, 2001). Many hope that the internet will be a powerful new force capable of transforming existing patterns of social inequality, strengthening linkages between citizens and representatives, facilitating new forms of public engagement and communication, and widening opportunities for the development of a global socio-political economy. In this nuclear age, the capacity to communicate will almost certainly be a key to human right.

Moreover, Onu (2006) while looking at the development of ICTs on the continent traced the relationships between good governance and the future of ICTs on the continent. He observed some correlation between bad leadership, poverty and to some extent the impacts of imperialism and neo-colonialism on poor ICT development on the continent. Poverty seriously inhibits access and usage of the internet since available statistics still portray the continent as a region with mass poverty (NEPAD, 2001; NEEDS, 2004). Despite the liberalization of the telecom sector, the cost of access to the services provided by operators is still out of reach for average citizens and the telecom companies are busy transforming into new monopolies such that the very essence of liberalization is defeated. This is manifested in the rate of dropped and uncompleted calls which are soaring among users in Africa.

### **Prospects of Cyber Efficiency in Africa**

Cyber development and efficiency in Africa is to a large extent a function of infrastructure development and poverty reduction. It is a product of genuine liberalization of the telecom industry and demolition of all forms of monopolies to create room for perfect competition amongst operators. Bridging digital divide between the continent and the rest of the world and that within the continent also demands qualitative, responsive cum focused leadership. Concerted efforts are imperative among African peoples and governments. Regional and sub-regional groupings have wholly recognized ICTs contribution to socio-economic and political development as seen in tele-medicine, electronic voting, e-learning and e-governance. Thus, both NEPAD and AU policy instruments have to be implemented to realize the dreams of economic recovery on the continent. This implies that the continental and national programmes on ICT development have to be jump-started and monitored while emphasis should be on adaptation and development of technologies that would enable peoples of Africa produce their own computers and harness their diversified potentials without being subjected to exploitation from the so called developed nations.

### **Conclusion**

Recorded statistics have adequately shown the widespread gaps in telephone subscription, broadband and internet penetration, usage and access across the continent of Africa along what obtained in other countries cum regions of the world. It effectively portrayed the continent as the least wired region of the world: a continent that parades about 14% of the world's population has only 3.4% internet usage with less than minimum world approved number of fixed telephone lines serving the people before 2001. She parades Egypt as a country with highest internet penetration at a paltry 10.5% wherein obtains some nations without any recorded percentage of internet access, usage and

penetration.

The foregoing position implies that the continent suffers from global digital divide wherein she lacks comparable access to ICTs as well as witness hiccups to regional and sub-regional development on the basis of serious divide in the same access within the region and countries.

Finally, it is surmised that poor infrastructure, bad leadership and mass poverty are the major obstacles to cyber development on the continent and that concerted efforts of African governments with effective monitoring through the African Peer Review Mechanism (APRM) crowned with effective partnership with the UN and other liberally minded donor agencies could serve as frameworks for technology adaptation and development in Africa.

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## Demographic Correlates of Adolescent Crime, Repercussions and Remediation.

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### Abstract

*The study set out to establish the demographic factors of youth crime in the South Eastern part of Nigeria inhabited mainly by the Igbo, the punishment meted out and preventive measures. The sample of the study which adopted a descriptive survey design consisted of 1,800 prison inmates (1,704 males and 96 females) from 10 prisons in 3 states- Imo, Enugu and Ebonyi. Data was collected using questionnaire titled Youth crime, repercussion and prevention (YCRP). There was also focus group discussion with school guidance counselors and special education teachers on their role in preventing criminal tendencies among the students. The result show that armed robbery and stealing are the most prevalent crime in the south Eastern States studied. There are state differences in prevalent crime and age of offenders. Counselors and special Education personnel felt that cognitive restructuring should be employed besides early identification and treatment of emotional behavioural disorder in children. Recommendations were made.*

### Introduction

One of the greatest problems facing human and infrastructural development in Nigeria is crime. People live in perpetual fear of being kidnapped or robbed violently on the highways and even in their homes. Crime is virtually becoming a household topic for discussion in the country. Crime according to Webster (2008) is a serious offence against the public law; something reprehensible, foolish or disgraceful. It is a breach and violation of the law, misdeed, and a disgraceful act. It is worthy to note that while every crime violates the law, not every violation of the law counts as a crime; for example: breaches of contract and other civil law may rank as "offences" or as "infractions". The Encyclopedia (2009) defined crime as intentional commission of an act usually deemed socially harmful or dangerous and specifically defined, prohibited, and punishable under criminal law. Crime can cause serious loss or damage or even death to individuals. It is also accompanied by social stigma on families and individuals who perpetuate it.

Common law originally divided crimes into two categories: felonies—the graver crimes, generally punishable by death and the forfeiture of the perpetrator's land and goods to the crown and misdemeanors—generally punishable by fines or imprisonment. This distinction in many cases was inconsistent with the gravity of the offenses concerned. For example, theft was always considered a felony irrespective of the amount stolen while obtaining by fraud was always a misdemeanor. There are also crimes defined by treaty as crimes against international law which include: crimes against peace, crimes of apartheid, genocide, piracy, the slave trade, waging a war of aggression and war crimes.

In Nigeria, serious crimes reported to the police range from murder, manslaughter, assault, armed robbery to currency forgery, bribery and corruption. This study set out to investigate their existence in the South Eastern States of Nigeria which is inhabited by the Igbo race.



## Who are the Igbos?

The Igbos are the second largest group of people living in southern Nigeria with an estimated population of between 5 and 6 million and covers a total land area of about 15,800 square miles (about 41,000 square kilometers). They are socially and culturally diverse, consisting of many subgroups that live in scattered groups of villages but speak one language. The Igbo country has four distinct areas—the low-lying deltas and riverbank areas which are heavily inundated during the rainy season and are very fertile; the central belt is called the high plain. The Udi highlands are the only coal-mining area in West Africa (Achebe 1995, Kalu, 1995, Njoku, 1990).

The Igbo race had been described by commentators as “prisoners of war” as a result of the way they had been treated after the civil war (1967-1970). Even when General Yakubu Gowon ended the war on a “no victor, no vanquished”, the programme of the 3Rs (Rehabilitation, Reconstruction and Reconciliation) did not do much to help the Igbo race. The ex-soldiers were not rehabilitated, many became unemployed, idle, and hungry and this considerably resulted to increase in crime rate in the society. The students among them went back to school but could not reconcile life as soldiers and students. This led to disobedience to school authorities, failure and increase in school drop-out. The influx of all these people into the society resulted to increase in crimes.

There is a public outcry over the increase in the rate and dimension of crime in the South Eastern part of Nigeria. In their lamentation in the African Sun Times (2010) titled “ARE THE IGBO IN NIGERIA BEING DEFINED BY CRIMINALITY?” Outraged Nigerians including the Igbo themselves, who have not only become docile and prisoners in their own land, with many of the well to do abandoning their homes and escaping to other areas of the country due to kidnappings, were united in their outrage against the increasing spate of kidnappings in the country, especially in the South-East.

From this report, crime appears predominantly a youthful activity. Although statistics vary between countries, involvement in minor property crime generally peaks between ages 15 and 21. Participation in more-serious crimes peaks at a later age—from the late teenage years through the 20s—and criminality tends to decline steadily after the age of 30. The evidence as to whether this pattern, widely found across time and place, is a natural effect of aging, the consequence of taking on family responsibilities, or the effect of experiencing penal measures imposed by the law for successive convictions is inconclusive. Not all types of crime are subject to decline with aging. Fraud, certain kinds of theft and crimes requiring a high degree of sophistication however, are more likely to be committed by older men, and sudden crimes of violence, committed for emotional reasons, may occur at any age. (Allot, Edge, Clarke & Thomas in Encyclopedia 2009)

In line with this, report from the Nigerian prisons show that incarcerated youths aged 16-20 years as at 2006 were 19,122; 21-25 years were 28,700 and 26-50 years 75,491. Crimes committed ranged from arson, treason, murder, armed robbery, forgery and altering to abduction among others. Crime also appears to be more of a male activity. In all criminal populations, whether offenders passing through the courts or of those sentenced to institutions, men outnumber women by a high proportion, especially in more-serious offenses. In Nigeria, from Nigerian Prison sources (2006), female prisoners accounted for only 1.7 percent of the total prison inmates nationwide. This is confirmed by Ejiofor and Ngwoke (2009) who reported that there were about 32 female prison inmates in all the 3 prisons in Enugu State. From prison sources, the number of males convicted six or more times were 910 while the number of females convicted the same number of times were 28.

The relationship between social class or economic status and crime has been studied extensively. Research carried out in the United States in the 1920s and '30s claimed that a higher incidence of criminality was concentrated in deprived and deteriorating neighbourhoods of large cities. Early studies of juvenile delinquents also showed a high proportion of lower-class offenders although such studies often overlooked white-collar crime and other criminal acts committed by people of higher socioeconomic status. Self-report studies have suggested that offences are more widespread across the social spectrum than the figures based on identified criminals would suggest (Clark & Bernard in Encyclopedia 2009).

In terms of etiology, criminal tendencies in the youths may have started as behavior problems. For example some children develop Emotional-Behavioral Disorder (EBD) early in life. If this problem is not handled early enough by a special education expert according to Rutter & Garmezzy (1983) it may eventually serve as a forerunner to delinquency and adult criminality. One aspect of EBD is the apparently irreversible nature if steps are not taken to correct them during the formative years. Nigerian prison authorities in 2006 stated that heredity, unemployment, alcohol and drug use are among the etiological factors in crime perpetuation among youths.

In terms of unemployment, reports from the National Directorate of Employment (NDE) show that unemployment rate in urban areas of Nigeria ranged from 1.1 percent in Osun state, 5.5 percent in Ebonyi State, 8.0 in Enugu, 8.2 in Abia, 9.2 in Anambra to 17.0% in Imo state while Kebbi State ranked highest with 61% and Zamfara followed with 17.6%. Considering the number of armed robbery cases reported to the police from these states, Zamfara with the highest unemployment rate, had 39 cases. While Anambra with only 5.5 % recorded 125 cases, Imo with 17% recorded a whopping 172 armed robbery cases reported. Abia had 97 cases and Ebonyi had 62 cases. (Nigerian Police sources 2006). Something must really be wrong in the South Eastern states of Nigeria to have a wide disparity between unemployment and crime rates.

Psychological explanations of crime are linked in part to the social learning theory of Bandura (1977). This theory stipulates that behavior is learned from a model or significant other in an individual's environment. In effect, crime can be learnt in the course of social interaction. In the same way, criminal behaviors can equally be unlearned through behavior modification.

In Nigeria, capital punishment by firing squad and jungle justice (mob action on criminals) is practiced in order to curb criminality. The increase in the rate of crime despite the capital punishment, jungle justice and arrests resulted to the move to curb criminal activities by communities in the South Eastern part of Nigeria. Such programs include the popular ousted BAKASSI vigilante group that meted out death by either burning with tire or beheading the offender. They were later replaced by the Police-Community vigilante groups made up of able bodied men (registered with the police) who take turns to keep watch in various villages. The community watch included giving information to the police on suspected criminals and suspicious movements in and around their communities. The question is, have all these efforts helped in reducing criminal activities among the youths?

*Statement of problem:* One of the greatest problems facing human development in Nigeria is crime. Citizens are virtually living in perpetual fear of being kidnapped or robbed violently in their homes or on the highways. This situation is believed to be an aftermath of the Nigerian Civil War due to influx of ex-servicemen and some weapons of warfare that were not surrendered by the ex-soldiers coupled with high rate of unemployment. The Igbo race is not left out by the crime wave which has rather increased tremendously amongst them. In spite of policies that arrest and imprison offenders

and the jungle justice meted on offenders by the people and vigilante groups common among the Igbo nation, the rate of crime has not abated. Based on this therefore, the researchers want to ascertain the causes of crime among the Igbo race, the repercussion of crime and areas of prevention bearing in mind the way forward for the nation to tackle the problem in the present and the future. The problem of the study then is: what are the demographic factors of youth crime, among the Igbo nation?

*The study was guided by 4 research questions –*

1. What are the crimes that are prevalent in South-Eastern Nigeria which is occupied by ndigbo?
2. What are the causes of crime among the Igbo nation?
3. What punishments are meted on crime offenders especially among the Igbo nation?
4. What are the preventive measures used to fight crime among the Igbo nation?

### *Hypotheses*

Three null hypotheses guided the study:

Ho1: there is no significant difference in the crimes prevalent in South Eastern Nigeria based on states.

Ho2; there is no state significant difference in the causes of crime.

Ho3: there is no significant state difference in the age of offenders from the different states studied.

Ho4: there is no statistical difference in the control measures among the three states of the Igbo nation.

### **Methodology**

The study design adopted a descriptive survey. This was to establish the demographic factors of youth crime, the punishment meted out and preventive measures in the Igbo nation in Nigeria.

*Area of Study:* The study was carried out in the South Eastern part of Nigeria made up of Abia, Anambra, Ebonyi, Enugu and Imo States. They are Igbo speaking people and were all formerly in East Central State of Nigeria before the creation of States. Imo State originally comprised the current Imo and Abia states; Enugu State was originally made up of the present Enugu, Anambra and Ebonyi states. Their culture and values differ dialectically. There are 14 prisons in the 5 states with a total of 4,125 inmates.

*Population:* The population of the study comprised all the inmates of the 14 prisons in the 5 states of south-eastern Nigeria totaling 4,125 subdivided into 3,901 males and 124 females.

*Sample:* The sample of the study encompassed prison inmates (3,121) from 10 prisons in only 3 states- Imo, Enugu and Ebonyi. Out of 3,121 inmates (3025 males and 96 females), 1,800 was used made up of 1,704 males and 96 females.

*Instrument for data collection:* Data was collected using questionnaire titled Youth crime, repercussion and prevention (YCRP). It was trial tested with prison inmates from Anambra State and found to have a reliability coefficient of .86. There was also focus group discussion with school guidance counselors and special education teachers on their role in preventing criminal tendencies among the students.

*Method of data analysis:* Data collected was analyzed using mean and standard deviation for the research questions and Analysis of Variance (ANOVA) for the hypotheses.

## Results

*Research question 1:* What are the crimes prevalent in Imo, Enugu and Ebonyi States?

Table 1 - Mean responses on crimes prevalent in the area

	Items	X	SD	Remark
1	Armed robbery	3.00	.92	Prev.
2	Stealing	3.33	.68	Prev.
3	Arson	2.19	.87	NP
4	Rape	2.45	.97	NP
5	Kidnapping	2.96	1.06	Prev.
6	Murder	2.46	.90	NP
7	Destruction of property	2.43	.86	NP

From the analysis, armed robbery, stealing and kidnapping are the most prevalent crimes in the three states studied.

*Research question 2:* What are the causes of crime?

Table 2 - Mean responses on causes of crime

	Items	X	SD	Remark
8	Drug use	3.01	.87	Cause
9	Heredity	2.36	.91	NC
10	Poverty	3.25	.81	Cause
11	Frustration as a result of dropping out of school	3.12	.72	Cause
12	Peer influence	3.31	.66	Cause
13	Curses on individuals	2.40	.91	NC
14	Lack of love as a result of broken homes	2.70	.94	Cause
15	Discrimination	2.30	.79	NC
16	Deprived neighborhood	2.10	.85	NC
17	Unemployment	3.30	.80	Cause

From the analysis, drug use, poverty, frustration as a result of dropping out of school, peer influence, lack of love as a result of broken homes and unemployment were the causes of crime in the three states studied.

*Research question 3:* What punishment is meted to offenders?

Table 3 - Mean responses on punishment meted on offenders

	Items	X	SD	Remark
18	Burning with tire	2.28	1.04	Not practiced
19	Handing them over to the police	3.10	.84	Practiced
20	Shooting them	2.12	.81	NP
21	Ex-communicating the family	2.34	.89	NP
22	Banishment from the town	2.38	.96	NP

Generally, offenders were handed over to the law enforcement agents – the police.

*Research question 4:* How is crime controlled in these areas?

Table 4: Mean responses on control measures

	Items	X	SD	Remark
23	Police surveillance	2.98	.99	Practiced
24	Local vigilante group	3.09	.83	Practiced
25	Oath swearing by members of the community	2.44	.93	NP
26	Providing social financial help for school dropouts	2.45	1.04	NP
27	Converting criminals through education and employment	2.91	.96	Practiced
28	Organizing regular community/kindred meeting to access security situations and take appropriate measures	3.04	.83	Practiced

Apart from oath swearing and providing financial help, all other measures are practiced.

H01 There is no significant difference in prevalent crimes based on states. See table 5

Table 5. Analysis of Variance of responses on prevalent crime based on states.

		Sum of squares	Df	Mean square	F	Sig.
1	Between groups	53.468	2	26.734	32.603	.000
	Within groups	1473.505	1719	.820		
	Total	1526.973	1799			
2	Between groups	31.381	2	15.691	35.633	.000
	Within groups	791.277	1797	.440		
	Total	822.658	1799			

3	Between groups Within groups Total	25.653 1346.902 1372.555	2 1797 1799	12.827 .750	17.113	.000
4	Between groups Within groups Total	61.134 1631.957 1693.091	2 1797 1799	30.567 .908	33.659	.000
5	Between groups Within groups Total	116.538 1890.435 2006.973	2 1797 1799	58.269 1.052	55.389	.000
6	Between groups Within groups Total	11.830 1441.045 1452.875	2 1797 1799	5.915 .802	7.376	.001
7	Between groups Within groups Total	81.843 1251.752 1333.595	2 1799 1799	40.922 .697	58.747	.000

From the above table, there is significant state difference in the crimes prevalent in the three states studied. The hypothesis is therefore rejected.

H02: There is no significant state difference on the causes of crime in the states.

Table 6; Analysis of variance on the responses of causes of crime from the three states.

		Sum of squares	Df	Mean square	F	Sig.
8	Between groups Within groups Total	46.474 1315.090 1361.564	2 1797 1799	23.237 .732	31.752	.000
9	Between groups Within groups Total	117.358 1369.997 1486.924	2 1797 1799	58.629 .762	76.921	.000
10	Between groups Within groups Total	14.368 1158.130 1172.498	2 1797 1799	7.184 .644	11.147	.000
11	Between groups Within groups Total	52.770 890.750 943.520	2 1797 1799	26.385 .496	53.229	.000
12	Between groups Within groups Total	54.174 718.083 772.258	2 1797 1799	27.087 .400	67.786	.000
13	Between groups Within groups Total	.861 1481.930 1482.791	2 1797 1799	.431 .825	.522	.593
14	Between groups Within groups Total	.118 1595.412 1595.599	2 1797 1799	.094 .888	.106	.900
15	Between groups Within groups Total	3.001 1134.105 1137.106	2 1797 1799	1.501 .631	2.378	.093

16	Between groups	.414	2	.207	.289	.749
	Within groups	1287.572	1797	.717		
	Total	1287.986	1799			
17	Between groups	16.168	2	8.084	12.812	.000
	Within groups	1133.818	1797	.631		
	Total	1149.986	1799			

From the table, Items 13, 14, 15, and 16 were not significant. This tends to suggest that Curses on individuals, lack of love as a result of broken homes, discrimination and deprived neighbourhood does not cause crime.

H03 There is no significant state difference in the punishment meted on offenders.

Table 6; analysis of variance on punishment meted on offenders based on state.

		Sum of squares	Df	Mean square	F	Sig.
18	Between groups	12.643	2	6.322	5.845	.003
	Within groups	1943.552	1797	1.082		
	Total	1956.195	1799			
19	Between groups	86.028	2	43.014	64.631	.000
	Within groups	1195.958	1797	.666		
	Total	1281.986	1799			
20	Between groups	11.974	2	5.987	9.276	.000
	Within groups	1159.892	1797	.645		
	Total	1171.866	1799			
21	Between groups	73.960	2	36.980	49.088	.000
	Within groups	1355.960	1797	.755		
	Total	1429.920	1799			
22	Between groups	21.501	2	10.751	11.764	.000
	Within groups	1642.232	1797	.914		
	Total	1663.733	1799			

From the table at 0.05 level of significance, there is significant difference in the punishment meted on the offenders in the three states studied. The hypothesis is hereby rejected.

Ho4; There is no significant difference in the measures of crime control in the states

Table 6. Analysis of variance of responses on measures of crime control in the states studied.

25	Between groups	67.021	2	33.511	40.736	.000
	Within groups	1478.257	1797	.832		
	Total	1545.278	1799			
26	Between groups	24.241	2	12.171	11.286	.000
	Within groups	1937.832	1797	1.078		
	Total	1962.173	1799			
27	Between groups	18.503	2	9.525	10.095	.000
	Within groups	1646.917	1797	.916		
	Total	1665.420	1799			
28	Between groups	73.374	2	36.687	56.009	.000
	Within groups	1177.070	1797	.655		
	Total	1250.444	1799			

		Sum of squares	Df	Mean square	F	Sig.
23	Between groups	20.141	2	10.071	10.240	.000
	Within groups	1767.217	1797	.983		
	Total	1787.358	1799			
24	Between groups	69.781	2	34.891	53.449	.000
	Within groups	1173.043	1797	.653		
	Total	1242.824	1799			

From the table, there is significant state difference at 0.05 level of significance in the method of crime control in the three states studied.

## Discussion

The study set out to establish the crimes prevalent in the South Eastern States of Nigeria. The result show that armed robbery, stealing and kidnapping were the most prevalent. This is in consonance with the report from police sources where 43,174 cases of stealing, 10,750 cases of robbery, and 7,860 of armed robbery were recorded in 2006. Abduction cases were only 17. The low reported cases of kidnapping that is becoming a National epidemic may either be that people were not really aware of the lucrative nature of kidnapping as they have been since 2009 or the fear of reprisal by the kidnapers if the police are involved in the issue. There is state difference in crime; this corroborates report from the Nigerian Police (2006) which showed that Imo State had 172 reported cases of armed robbery; Enugu had 44 while Ebonyi had 62. In terms of current happenings, reports from newspapers, radio and television show that out of the three states studied, Imo had the greatest number of kidnappings followed by Enugu State.

On the demographic causes of crime in South Eastern Nigeria, the result show that drug use, poverty, frustration as a result of dropping out of school, peer influence and unemployment are the root causes. This is in consonance with the Nigerian Prisons report (2006) that unemployment, alcohol and drug use are among the etiological factors in crime perpetration among youths. Reports from the Federal Ministry of Labor (2004) showed that registered unemployed lower grade workers stood at 252,362 while only 12,113 were employed. For the professional and executive cadre, there were 79,686 in the unemployed register but only 510 were employed. There is the likelihood that the situation is worse today.

Under this condition, it will not be surprising if the unemployed resorted to crime for sustenance. When punishments meted on criminals are considered, indigenes of the three states hand the criminals over to the police which is the right and legal thing to do. The police also help in control of crimes as they patrol major roads in every state. Due to the inadequacy of law enforcements agents to cover all the nooks and crannies of the states, there are registered vigilante groups which are permitted by the police to carry arms in the various villages. The police also come to their aid when alerted over armed robbery invasion. In spite of all these measures, armed robbery and other criminal activities have not abetted. What then should be the role of counselors and special education professionals on the way forward?

In a focus group discussion with school guidance counselors on their views about crime and solution, they agreed that cognitive restructuring should be the first step. They believe that the average Nigerian youth wants to make quick money without much work. That is the reason why they engage



in various crimes. With cognitive restructuring, the youths are helped to view reward as synonymous with hard work. They should also be motivated to study hard by training them on time management, study habit and taking examinations. Information on career opportunities, sources of loans, scholarships and grants in aid for the indigent students should also be provided by the school Counselors. This highlights the need for the provision of relevant daily Newspapers, magazines and brochures from various colleges and universities in the school libraries and counselors' offices to enhance the informational aspect of counseling in the schools. On unemployment alleviation, they suggested using psychological tests to identify students' interests and abilities and channel them right early to these areas right from the secondary school to avoid dropping out of school due to poor performance. For those out of school, retraining in any entrepreneurial activity such as computer compliance and even getting involved in distributive trades or small scale businesses will be of immense help.

The special educationist hammer on early identification of emotional behavioral disorder in children and immediate proper handling before it escalates to problematic behavior in adolescence. Here again, the counselor is expected to train parents in the use of behavior modification techniques of shaping and use of reinforcement to modify maladaptive and destructive behaviours instead of flogging and labeling the child.

It is heartwarming to hear that the procurement of materials for the educational and vocational training of prisoners had commenced in full swing. The donation of tailoring, plumbing and carpentry equipments by the ministry of women affairs and social development to the prison authorities is a welcome development as it will boost the federal government's efforts to launch out ex-prisoners who will be useful to the society and themselves.

The establishment of the National Directorate of employment was for the purpose of training and retraining youths in Nigeria but little has been achieved. Records from NDE showed that as at 2006, only 560 youths from Ebonyi State, 1,000 from Enugu and 610 from Imo state were trained which is a far cry from what is expected considering the number of unemployed youths in these states. More youths need to be trained and Non-Governmental Organisations (NGOs) and private enterprises can help to augment the efforts of the government. This calls for Igbos in Diaspora to encourage and even establish training centers in their various states where unemployed youths can be trained and retrained to fit into the current technological age. Establishing or instituting scholarships for indigent students in schools and soft loans for youths to engage in entrepreneurial activities after training will go a long way to alleviate the current crime problems in the Igbo nation.

## **Conclusion and Recommendations**

Crime is a reality and all efforts so far have not achieved much. The authors recommend that; School guidance counselors who hitherto have been subjected to teaching only should be empowered through reduction or even removal of teaching loads in order to direct these young ones to be useful citizens through effective studies and appropriate career choice.

There should also be public/private sector collaboration in providing employment for the educated youths and retraining the drop outs to reduce their criminal tendencies.

National Directorate for Employment (NDE) should beef up its training programs to accommodate more unemployed youths. Igbos in Diaspora Should institute scholarships and training centers to augment the efforts of the government agencies. Those retrained should also be given

financial support in terms of grants or soft loans to enable them set up small scale businesses.

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# The Challenges of the Igbo Language Teachers in the 21st Century

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## Abstract

*Education is a major tool for national development. The educational system plays an important role in the production of the human resources needed to function in different facets of national life and development process. This paper argues for the use of Igbo alongside English as media of instruction in schools. This will further promote and enhance the Igbo science and technology. While it is observed that the production of qualified teachers to teach at various levels of education is a major challenge facing the educational system in contemporary Nigeria (Ibidapo-Obe,2007), this paper identifies learners' attitude as a major challenge facing the Igbo language teachers in Igboland. The paper, therefore, recommends the use of an audio-visual laboratory at all levels of education in order to stimulate learners' interest in Igbo lessons; the introduction of oral Igbo production in the classrooms which will comprise the phonemic inventories of all Igbo dialects; and teachers who are knowledgeable in both science and Igbo to teach science in Igbo.*

## Introduction

Language plays a vital role in the education process. Language is generally accepted as the inherent communicative ability bestowed on human beings by God. It plays a great part in our life. The effects of language are remarkable. The concept of language, according to Agbedo (2000:1), "is the system of rules and principles of human communication." Similarly, Rocenga et al cited in Nwaka (1998:37) comment, "language is a system of arbitrary vocal symbols by which members of a social group cooperate and interact". The educational system comprises various sub-systems (the primary, the secondary and the tertiary levels). These sub-systems are interrelated in the sense that learners graduate from one system and join the next. Therefore, a fault or defect in one sub-system leads to faults or defects in the others. In an attempt to tackle this problem, emphasis is laid on the quality of teachers who teach at the various levels of educational system. There is still a yearning gap as regards the availability of quality teachers.

Interestingly, it is discovered that while teacher-quality is a major challenge to the teaching of other subjects in schools, learner-attitude constitutes the main obstacle to the teaching of Igbo in schools. The teachers are equipped but the learners show no interest in the subject. For instance, many secondary school students of Igbo avoid Igbo lessons because of their preference for English. They will either run out of the class when it is Igbo period or read other subjects while the Igbo lesson goes on. The focus of this paper is the inclusion of Igbo as a medium of instruction in schools. To this effect stimulating strategies are recommended for use during Igbo lessons.

## Review of Previous Works

Many scholars have argued in favour of the use of English as the medium of instruction in Nigerian schools. Eyisi (2005:58) stipulates that "... the language (English) is wisely or unwisely the barometers

with which the quality, efficiency and effectiveness of our (Nigerians) school curricula are measured.” She also notes that virtually all the subjects in the curricula are taught in English. Idowu (nd:1) asserts “English is the only effective medium of communication among Nigerians...”

National Economic Empowerment and Development Strategy (NEEDS) (2005:35) lists the following as the goals of the education system in terms of teacher quality:

- Ensuring that eighty percent of primary school teachers acquire the minimum teaching qualification (the National Certificate in Education);
- Ensuring that ninety percent of secondary school teachers obtain professional qualification (B.Ed., B.A. Education, B. Sc. Education, PGDE);
- Ensuring that eighty percent of teachers in tertiary institutions acquire pedagogical skills.
- Ensuring that eighty percent of teachers at all levels are professionals.

Ibidapo-Obe’s (2007) discussion on the challenge of teacher education in Nigeria points out that effective operation of the educational system requires that quality teachers be available in sufficient quality at all levels of the educational system in order to meet the needs of the nation. It is obvious that English enjoys supremacy in our educational system. But then, the inclusion of our indigenous languages is very necessary.

## Methodology

Pupils and students in public and private primary and secondary schools in core Igbo states were selected for the purpose of this study. The core Igbo states are Abia, Anambra, Ebonyi, Enugu and Imo states of Nigeria. Information was elicited from the students with a check list using a mode of elicitation called structured interview. The basic method of analysis employed in this study is the general descriptive approach. The description was done through a survey of the corpus.

*Teaching Language to Igbo Children:* In this part of the study, we shall examine the Igbo language use at home and school.

### Teaching Language at Home

English is basically used in many Igbo homes as a medium of communication. Beginning with nursing mothers, they speak English to their babies. Eme and Nkamigbo (2009) identify some of the English statements used by Igbo nursing mothers as follows:

Daddy is back  
Stop crying now  
Oh! I love you baby, etc.

It is now the trend for Igbo male children to be called ‘junior’. When a mother is asked what her male child’s name is, she answers “He is junior”. Igbo children no longer call ‘mama’ and ‘papa’ rather ‘mommy’ and ‘daddy’. They no longer call our old people ‘nne ochie’ and ‘nna ochie’ instead they call ‘grandma’ and ‘grandpa’.

So, parents are proud to speak English to their children and scold them whenever they communicate in vernacular. English appears to be a mark of belonging to the elite society. When the Igbo language is used at elite Igbo homes, it is the offensive aspect of the language that is normally used. This offensive aspect of the language is what Eme (2005) termed ‘verbal abuse’. She also observes that verbal abuse is used at both the home by parents and the school by teachers. These abusers prefer

using verbal abuse to flogging the children in order to avoid inflicting any bodily injury on them.

Some of the Igbo derogatory terms used in form of verbal abuses include:

### **Igbo derogatory Terms**

amoosu

osu

mamjwỌta

ekwensu

akwỤna

onye a bỤrỤ ỌnỤ

onye nzuzu

### **English Gloss**

witch

slave of a shrine or deity

mermaid spirit

devil

prostitute

a cursed person

a foolish person, etc.

(Adapted from Eme 2005:143)

### **Teaching Language to Igbo Children in Schools**

The public schools in Igboland adhere to the stipulation of the National Policy on Education (NPE). NPE (2004:16) stipulates, "Government will see to it that the medium of instruction in the primary school is initially the mother tongue or the language of immediate community and at later stage English". To the public schools, a child learns very well and fast when s/he is educated in her or his language (mother tongue). So, the medium of instruction in public primary schools in Igboland is Igbo. Therefore, subjects like social studies, health education, primary science etc. are taught in Igbo. Conversely, the private school operators agree with Ikekeonwu (2008) that a child can learn as many languages as s/he is exposed to simultaneously at the same level of proficiency. Eme and Nkamigbo (2009) ascertain that a handful of private schools in Onitsha metropolis have good population of pupils/students because of their use of English as the major (if not the only) medium of instruction and Igbo is partially used only during Igbo lessons. Many a time Igbo is taught in English in these schools.

### **Analysis of the Igbo language**

Igbo is a Benue-Congo language spoken in Abia, Anambra, Ebonyi, Enugu and Imo states of Nigeria. It is also spoken in some parts of Bayelsa, Delta and Rivers states in the southern region of Nigeria. The 2006 population census shows that there are about 15 million (14, 620, 331) Igbo speakers in the core Igbo states (Abia, Anambra, Ebonyi, Enugu and Imo states of Nigeria). English, being the official language of Nigeria, is in contact with Igbo. As a result of this contact the two languages influence each other. Igbo has greatly influenced English in the sense that Igbo speakers of English often transfer the patterns and features of Igbo into English.

However, English has tremendous influence on Igbo. This influence is evident in the large number of vocabulary items which can be traced to loans or loan translation. For example, *bank* (bank), *keỌin* (cotton), *radio* (radio), *video* (video) etc; spellings of Igbo names using English orthography for instance, Amawbia (for Ama Ọbja), Awkuzu (for Ọkuzụ), Owerri (For Owere), Mbah (for Mba), Okafọ (for Okafọ) etc; and code mixing and code switching.

Spelling pronunciation and pronunciation spelling are also results of the influence. Spelling pronunciation is pronouncing a word as it is spelt while pronunciation spelling is spelling a word as it is pronounced. These are illustrated below:

### *Spelling pronunciation:*

'ewe lamb' is pronounced as [ewe læmb] instead of [ju læm].

'aghas't is pronounced as [aʏast] instead of [əgæst].

Pronunciation spelling:

'women' is spelt as \*wimin.

'womb' is spelt as \*wum.

### *Igbo Teacher Challenges*

The challenges facing the Igbo language teacher include classroom instructional strategies, evaluation methods, and family support.

### *Instructional Strategies*

Instructional strategies connote a comprehensive approach to instruction using objective guidance as against fewer objectives and less directional instruction. They comprise sequence of activities, need assessment and objective specification, content selection, instructional materials design, selection and production, instructional planning, evaluation and modification (Sanders, 1979) cited in (Onasanya, 1998). When these strategies are tied to the needs and interests of students, learning the Igbo language is enhanced. Harberman (1992:54) enumerates the following instructional strategies:

- i. Beginning a lesson by stating its objectives and outlining its structure.
- ii. Demonstrating effective delivery skills built on clarity gestures and direct eye contact with learners;
- iii. Presenting clear, precise guidelines and routines that make the classroom run smoothly;
- iv. Involving the learners actively in the learning task;
- v. Scanning the classroom frequently and drawing the learners back to the lesson when attention wanders;
- vi. Moving round to supervise and offer help as needed when students work at their desks;
- vii. Getting down to students' interest level, listening sensitively, and accepting meaningful learner responses that differ from the teacher's view;
- viii. Commencing and stopping lessons on time;
- ix. Treating the learner with trust and respect;
- x. Creating room, for reviews and repetitions especially where difficult tasks are involved.

### *Evaluation*

In line with Onasanya (1998), this paper is of the view that there is a need to evaluate instructional strategies in order to determine its effectiveness and the extent of accomplishment of objectives. The administration of traditional post-test, examination or short-puzzle is a valid instrument of measurement in systems approach to instruction.

Feedback: The post-test result could serve as a feedback to the learners. It could also provide vital information which the teacher may use to modify the different components of the learning situations and generally for system modification.

*Family Support:* Igbo language teachers are greatly faced with nonchalant attitude from the Igbo

society in general and Igbo family in particular. Parents frown at their children's proposal to study Igbo in the university. They would normally prefer them to study "known" disciplines because they doubt the usefulness of Igbo after graduation. Similarly, most parents withdraw their children from primary/secondary schools where Igbo is mainly used as a medium of instruction and register them in the schools where English is used. It is a general conception that children who attend public schools come from poor family background.

### **Implications for National Development and Growth in the 21st Century**

Science and technology subjects should be taught in Igbo. By so doing our children will understand the subjects better and this will definitely lead to an improvement in the students' performance in examinations. Let us consider China and Japan. They are highly respected today in the world due to their expertise in technology. I can assure us that an average educated Chinese or Japanese native speaker cannot communicate effectively in English. A Japanese scholar once said that his grandfather's note was written in only English. His father's note was written in both English and Japanese while his note was written in Japanese. This suggests outright removal of English in the vital sectors of Japanese national development.

The argument that the Igbo language is not sufficiently competent for modern science and technology practice contradicts the history of science and technology in the Igbo culture area (Osuagwu, 2007). Igbos have developed terminologies for science and technology. They had places of excellence in gun-making such as Awka and Nkwerre before the advent of the whiteman. The gun-making technologists made effective guns without speaking the English language. Production of farm implements, fishing tools, cooking utensils, and food processing such as cassava were all done before the contact with English. In line with the foregoing, Osuagwu (2007:110) opines, "In my teaching experience, I find that if the aim is to communicate a scientific concept to Igbo students, the best medium is Igbo. And those who take my courses will testify that I do most of my explanation in Igbo. And everybody is happier for it". This is a science teacher narrating his teaching experience. Our children will perform rather better in science subjects when they are taught in Igbo.

### **Conclusion and Recommendations**

This paper is of the view that since learners' attitude constitutes a major obstacle to the teaching and learning of Igbo, attempts would be made to reform this attitude. Igbo speakers of English should bear in mind that Igbo is not inferior to English. As a matter of fact, no language is inferior to the other so long as it satisfies the need of communication. Parents should speak the language to their children right from the cradle. Parents and teachers should not humiliate their children/students when they speak Igbo. They are rather advised to expose these children to those languages which they think their children need to learn.

Grigiri (2006: 27) reported "*Technology and economic activities were well developed in pre-colonial (Igbo Society of) Nigeria. These were found in the spheres of agriculture, manufacturing, mining ...*"

Having critically examined the challenges facing the Igbo language teacher this paper, therefore, recommends the provision of a practical medium for Igbo lessons. An audio-visual laboratory is needed where television, for instance, will be used during lessons. It has been proved very effective in Ivory Coast and can equally be effective in Igbo schools. The practicability of obtaining educational programmes of films, tape, and television should be considered very seriously.

Following Mbagwu (2006), this paper recommends the introduction of the teaching and learning of oral Igbo in schools just as it is with oral English. With the teaching and learning of oral Igbo, learners' interest will be stimulated. The non-inclusion of some of the learners' dialects in the standard Igbo orthography may have dwindled their interest in studying the language. The oral Igbo programme would make learners know the sound system of standard Igbo, its relationship with their own dialects and other dialects of Igbo. It is also suggested that teachers who are knowledgeable in both science and Igbo should be employed to teach science in Igbo.

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## Definitions of Adult Education: Clearing some Misconceptions.

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### Abstract

*This paper is articulated in the interest of new entrants into the profession of adult education, to colleagues – educators and non-educators, who may wish to share in this all- embracing and encompassing discipline which seems to be confusing to many people, also for the advancement of knowledge in this area of study. The paper explains why the concept of adult education seems confusing, reviews some definitions of adult education by different authors, proposes some definitions, highlighted andragogy as conceived by Malcolm Knowles and pointed out that it should not be viewed as being in sharp contrast with pedagogy in the interest of life long education and development. It also discusses the goals, purposes and coverage of adult education.*

### Introduction

Adult education is defined differently by different people in different cultures and societies. It has no single universal definition. This is because it embraces a lot of activities and addresses myriads of problems which may be individual, societal and national. The choice of programmes of adult education for each individual, society and/or culture is derived from particular needs of such individual, society or culture at a particular period of time. Knowles (1997) observed that adult education emerged in response to specific needs and solution of particular problems during particular period of an individual and societal life. Merriam and Brockett (2007) noted in a similar vein that during the colonial period in America, adult education had a moral and religious imperative while as a nation it was more focused on developing leaders and good citizens. Similarly in different countries and nations which programmes of adult education varies depending on the needs it is meant to respond to and the problem which it is meant to solve at a particular time. Odokara (1974) see adult education as being related to the needs of adults in terms of their ambitions, their interests, and their broadening world of experience and to the new responsibilities which a change society imposes.

Merriam and Brockett (2007) in considering the nature of the concept likened it to the proverbial elephant described by five blind men whose definitions depends on which part of the elephant they touched and how they experienced the phenomena. To some scholars (Kelly and Perkett, (N.D), Hall Quest (1927), Verner(1964); Braimoh and Biao (1988); Merriam and Brockett, 2007) adult education is complicated, difficult to define and impossible to articulate, hence, they noted that it encompasses lots of activities and methods which are used to educate adults.

The difficulty in the definition of the term adult education seems to rest on the word ‘adult’. According to Kagan and Meidow (n.d). The word adult is difficult to define because “it varies from one society to another, and has changed over time. The boundaries that determine who is considered an adult can depend on actions (i.e legal age to fight a war, drive a car, drink, vote), activities (i.e., age that one can begin to work), and/or responsibilities (i.e, marriage age, age to begin supporting family).”In corroboration with this view Braimoh and Biao (1988) finds the word ‘adult’ a vague concept and noted that although the Nigerian constitution views a person who is 18 years as an adult, It is not acceptable in many cultures and communities in Nigeria. In a similar vein, Kelly and Perkett (n.d),

noted that although adulthood can be defined using developmental terms of experiences and attitude, different societies associate adulthood with different characteristics. For example they noted that while White American Associate adulthood with self-sufficiency and independence, that is, the ability to have one's opinions and "stand on one's feet, the Japanese associate adulthood with the "ability to sacrifice or submerge ones own desires' hence they do not consider those who "stick to" personal opinions, or who place first priority on satisfying their own desires as adults. This would not seem confusing to us since even in Nigeria, different communities associate adulthood with acquiring different characteristics and/or different parameters ranging from chronological, biological, social, psychological, historical and political. The legal and chronological definition of maturity always seems more attractive for defining adulthood because they lend themselves to population and demographic analysis. One can therefore deduce that definition of adulthood differs considering the societal and cultural milieu which it sprang up hence there exists different parameters for defining adulthood.

### **Adult Education Definitions**

Over the years so many definitions have been proposed by different authors for the term adult education. It becomes pertinent at this point that some of these definitions be reviewed:

Lindeman (1926) "Education is life – not a mere preparation for an unknown kind of future living .... The whole of life is learning; therefore, educations can have no ending. This new venture is called adult education – not because it is confined to adults but because adulthood, maturity, defines its limits".

Bryson (1936) "... all the activities with an educational purpose that are carried on by people, engaged in the ordinary business of life".

Verner (1962) "Adult Education is the action of an external educational agent in purposefully ordering behavior into planned systematic experiences that can result in learning for those for whom such an activity is supplemental to their primary role in society, and which involves some continuity in an exchange relationship between the agent and the learner so that the educational process is under constant supervision and direction.

Verner (1964) "... the term adult education is used to designate all those educational activities that are designed specifically for adults.

Knowles (1980) "One problem contributing to the confusion is that the term adult education' is used with at least three different meanings. In its broadest sense, the term describes a set of organized activities carried on by a wide variety of institutions for the accomplishment of specific educational objectives ..... A third meaning combines all these processes and activities into the idea of a movement or field of social practice. In this sense, adult education brings together into a discrete social system all the individuals, institutions and associations concerned with the education of adults and perceives them as working towards common goals of improving the methods and materials of adult learning, extending the opportunities for adults to learn, and advancing the general level of our culture".

Courtney (1989) "Adult Education is an intervention into the ordinary business of life – an intervention whose immediate goal is change, in knowledge or in competence. An adult educator is one, essentially, who is skilled at making such interventions".

Houle (1996) "Adult education is the process by which men and women (alone, in groups, or institutional settings) seek to improve themselves or their society by increasing their skill, knowledge or sensitiveness, or it is any process by which individuals, groups, or institutions try to help men and

women improve in these ways.

Kelly & Perkett (n.d) Adult education will be defined as all segments of the culture which includes the education of adults, including, but not confined to, access to public libraries, study groups, business education for the purpose of social and economic development and education at the primary and secondary level, such as elementary math, composition, etc.

Merriam & Brockett (2007) “Adult education is virtually any activity for adults designed to bring about learning which according to them include the work of aerobics instructor, nurse, private consultant, literacy worker and community activist.”

Okediran and Sarumi (2001) Adult education should be seen as the provision of resources and support for self directed learning irrespective of age. Adult education should be distinguished from schooling within the overall concept of lifelong learning. The emphasis should be in the cultivation of total man whose educational need goes beyond cognitive knowledge, but to other areas of human endeavour.

UNESCO (1976) “... the entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as apprenticeship, whereby persons regarded as adult by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications or turn them in a new direction and bring about changes in their attitudes or behavior in the twofold perspective of full personal development and participation in a balanced and independent social, economic and cultural development...”

### **Discussion of the Definitions**

Generally one can see that the definitions proposed by different authors as highlighted in this paper depend on their viewpoint, varying cultures and societies where they belong and develop. Adult education embraces and encompasses a lot of educational activities and programmes. It is not just literacy- teaching illiterate adults how to read write and compute, or just community development. It is not just what goes-on in old peoples home. It is educational purpose carried out by adults or planned for adults to acquire positive change which will enable them to be useful to themselves and their societies. According to Usher and Bryant (1989) the idea which is common to all notions of adult education is that some concept of adult undergirds the definition and the activity is intentional. It is the adapting and improving behavior of those who are referred to as adults in the societies which they belong.

Adult education is all planned and systematic activities (whether formal, informal or non-formal) designed to bring about learning for those (whether literates, illiterates or out of school children) who are considered adults in the society which they belong to enable them acquire positive knowledge, skills and attitude for satisfying their individual, institutional and/or societal needs. Adult education is education for life. It essentially advocates that education should be life-long and terminates with life. It emphasizes that education should be available and fairly distributed to everyone young and old, rich and poor and to all human race. It is designed to enable one develop competency in one's professional area of life. It is education that gets one prepared for employment and is also provided during employment. It is education that enables one to catch up with time and get ahead which means that it makes it possible for one to continue updating ones knowledge, attitude and skill for positive family and community life and also for preservation and enhancement of people's way of life.

According to Kelly and Perkett (n.d) “Indeed the field has become so encompassing that it would not be wrong to refer to it as culture. Lindeman, (1926) while opposing the concept of andragogy pointed out what are inclusive and not inclusive in adult education as follows:

Authoritative teaching, examinations which preclude original thinking, rigid pedagogy formulae – all these have no place in adult education . . . small groups of aspiring adults who desire to keep their minds fresh and vigorous, who begin to learn by confronting pertinent situations; who dig down into the reservoirs of their experience before resorting to texts and secondary facts; who are not led in the discussion by teachers who are also searchers after wisdom and not oracles: this constitutes the setting for adult education, the modern quest for life’s meaning (Lindemen, 1926, pp. 10-11).

Adult education programmes are not geared only towards academics and examination. It appreciates the fact that there is more to education than academics and that success in attitude is achieved by developing skills that cannot be measured. It believes in the essential educability of all men which means that every individual has a unique talent and can advance at a natural pace without negative stigma of failure. Reed and Loughran (1984) pointed out that many groups of youth as well as adults learn more effectively in non-formal out-of school settings. They identified vocational training, as common vehicles for such learning. This line of thought and direction enhances positive self-esteem which instills a love to learn that stays with an individual throughout lifetime. Education is therefore a lifetime experience which is not limited to the youthful years.

According to Grathan (1959) in Akinpelu (2002), Adult education is no field for pessimists – about the potentialities of man. Akinpelu (2002) in corroboration with the view stated that an adult educator must believe in the equality of man, since basic to adult education is the respect for the freedom, dignity and self esteem of the learner. The teaching – learning relationship cannot be one of authoritarian or of superior – teacher and inferior – learner. The adult illiterate may not “know book” or “sabi grammer”, but he does “know his inside” (p.5).

### *Malcolm Knowles Andragogy*

The modern adult education hinges on Malcolm Knowles Andragogy “which is the antithesis of pedagogy (Kelly & Perket, n.d). They noted that:

Whereas pedagogy is the instruction of dependent personality (the child), andragogy is the instruction of a non- dependent personality (the adult). Adult learners are considered to have more experience, a greater interest in life – centered topics. Whereas children are commonly referred to as “students” who are “taught” adults are more commonly referred to as “learners” who are “facilitated”.

Adult learners have far more experiences than children and are thus not dependent on the instructor or any learning encounter. The pedagogical model places the student in a submissive role requiring obedience to the teachers instruction. It does not make enough provision to the developmental changes in an adult and as a result makes it difficult for an adult to cope.

Knowles (1980) notes that andragogy is a learning theory designed to address the particular needs of adults and is rooted on the premise that there are significant differences in learning characteristics between children and adults. As conceived by him it is predicated on four basic assumptions about the learners ability, need and desire to take responsibility of learning (p.44 -45). The assumptions are as follows:

- (a) The self concept of an adult learner moves from dependency to independency or self directedness.
- (b) They accumulate a reservoir of experience that can be used as a basis on which to build learning.
- (c) Their readiness to learn becomes increasingly associated with the developmental tasks of their social roles.
- (d) Their time and curricular perspective change from postponed to immediacy of application and from subject – centered to performance centered.

Knowles andragogy made it clear that there is significance difference between a child learner and an adult learner. Andragogy as opposed to pedagogy is a learning theory designed to address the particular needs of adult learners.

Compared to children, adults have special needs and requirements for learning. The Knowles andragogy have marked implication for adult learning and if applied correctly, a skilled and dedicated facilitator can make positive impact on the learners. Part of being an effective instructor involves understanding the characteristics of an adult learner and as a result designing meaningful experiences for him. In addition there is need for educators to consider the culture, physiology learning styles and personality of learners while developing learning programmes for them. The instructor should understand that his work is that of a change agent. It is worthy of note that adult education is relevant to the lifelong education of children and youths. This is because the discipline cuts across different age boundaries.

Adult education is expected to accelerate the adult traits and potentialities latent in children and youths. it is also needed for individuals to remedy their deficiencies in youthful age and to enhance their adulthood age. In consonant with this idea, Anowor (1987) noted that the content of adult education needs to be re-examined in order not to neglect the education of the child which it is supposed to take care of. Integration of pedagogy and andragogy is therefore imperative for accelerating development and achieving all round and lifelong education in individuals.

### **Goals, Purposes and Coverage of Adult Education**

As the definitions of adult education differ but are interrelated, interwoven and overlapping, so do the purposes and goals of the subject. As Shown by literature, goals and purposes delineate coverage. The goals and purposes of adult education are catalogued differently by varying writers as follows:

Apps (1985); Career development, personal development, remedial cultural criticism and social action.

Beder (1989); Facilitate change, enhance personal growth, promote productivity, support and maintain social order.

Rachal (1988); Liberal, occupational, self-help, compensatory

Darkenwald and Merriam (1982); Cultivation of intellect, personal and social development, individual and self actualization, social transformation, organizational effectiveness.

Liveright (1968); Vocational, occupational and professional competencies, self realization, personal and family growth and also civic and social responsibilities.

Grathan (1955); Liberal, vocational, informational and recreational

Bryson (1936); Liberal, occupational, relational, remedial, and political.

International Women in Science and Engineering (TWISE, n.d)

Personal growth and development for self actualization, social improvement for enhancement of ones career, organizational effectiveness, intellectual growth and social transformation.

In the Nigeria context and as recognized in the section six of the National Policy on Education (2004 p.24) the subject is identified as mass literacy, Adult and Non-formal education. According to the document adult education covers functional literacy and continuing education for adults and youths; functional and remedial education for young people and out of school children who did not complete secondary school, and need to improve their basic knowledge and skills; in-service, on-the-job, vocational and also professional training for different categories of workers and professionals for constant updating and improvement of their knowledge and skills; aesthetic cultural and civic education for public enlightenment.

Adult education increases and improves the quality of human resources (in all areas of life) which is the most precious of all resources of mankind through constant training and retraining. Adult education makes it possible for every individual to start or continue his education in adult life. It equips individuals with knowledge, skills, attitudes and values which enable them live productive life. It involves education for social economic and political development which makes it possible for citizens to identify themselves with the general aims of the nation. It teaches democracy, social justice and patriotism which creates conducive atmosphere for nation building and cultural appreciation. It includes continuing education at all levels, liberal education for self fulfillment, distance and on-line educational programmes and also extension and community education for development of livelihood skills which addresses illiteracy and poverty. Short term training workshop, seminars, conferences, programs and projects that bring about awareness, socio-political, cultural and aesthetic enrichment are all in the scope of adult education. It then becomes obvious that in this rapidly changing world, one surely needs one kind of adult education or the other in order to survive.

## **Conclusion**

Adult education has a very wide scope. It is education for life and development. It is education that cuts across all ages; for children and adults. Adult learners are different from traditional college students. Many of them have responsibilities which include families and jobs. If the concept is understood by educators and correct meaning proffered, suitable adult education programmes can be designed and learning facilitated for people of all ages and different social status in different culture and environment.

In the light of the present global challenges and perpetual changes in all facets of life, adult education seems the best remedy. Viewing learning and indeed education as a lifelong endeavour provides basis for accommodating changes and realizing the millennium development and education for all goals for sustainable development.

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# Identification of ICT for Development in Nigeria: Utilization, Literacy Efforts and Challenges

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## Abstract

*This position paper examined issues relating to developmental challenges of Information and Communication Technologies (ICT), literacy needs, and absence of ICT devices for human development and non-formal educational approaches to the understanding and application of ICT in Africa, with reference to Nigerian communities. Several data on ICT efforts were collected from documented materials, literature and other sources to assist in this discussion; including historical and analytical reports on ICT in Nigeria relating to the impact, capacity building and citizenship participation on the ICT process. Recommendations for ICT policy improvement in the field of literacy, special education, formal and non-formal education for urban and rural dwellers in Nigeria were also provided.*

## Background to ICT & Global Usage

Globally speaking, literacy, special education, formal and non-formal education instructors are constantly challenged with new educational technology inventions, tools and resource materials, as well as faced with Information and Communication Technologies (ICT) that aid in the training, learning, skill acquisitions and applications by individuals; for independent living, employment, community integration and attaining other forms of postsecondary options in the society. Both gifted and exceptional citizens worldwide require modern ICT knowledge skills for growth, survival at home (whether it is in urban or rural community), become productive in the workplace and achieve community development goals. Information and Communication Technology (ICT) innovations have come to stay in this 21st Century and beyond; every nation and people are constantly faced with the challenges of ICT in different sectors of human development, community improvement and nation building.

The global quest for ICT for development is enormous to both urban and rural communities because ICT skills are critical to the success of enhancing national development in a globalised era (World Bank, 2006). In this regards, governments in developed and developing societies strive to create opportunities for citizenship participation in ICT training, creative knowledge, skills acquisition, general application and usage of ICT tools to solve problems, promote their wellbeing and enhance national growth.

Furthermore, rudimentary intermediate-level ICT skills necessary to function optimally in basic computer-related environments are crucial to national competitiveness in a developing context. The supply of these skills provided predominantly by private, non-state institutions in most developing contexts is considerably under-researched, argues Atchoarena and Esquieu (2002). Several attributes have been given to Information and Communication Technology (ICT), Information Technology (IT) but they all focus generally in one direction, i.e. to aid in human development, growth and facilitate standard and effective living.

Bialobrezeska & Cohen (2003) regarded ICTs as technologies that generally support an

individual's ability to manage and communicate information electronically, and include hardware such as computers, printers, scanners, video recorders, television, radio, and digital cameras; as well as the software and systems needed for communication, such as the Internet and e-mail. *Information technology* (IT) is "the study, design, development, application, implementation, support or management of computer-based information systems, particularly software applications and computer hardware", according to the Information Technology Association of America (ITAA, 2008). Today's professionals in information technology obtain training skills and certification in performing several roles in the areas of installing applications to designing complex computer networks and information databases – multimedia applications, processes, computer software, computer hardware, programming, data constructs, among others.

The public/private enterprise, educational systems and non-governmental institutions are not left out in the quest for ICT development, applications and usage in different facilities and environments. Private/public enterprises, non-governmental agencies and industrial concerns have embraced ICT to solve problems, earn revenue and improve work and productivity in the workplace. A few of the duties that IT professionals perform may include data management, networking, engineering computer hardware, database and software design, as well as management and administration of entire systems. Technology can help an organization improve its competitive advantage within the industry in which it resides and generate superior performance at a greater value (Bird, 2010). The personnel of these establishments integrate technologies, such as the use of personal computers, assistive technologies, cell phones, televisions, automobiles, specific electronic gadgets, and many others; to provide services, attend to problems, handle work demands and increase productivity.

*Communication* involves the interactive exchange of information, ideas, feelings, needs, and desires, states Heward (2009); adding that, communication involves a message, a sender who expresses the message, a receiver who responds to the message. In this regards, communication functions solely to facilitate the process of narrating, explaining/informing, requesting and expressing information, materials and items which human beings encounter daily in life. It means that when a sender transmits a message to a receiver through some medium – could be via word of mouth, telephone, text messaging, fax, telegraph, written expression and other multimedia channels. The receiver then decodes the message and gives the sender a feedback. As far as literacy, non-formal education and special education are concerned, individuals acquire life skills and use various modes of communication; for instance there are verbal and non-verbal means of communication. i.e. auditory means, like speech, song, and tone of voice, and the visual/nonverbal/physical means, like using sign language, body language, eye contact, touch; through different media, such as, graphics, pictures, writing and sound process.

This paper attempts to identify the development, usage and challenges of ICT in Africa, with particular reference to ICT for literacy, formal and non-formal education, and special education development of rural and urban Nigeria.

### **Development of ICT in Africa**

Bellis (2010) provided a list of different historical inventions which aided ICT development back in 3500 BC when the Phoenicians developed an alphabet; the Sumerians developed cuneiform writing - pictographs of accounts written on clay tablets; and the Egyptians in North Africa developed hieroglyphic writing. Bellis accounted further that from 1445; Johannes Gutenberg invented a printing

press with metal movable type; 1821 Charles Wheatstone reproduced sound in a primitive sound box - the first microphone; and in the 1900s when different technologies - radio, telephones, electronic gadgets, motion pictures emerged. Today, we have computers, videos, television, wireless network and the birth of World Wide Web (WWW), making communication at light speed, Bellis, concluded. Several developed and developing nations have since embraced the developmental trends and utilization of ICT tools and resources.

The global quest and development of ICT, notwithstanding, the African continent has a lot to worry about, especially on the invention, adoption, development, training, availability and application of ICT resources and tools in different sectors of the African economy. Many African nations are lagging behind in ICT development and adoption in their urban areas, not to mention the rural community settings; thus, an urgent need for more ICT sensitization and for support. Okpaku (2002) disclosed that the UN ICT Task Force Summit meeting held in Kananaskis, Alberta, Canada on June 26-7, 2002, the Heads of State of the G8 industrial countries endorsed the program and Implementation Plan of the New Partnership for Africa's Development (NEPAD), the strategic development initiative of the African Union (AU). The G8 Africa Plan of Action, emphasized support for ICT Development in Africa, and commits the member states to providing support for enhancing Africa's ability to develop ICT capacity, as well as to create ICT-friendly environments in Africa.

### **How ICT evolved: Ideas and Efforts**

Since the 1990s, there have been several initiatives signed by African governments and UN agencies promoting ICT programs. For instance, the Global Digital Opportunity Initiative which plans support for ICT development in twelve African countries. This program, according to Okpaku (2002) holds immense potential for driving ICT development support in Africa in a consistent and coherent way, especially the support of the indigenous African private sector, the ultimate repository and arbiter of long-term durable industrial and competitive capacity-building and knowledge acquisition in Africa. Aside from the UN/AU ICT initiatives, different African governments, including Nigeria, have become aware of the need for ICT development and training to boost the manpower, general workforce development, improve the peoples' wellbeing and sustain the economy. Many government institutions, private firms and NGOs in Africa are striving to assist in the provision/availability of ICT training programs at all levels in schools and work environments. Akoojee & Arends (2009) revealed, for example, in South Africa, considerable attention has been paid to intermediate level ICT skills in light of the advantage of ensuring that the country develops a competitive edge with a view to attracting investment to respond to national transformational prerogatives including growth and employment creation. Considerable attention has been paid to higher-end ICT skills provision (Moleke, Paterson, & Roodt, 2003; Paterson, McGrath, & Badroodien, 2005), but similar studies have not been replicated at the intermediate-level. It is contended that this is where most national development benefits accrue in terms of employment-generation.

In response to limited resources, Kinuthia (2008) reported that many African governments are partnering with each other; Western countries, private enterprises, and nongovernmental organizations (NGOs) to pull together their resources and to share successes (LaRocque, 2003). A higher education example is the African Virtual University (AVU), which was launched in 1997 as a World Bank sponsored project has encouraged the establishment of e-learning, Open University education and distance education programs in different African states for capacity building; developing and

disseminating open and distance learning (ODL) and e-learning content; delivering degree, diploma, and certificate programs; for example, the Open University of Nigeria (OUN) located in Lagos.

Despite the vision and efforts for African ICT education programs at high levels; the public schools system in Nigeria is yet to undergo drastic changes to move away from a system that offered substandard schooling (in the inclusion classrooms, adult literacy, formal non formal education, and special education settings) to Nigerians and a high matric failure rate, to a competitive national curriculum where ICT would be fully recognized and affordable with physical structures, facilities and resource materials readily available to every institution. Nigeria's public education requires technological content (ICT theory, practical applications, experiments, and innovative research) based on outcomes-based education, which requires the learning process to be an interaction between learner and teacher. Nigerian institutions need concise curriculum with clear ICT education goals, government commitment to ICT development in the public school system; just like in South Africa where the use of ICTs in achieving specific curriculum outcomes were highly emphasized in 2004 (Department of Education, 2004).

It is appalling to note that for many years, the major thrust in the Nigerian governance has been the search for ways in which the leadership, technocrats and instructors could be convinced that ICT should be an integral part of community and national development, need for skills training and effective instructional curriculum and ICT delivery strategies. In principle, the federal government intends to utilize every available opportunity to make Nigeria's Millennium Development Goals (MDGs) commitments and Vision 20-2020, not a pyrrhic victory but a lasting reality, says the Nigeria ICT Forum 2010.

### **How has ICT Changed Lives**

Nigeria, like the rest of the world, recognized the globalization and significance of information and communication technology (ICT) to meet the growing demands of work, business, production and services in different sectors of the economy. Thus, ICT has had a great impact on the lives of many Nigerians by offering them a world of opportunities with the introduction of automated services in the manufacturing and industrial sectors, banking business, trade and commerce, telecommunications, transportation and aviation industry, and other areas unlike when computers and multimedia technology didn't exist.

Things were quite different about a decade ago when most private businesses, public agencies and government offices could not conduct transactions with effective technology gadgets – example, use of computers, ATM machines, iPods, electronic filing system, and individuals being capable to access the World Wide Web and other information and communication technology network with ease. In this contemporary era, many Nigerian establishments, shopping centers, businesses and nongovernmental organization' corporate projects/programs rely on ICT facilities e.g. automated machines for all kinds of financial, management and service firms, , medical equipment used by hospital professionals (doctors, nurses, x-ray technicians, laboratory experts), telecommunications (telephone operators, telemarketing, telex, etc.), broadcasting (radio, television, cable network), law enforcement ( police, military, firemen – signals and communication gadgets though needs to be improved and made available to the officers for efficiency and effective protection of lives and properties in urban and rural communities), postal services, etc., all use ICT facilities.

Furthermore, several unemployed Nigerian youths rely on ICT training and facilities for their

daily livelihood, for instance, upon graduation from an institution of learning (both high schools and universities) and staying at home for years without employment, many of these unemployed youths have the vision to enroll for formal or non formal trainings (depending on the affordability) in computer programming, web designs and word processing, cell phone and computer repairs, software installation, repairs, data entry process, e-learning, e-marketing, e-trade, e-commerce, etc. The acquisition and application of such ICT skills have opened opportunities for jobs and engagement of young adults in urban centers. Today, business centers and cyber cafes are opened daily in many Nigerian cities like, Lagos, Abuja, Onitsha, Ibadan, Kano, Sokoto, Kaduna, Owerri, Aba, Enugu, Benin, Port Harcourt, Calabar, among others towns, to meet the ICT needs of the citizens and business organizations. These business centers and cyber cafes provide services such as typesetting of documents, printing, production of different projects, company brochures, reports, proposals; use of internet and web facilities, online blogging and social networking, making local and international phone calls, selling telephone cards for MTN, Glow, Etisalat, Airtel, Zain, among other telecom firms.

The movie industry and telecom business is now a multi-billion naira business in Nigeria with the participation of citizens from the urban and rural Nigeria – in acting, performing and enjoying mobile phone services. The home movie industry for instance, have permeated into the mainstream Nigeria market and overseas, cutting across interest in various multimedia levels; and so is the use prepaid phone cards which are relatively affordable. It should be noted that with the advent of the privatization of telecommunication industry and network in Nigeria, several young Nigerians are being employed by these multinational corporations operating in Nigeria, and even self-employed youths setting up makeshift outlets for selling prepaid cards in the marketplaces, bus stops and street corners in the urban and rural areas.

### **The Implications**

Nigeria imports virtually 100 per cent of all its IT equipment and a diversity of firms exist to supply, service, and maintain the imported equipment, according to Nwachuku (n.d.) , who stressed that there are however problems associated with poor vendor performance and the high cost of computing equipment, installation and software application issues. Nigerians have embraced the ICT industry especially in the urban areas than in the rural communities where ICT tools are not readily available due to several factors, like lack of electricity, computer network, poor training skills, and motivation. The vast majority of Nigerians in urban centers are aware of the ICT industry, and many are utilizing the opportunities.

With the proliferation of computer network facilities and telecommunication business in urban centers many Nigerian youths are migrating to urban cities seeking greener pastures – jobs, trainings, apprenticeships, connections. This new development has created overcrowding and over population of some areas like in Lagos metropolis. There are no amenities and infrastructures in most rural areas in Nigeria, hence, lack of power supply and cottage industries to provide jobs and services to the rural population. Furthermore, able-bodied men and women are abandoning their farming communities for urban centers, in search of white collar jobs. This situation is creating population explosion, unemployment and increase in crime wave. Aba, Owerri, Awka and Enugu in eastern Nigeria has witnessed young men and women abandoning formal schools, family business and farming in their rural communities to these cities in search of employment; thus, engage in riding motorcycle taxis popularly known as ‘okada’ while some unscrupulous ones engage in robbery and kidnapping of

hardworking people for ransom.

### **Hope on ICT for Urban and Rural Dwellers in Nigeria**

ICT has so much promise to Nigeria and Nigerians, judging from the resourcefulness and ambition to acquire professional skills and ICT facilities by the government and her citizens. Several firms are doing creditable and commendable jobs, in spite of their numerous handicaps, in supplying and maintaining the growing need for computer equipment and services in the Nigerian market. There is hope for significant improvements and increase in ICT awareness in the coming years in Nigeria, as suppliers take advantage of globalization of ICT, liberalization of foreign exchange and the increased volume of business expected from the fast growing computer and other forms of multimedia usage in urban areas. This would gradually trickle down to the rural communities, especially if the electricity/power supply situation in Nigeria improves.

Furthermore, aside from the establishment of several under-funded universities of technology across Nigeria; the National Information Technology Development Agency (NITDA) of Nigeria, among other ICT groups and organizations are poised to promote ICT advancement in Nigeria alongside the government, provide information, support and contribute to ICT policy making at all levels for national growth. New ICT-related tools have been known to make institutions and markets more productive, enhance skills and learning, improve governance at all levels, and make it easier for services to be accessed (Opara & Ituen, 2009). The supply of ICT skills represents an integral component of the overall national development trajectory of countries in a globalised world, opines the World Bank, which had expressed in 2009 its readiness to kick-start a \$2m (N300m) investment on facilities to promote growth and employment projects which would further strengthen ICT development, as well as the entertainment (music, movies and films) industry in Nigeria, according to Opara & Ituen reported.

The Nigerian government should be commended for its recognition of the need for a wide usage and exploitation of ICT tools in the country, as well as identification of capacity building as a paramount focus of the government towards enhancing career progression and development among Nigerians, particularly those in ICT and the industry, for a better and quality output that would have multiplier effects on the nation's economy (Opara & Ituen, 2009). In this regards, the government should ensure that all school children will be able to utilize ICTs by the year 2020 (in line with the national vision for an educated and industrially developed society). However, some Nigerian universities are gradually soliciting ICT support from several foreign agencies – computers, internet/web-based facilities and e-learning instructional resources, example the University of Lagos, Covenant University, University of Ibadan, University of Nigeria, University of Lagos, Nnamdi Azikiwe University, etc. Most of the libraries have internet facilities for students, faculty and staff to access information, but they are not adequate.

### **The Impact**

The growth of information and communications technologies is changing the way Nigerian economic and social structures develop, especially in rural and urban education settings. This needs a critical appraisal. The Nigerian ICT industry is witnessing great changes in hardware, software and connectivity, and related training/implementation strategies in the teaching and learning environments, which often appear to have taken center stage as the people struggle to acquire survival skills in the

urban and rural communities.

One of the challenges facing researchers investigating how information communication technologies (ICTs) are being used in teaching and learning environments is devising a conceptual and analytical framework to guide the design, analysis and interpretation of empirical studies, according to Hodgkinson-Williams (2006). This handicap is applicable to the Nigerian environment. There is a need for adult educators and special education specialists to collaborate to develop ICT literacy primers, e-learning and distance education programs, assistive technology and therapy services for adults and exceptional individuals within the community so that learning could take place in their life.

With regards to Non-formal education (NFE), Kinuthia (2008) argued that Non-formal education has always played an important role in Africa, especially because of its noncompulsory, semi-structured, flexible nature:

Its popularity is linked to its lifelong learning, experience-based, self-directed approach, and in many cases its immediacy of application of acquired skills. For that reason, it is commonly used for teaching basic and functional literacy skills, educational programs related to development initiatives—health education for example—and promotion of best practices such as agriculture. These are all important development indicators for many African nations.

There is a need for the creation of appropriate e-learning networks for public education in regular classrooms, special education and non-formal education settings to enhance the capacity of teachers and their institutions to become more responsive to new challenges in ICT instruction through the formal and non-formal education process. This could be achieved by connecting online training and distance education instruction via different institutions.

### **ICT Challenges and Implications**

Nigeria as a developing nation should strive to apply ICT structures in all sectors of development for the citizens, harnessing the national manpower and general growth of every sector of the economy. The development of digital technologies and the convergence of broadcasting, telecommunications and informatics offer sizeable opportunities for the implementation of appropriate new technologies by developing countries. The program assists developing countries to plan, build, operate, upgrade, manage and maintain technologies applicable in their networks and services. This includes the development of the Telecommunications and Information infrastructure and applications (ITU, 2010). Nigeria is not included in the recent International Telecommunication Union (ITU) reports on most advanced countries in ICT over five-year period from 2002 to 2007. Out of the top 154 countries, no Third World and developing country was listed. The most advanced countries in ICT were mainly from Northern Europe, with the exception of the Republic of Korea, which is in the Asian continent. Sweden tops the new ITU ICT Development Index, followed by the Republic of Korea, Denmark, the Netherlands, Iceland and Norway.

Nigeria is, indeed, developing in the area of ICT but there are still some loopholes, which are affecting its total advancement in this area, lamented Opara and Ituen (2009); referring to the International Telecommunication Union (ITU) report which listed the following as indices for ICT compliant and benchmarking tool globally, regionally and at the country level. "These are related to ICT access, use and skills, such as households with a computer as well as the number of Internet users; and literacy levels," says ITU.

People in rural Nigeria are willing to learn new things through formal and non-formal education

settings, if such opportunities are provided. Nigerians are smart and resourceful no matter where they reside. Nigerians are always ready to learn new things and open to change, as well as adapt easily to new environment and technologies. The absence of non-formal education centers in rural communities of Nigeria discourages ICT training and knowledge acquisition by the citizens. ICT resource availability and affordability are major handicaps. Thus, the citizens are to fully utilize the potentials of ICT if they have unlimited and poor access to the Internet facilities and computer education. Even in urban areas, access to personal computers and internet is largely limited and expensive to most Nigerians.

All these issues, notwithstanding, the Federal Executive Council of Nigeria, approved a national IT policy in March 2001, view to solve ICT problems in the country. Government established the National Information Technology Development Agency (NITDA), charged with the implementation of ICT policies. The policy recognized the private sector as the driving engine of the IT sector. There are calls for an ICT policy reform in Nigeria so that individual citizens could access the training and services. In this light, the governments setup the Nigerian National ICT for Development (ICT4D) Strategic Action Plan committee to develop a new ICT policy for development as the ICT action plan / roadmap for the nation. The Nigerian government should ensure that this agency provides the needed services for a sustainable intervention, and environment for creating affordability and accessibility to ICT gadgets and trainings

### **Recommendations for Improvement**

1. Universities, national research centers and the National Information Technology Development Agency (NITDA) should collaborate with international agencies to review and establish the needed special ICT courses/programs and projects that would provide skill training opportunities for people in the field of research, creativity and innovations on ICT infrastructure; content development, law, policy and regulatory affairs, industrialization, governance, online distance services, including telemedicine, distance education, and Internet marketing.
2. Federal government should allocate more funds to ICT education nationwide; provide adequate ICT resources and training opportunities for people in rural and urban communities. In addition, power supply must be steadily available for such program to be successful.
3. Special ICT personnel and special educators should be trained on the use of ICT facilities and assistive devices so that individual learners and exceptional adults could benefit from such trainings whether in a formal or non-formal settings in urban and rural Nigeria. Schools must be equipped with ICT gadgets and tools, including assistive technologies, like Braille for the visually impaired, mobile wheelchairs, cochlear implants and other hearing aids, among other devices for students with disabilities and handicapped adults, etc., for the national ICT compliant dream to be accomplished.
4. Improvement of access to technological tools and the internet in urban and rural communities. Advantage should be taken of organizations like the Free and Open Source Software Foundation for Africa (FOSSFA) and LinuxChix Africa, which are promoting the use and development Free/Libre Open Source Software (FLOSS).
5. Government/private firms should develop and promote the emergence of rural telecommunication operators and encourage telecommunication operators either incumbent



or new to provide services in rural/remote communities with appropriate private investment incentives with pro-active regulatory environment. .

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### **Web Support**

<http://www.forum.org.ng/about>

<http://www.itu.int/net/ITU-D/index.aspx> <http://www.jidaw.com/itsolutions/policynigeria.html>

[http://www.itu.int/ITU-D/tech/RuralTelecom/Rural\\_Projects/UPU\\_RSA.pdf](http://www.itu.int/ITU-D/tech/RuralTelecom/Rural_Projects/UPU_RSA.pdf)

[http://www.unesco.org/education/educprog/lwf/lwf\\_activities.html#NTLearn](http://www.unesco.org/education/educprog/lwf/lwf_activities.html#NTLearn)

# The New Partnership for Africa's Development (NEPAD) as a Development Strategy in Africa: Challenges and the Way Forward

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## Abstract

*This article examines the vision of NEPAD and the challenges that lie ahead of it as it sets to tackle the problems of underdevelopment in Africa. This paper posits that initiatives such as NEPAD requires commitment, sacrifice and the political will on the part of African leaders in order to have its set goals and objectives achieved. In doing this, critical issues such as political corruption, political violence and instability, HIV/AIDS, among other challenges are frontally confronted. Above all, the paper submits that the African State must be reformed for it to meet the social needs of the African peoples.*

## Introduction

That Africa is in need of a development paradigm is not in doubt. The continent consists of 53 independent states with a total area of 29.4 million square kilometers and an estimated population of about 815 million people (Eyinla, 2004:158). Fragmented into numerous ethnic and linguistic groups, it is the most diverse continent in terms of population and language (World Bank, 2000). The continent is faced with a myriad of problems ranging from political instability and intra – and inter-state conflicts to lack of appropriate socio-economic policies for development. Based on all economic and social indicators, the continent is the poorest region in the world with a per capita income of \$664 and a life expectancy at birth of just 50 years. Throughout the 1990s, its share of world trade and Foreign Direct Investment (FDI) flows, averaged at about two per cent and it has the highest per capita foreign and dependency ratio of \$20 (ADB, 2003).

The African condition, according to Akinyemi (1997), has elicited indifference, benign concern and patronizing interest from the international community. The indifference is manifested in an attitude presuming that Africans are responsible for their problems and should be left to sort these problems. The benign concern manifests itself in the disposition of those who are genuinely concerned about the African situation and are interested in seeking possible solutions to them. The patronizing interest can be seen in the attitude of those who believe that Africans are incapable of solving their problems and that the international community should assume responsibility for solving these problems. The combination of these attitudes gave rise to what became known as, Afro-pessimism, typified in the deep sense of despair and frustration about the African condition (Eyinla, 2004).

It is assumed that the need to combat the rising tide of Afro-pessimism and confront the challenges facing the continent, among other factors, pushed African leaders in their individual and collective capacities to begin to think of ways of taking over the ownership and responsibility for the political stability and sustainable economic development in Africa. This led to the formation of various initiatives to redeem Africa and its people from an ugly and unpalatable socio-economic and political situation. Among the emergent plans and strategies were the African Renaissance Plan, promoted by Thabo Mbeki, former South African president, the Millennium Action Plan for African again promoted

by Mbeki, with support from Abdoulaziz Bouteflika of Algeria and Olusegun Obasanjo of Nigeria and the Omega Plan by Abdoulaye Wade of Senegal. The coalescence of these plans led to the birth of the New African initiative, which was adopted by the OAU Summit in July 2001. This later metamorphosed into the New Partnership for Africa's Development (NEPAD) in July 2001. Since its adoption, much effort had been concentrated on lobbying support for the NEPAD process within African and among Africa's development partners. Linkages and engagements have been established with key international institutions, such as G8, the Bretton Woods Institutions (World Bank/IMF), the United Nations and its specialized agencies.

Since its birth in July, 2001, the New Partnership for Africa's Development (NEPAD), which seeks to reverse the continent's protracted economic and political backwardness and increasing marginalization in the world economy, has drawn commendations and condemnations from various quarters (Omoweh, 2003:33). While African leaders, the Group of 8 industrialized nations, the Bretton Woods institutions (IMF and World Bank) and other stakeholders in international capital see NEPAD as a welcome development, others, mostly the academia, see it as not being the needed panacea for Africa's development (Adams, 2005; Omoweh, 2003; Eyinla, 2004). Be that as it may, it is widely believed that the regional document will reposition Africa on the part of long term development and reduce her marginalization in international economic relationships.

This study, therefore, seeks to examine the principles and vision of NEPAD to determine whether or not the new development initiative which has elicited so much reaction can bail the African continent from her crises of underdevelopment, poverty, economic backwardness and political instability, in this age of globalization. In doing this, the study will articulate the challenges and problems that face the African – wide development initiative in the 21st Century. The paper will also trace the events leading to the birth of NEPAD, highlight the essential elements of the NEPAD initiative and recommend the way forward for NEPAD in achieving Africa's development.

### **The Origin, Structure and Content of NEPAD**

The inauguration of the administrative structure and machinery for pursuing NEPAD's objectives is a culmination of several years of efforts aimed at agreeing on a commonly acceptable developmental blueprint for Africa. Earliest attempts in this direction include the Lagos Plan of Action for Economic Development of 1980, the African Alternative Framework to Structural Adjustment Programme for Socio-Economic Recovery and Transformation of 1989, the Protocol for the Establishment of African Economic Community of 1991 and the Final Act of Lagos of 2000. Unfortunately, none of these plans was ever pursued by the contracting African states. Indeed, none ever went beyond the realm of theoretical concept and the implementations of the key provisions were contemptuously ignored. It took the attainment of black majority rule and the end of apartheid in South Africa in 1994 and the changing international environment to kindle efforts in evolving a collective African development agenda.

The first comprehensive attempt at articulating an initiative aimed at addressing the myriad of problems facing Africa was undertaken by Thabo Mbeki, the then Vice – President of South Africa. In a lecture titled, "The African Renaissance, South Africa and the World", at the United Nations University, Tokyo, Japan on 9th April, 1998, Mbeki called for a departure from century-old past prejudices that have sought to perpetuate the notion of an Africa condemned to remain a curiosity, and consigned to the periphery of the world. Instead, he called for an African Renaissance that would

make the 21st Century the African century. The urgency of transforming the political concept of an African Renaissance into a comprehensive and articulate policy position dawned on Mbeki, following the Euro-African Summit meeting in Lisbon, Spain in March 2000. After the meeting, Mbeki was expressed disappointment and disillusionment by the seeming confusion among the EU leaders about what to do with Africa. He, thereafter, began the process of formulating an action programme for African development (Eyinla, 2004:164). The resultant process, known as the Millennium Partnership for African Recovery Programme (MAP) was unveiled in January 2001 at the World Economic Forum in Davos, Switzerland, in which Mbeki described the Millennium African Renaissance Programme as a declaration of a firm commitment by African leaders to take ownership and responsibility for the sustainable economic development of their continent.

While the Mbeki Millennium Africa Renaissance Programme was in motion, President Abdoulaye Wade of Senegal conceived another developmental agenda, known as the Omega Plan for Africa which was first unveiled in January 2001 at the Franco-African Summit in Yaoundé, Cameroon. The Omega Plan is premised on four essential elements: infrastructure, education and human resource development, health and agriculture.

The emergence of two different and seemingly parallel strategic thinking of African development quickly posed a challenge. It was capable of causing division among the African states. To be sure, the Omega Plan was conceived amidst growing disquiet among the Francophone African states that their interest is not well represented within the ambit of the Millennium Partnership for African Recovery Programme. Indeed, they saw the leadership role of Nigeria and South Africa, both Anglophone countries, in the formation of MAP as a bold attempt by the two regional hegemony, to put themselves in the driving seat of the African developmental agenda (Taylor and Nel, 2002:173). While the Omega Plan is largely a technocratic reduction of the challenges facing Africa, the MAP is a much more comprehensive attempt to bring the developmental challenges into a historical, cultural, and economic framework (Melber, 2001).

The evolving dichotomy within Africa along the lines of Anglophone and Francophone countries on which development agenda to be pursued was resolved in March, 2001 during the OAU Extra – Ordinary Summit in Sirte, Libya. This was after Presidents Obasanjo of Nigeria and Wade of Senegal respectively presented MAP and Omega Plan to the OAU Assembly of Heads of States and Government. It was thereafter agreed that the two initiatives, along with the United Nations Economic Commission for Africa's (UNECA), New Global Compact Plan for Africa's Renewal, be integrated together in one document. In reaching this decision, the Assembly was guided by the imperative of presenting a single well-coordinated and credible developmental plan, supported by all African states to the international community. Consequently, a group of nine experts began work on merging the various initiatives under the supervision of the Steering Committee comprising Algeria, Egypt, Nigeria, Senegal and South Africa. The resultant work, the integrated document known as A New African Initiative: Merger of the Millennium Partnership for African Recovery Programme and the Omega Plan.

The presidents of the Five –State Steering Committee presented the New African Initiative (NAI) to the OAU Summit of Heads of States and Government at Lusaka, Zambia on 11 July, 2001. The initiative was enthusiastically received and unanimously adopted by the summit and a 15-member state Implementing Committee was set up to govern the process and drive it forward. It was at the meeting of the Implementing Committee in Abuja, Nigeria on 23 October 2001 that the New African Initiative

was renamed the New Partnership for Africa's Development (NEPAD). The meeting identified five priority areas to be pursued and constituted a task team for each of the areas. These are: economic and corporate governance; agriculture and market access; infrastructure; central bank and financial standards; and capacity building on peace and security (Eyinla, 2004:165). It also formalized the management structure of the NEPAD.

NEPAD is hierarchically structured. At the apex is Assembly of the African Union (AU). Next is the 15 –member Heads of State and Government Implementation Committee (HSGIC), which will meet three times a year and make an annual report of its activities to the All Assembly of Heads of State and Government. Next is the Steering Committee, comprising the personal representatives of the five – member states, with a Secretariat at Pretoria, South Africa to provide technical and logistical support to both the Steering Committee and Heads of State and Government Implementation Committee.

NEPAD is set to achieve the following long and medium term objectives.

*Long Term Objectives*

NEPAD's long-term objectives as contained in the document (Articles 174 - 188) are to:

1. Eradicate poverty in Africa and to place African countries both individually and collectively, on a path of sustainable growth and development and thus halt the marginalization of Africa in the globalization process; and
2. Promote the role of women in all activities.
3. Short and Medium Term Objectives
  - a. These include:
    - i. Strengthening mechanisms for conflict prevention, management and resolution at the sub regional and continental levels, and to ensure that these mechanisms are used to restore and maintain peace;
    - ii. Promoting and protecting democracy and human rights in their respective countries and regions, by developing clear standards of accountability transparency and participatory governance at the national and sub-national levels;
    - iii. Restoring and maintaining macroeconomic stability, especially by developing appropriate standard targets for fiscal and monetary policies, and introducing appropriate institutional framework to achieve these standards;
    - iv. Instituting transparent legal and regulatory frameworks for financial markets and the auditing of private companies and the public sector;
    - v. Revitalizing and extending the provision of education, technical training and health services, with high priority given to addressing the problems of HIV/AIDS, malaria and other communicable diseases;
    - vi. Promoting the role of women in social and economic development by reinforcing their capacity in the domains of education and training; by developing revenue – generating activities through facilitating access to credit; and by assuring their participation in the political and economic life of African countries;
    - vii. Building the capacity of the states in Africa to set and enforce the legal framework, and to maintain law and order;
    - viii. Promoting the development of infrastructure, agriculture and its diversification into agro-

- industries and manufacturing to serve both domestic and export markets; and
- ix. Giving impetus to Africa's development by bridging existing gaps in priority sectors in order to enable the continent to catch up with developed parts of the world.

The New Partnership for Africa's Development document is a 60 – page document divided into eight chapters containing the proposals agreed upon by the 15 – member state Implementation Committee at their October 2001 meeting in Abuja, Nigeria. According to Olaniyan (2004), the distinguishing features of NEPAD are the emphasis on African ownership, integrated development and partnership with developed countries and other countries in the South. NEPAD is viewed as an African – led strategy for sustainable development and poverty reduction in Africa. It recognizes Africa's responsibility to create the conditions for development by ending conflict, improving economic and political governance and strengthening regional integration (OAU, 2001:1-2).

### **Globalization and Africa's Development Crisis**

The definition field of globalization is nevertheless full of confusion (Nadubere, 2000; Adams, 2005; Asobie, 2001). For instance, it is not easy to say whether globalization is a new or an old phenomenon. However, whichever way we want to look at it, globalization according to Khor (2000:1) is not a new process, for over the past centuries; firms in the economically advanced countries have increasingly extended their outreach through trade and production activities to territories all over the world. And as Nabubere (2000) sees the phenomenon, "it is an old enemy in a new guise". This view is equally shared by Ake (1995) who defines globalization as "the march of capital all over the world in search of profit, a process reflected in the reach and power of multinational corporations". He goes further to say that globalization:

"... is all about structural differentiation and functional integration in the world economy; it is about growing interdependence across the globe; it is about the nation – state coming under pressure from the surge of transitional phenomena, about the emergence of the global mass culture driven by mass advertising and technical advances in mass communication".

Thus, globalization as an economic phenomenon refers to a shift by nation – states from distinct national economies to a global economy. It entails a situation in which the production of goods and services is internationalized and capital flows freely across international boundaries. Proponents of the globalization process argue that essentially, the phenomenon brings about efficiency in production by encouraging exchanges among countries, enhances consumer satisfaction, i.e. making a wide range of goods and services available to consumer nations; encourages technological advances and leads to cosmopolitan community and world peace (Madunagu, 1999:53).

With regards to the benefits accruable to African countries from the globalization process, it is argued by Anyeabunam (1990) that international market forces which underpin the globalization process have acted to retard progress of poor countries and to widen the income lacuna between them and the rich ones. According to Ake (1995), "economic globalization has a tendency to fragment, differentiate and marginalize those social forces (developed countries) who are in charge of the capital transformation. It appears in fact to be a logic of the system that the weak working social forces have to be exploited in order to enhance capitalist accumulation for the dominant forces on a world scale". It is important to add here that contemporary globalization, which has dealt devastating blows on the

economies of developing countries has been aided by massive development in communications and technology, the restructuring of global capitalism, the collapse of sovietism and the end of the cold war. The dominant role of international financial institutions, transnational corporations and the ubiquitous presence of their agents, money and ideas, along with changes in individual and corporate life style, have all come to create new conditions of proximity which come to compress time and space, creating a world that is united but at the same time unequal, uneven and one in which there exists social exclusions and polarization (CODESRIA Bulletin, 1985:5).

According to Khor (2000:10), “the uneven and unequal nature of the present globalization process is manifested in the fast growing gap between the world’s rich and poor people and between developed and developing countries, and in the large differences among nations in the distribution of gains and losses”. Writers such as Nabudere (2000), Khor (2000), Anyaegbuna (1990) among others, are vehement about the negative impact of the globalization process of countries in the southern hemisphere. For instance, Anyaegbunam (1990) observes that the structure of the relationship, in the new globalism, is such that the economic world is being divided into a nucleus consisting of the heavily industrialized countries and a periphery of the poor technologically backward countries of the Third World. This unequal relationship leads to unequal distribution of benefits and losses. This imbalance equally leads to polarization between the few countries and groups in societies that lose out or are marginalized (Khor, 2000).

Thus, the phenomenon of globalization, which is associated with the emergence of the “Global Village”, is forced on African post – colonial governments by the Bretton Wood institutions such as the World Bank and the International Monetary Fund, IMF. For example, the World Trade Organization, WTO, is currently being used by countries in the northern hemisphere to impose new forms of controls which will further put countries in the South under their surveillance. This is evident in the agreements that are reached of which African nations did not make inputs, but are bound to respect, whether or not they benefit from them (Ekanem, 2005:45).

On the whole, it can be deciphered that, with regards to the position of African countries in the new globalism, globalization has added more obstacles to the institutionalization of democracy in Africa; it has imposed a violent post – colonial imperialism, thus further tightening the noose of economic subjugation and above all, comprised Africa’s advancement in knowledge and technology.

### **NEPAD as a Development Strategy in Africa: Challenges and Leeway**

Some of the major challenges that the New Partnership for Africa’s Development, NEPAD, has been facing in its task of repositioning the continent on the part of sustainable development are as follows:

Firstly, there is the character of the post – colonial African state which is essentially repressive, and which has failed to address the basic needs of the people such as food, shelter and housing. Can the post – colonial African state, with its peripheral economy coupled with the kleptocratic leaders, garner the political will to executive and achieve the goals of NEPAD?

Secondly, there is the constraint of funds. Given the extent to which corrupt practices have become the norm of governance in African states, where will African leaders find the financial resources with which to carry out the numerous programmes of NEPAD which is supposed to be an autochthonous initiation? Or will they go, cap – in – hand, to the IMF and World Bank, etc to solicit for development fund? If this is the case, what is new about NEPAD? Is NEPAD truly an African



initiative?

The third challenge of the African development initiative is generalized poverty. How will the goals of NEPAD be achieved in the face of debilitating poverty in the continent? Will the people of Africa understand the principles and visions of NEPAD when hunger, want and deprivation stare them in the face?

Fourthly, another major constraint which is posing a serious challenge to African leaders is the HIV/AIDS pandemic. What steps are leaders of Africa taking to contend the spread of the dreaded HIV/AIDS virus which is ravaging the productive population of the African society?

What about conflicts in the continent? With conflicts springing up in various parts of Africa (Sudan, Ivory Coast, Liberia, Sierra Leone, etc), will the founders of NEPAD, and indeed African leaders who have embraced the principles and vision of the continental developmental initiative, be able to put Africa on the part of long term development? Finally, there is the challenge of globalization. The process of globalization with emphasis on market economy places premium on profit maximization. Will members of G8 (Britain, USA, Japan, Canada, Germany, France, etc) develop a benevolent streak and abandon profit maximization in this partnership? Is this partnership not going to depend on dependence on the capitalist west and even worsen Africa's socio-economic problems?

Globalization, which is the new "buzz word" in the world today, is not a new economic revolution as has been touted by its proponents. At best, globalization, which is based on neo-liberal market economy, emphasizes de-subsidization, liberalization, deregulation, privatization, etc, has brought pain rather than succor to the mass of the African people. African leaders have the onerous task of using the NEPAD framework to think out new autochthonous programmes that will reverse the current backwardness in all spheres of the economic lives of African nations.

## **Conclusion**

The central thrust of the article revolves around the challenges of the New Partnership for Africa's Development (NEPAD) in its attempts at reversing the continent's protracted economic and political problems in this century. With the support of G8 (USA, Germany, UK, Canada, Japan, France, Russian, and Belgium), it is expected that the regional document would be used as a framework to bail the African continent out of the doldrums.

However, in line with Article 85 of the regional document, the African state needs to be reformed to be able to be used effectively in implementing the NEPAD projects. As it stands now, the African state is undoubtedly the greatest obstacle of the recovery and development of the continent (Omoweh, 2003). The reforms should be such that would strengthen state institution for them to be used for the benefit of the masses. Social democracy, as against liberal democracy, which is dictated by market forces, should be institutionalized in the continent. Social democracy permits the redistribution of goods and services from which the vast majority of the people will benefit and their rights, duly protected. This indeed is the only premise upon which NEPAD would be adjudged as moving towards sustainable development of the African continent.

## **Recommendations**

In the age of globalization, which has widened the lacuna between the rich and the poor countries of the world, African leaders can best achieve long term development in the continent through the following;

Firstly, Africa's development can be achieved if leaders in the continent can sit down and think up, drawing from past experiences with controlled development, workable programmes of development which will address the fundamental problems of food, shelter, security, environmental degradation, political immobilism, etc;

Secondly, the problem of conflicts in the continent must be jointly addressed by African leaders within the framework of NEPAD. Mechanisms should be devised for conflict prevention, management and resolution, standards of accountability, transparency, participatory governance, corporate governance should be developed, and capacity building in all sectors at the national, sub-regional and continental levels (Omoweh, 2003).

Most importantly, corruption among government officials must be fought on all fronts by the African ruling elite. Corruption has been singled out as one of the most deleterious factors to the socio-economic and political development in Africa. African leaders should stand on the platform of NEPAD to scale down corruption in the public domain so as to achieve its goals.

Also, the HIV/AIDS pandemic should be tackled headlong, within the framework of NEPAD. World Statistics and figures show that Africa is the worst hit by the HIV/AIDS scourge. The development of the African continent, within the framework of NEPAD can only be achieved if the working population is energetic and healthy.

Finally, there is the task of mobilizing the people of Africa, especially civil societies to fully participate in the programmes of NEPAD. This recommendation is premised on the fact that NEPAD is largely confronted by the problem of recognition, legitimacy and acceptability. For example, African people that are supposedly charged with the responsibility of playing the central role in driving the initiative forward are hardly aware of its existence. Participatory development is easily achieved than development that is supervised by exogenous forces (IMF, World Bank, etc).

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# Challenges Faced by Teacher Students of Kenyatta University in Accessing Further Education through e-Learning

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## Abstract

*One of the innovations that Kenyatta University (KU) adopted is the Open, Distant and e-Learning (ODeL) which involves students learning at a distance, using printed modules and interacting with lecturers through e-Learning. While this mode of learning has its advantages especially cost effectiveness and reaching many students, it has had challenges which have hindered its effectiveness and therefore the realization of its intended objectives. The main objective of the study was to identify the challenges faced by teacher-students enrolled for Bachelor of Education Degree in KU-ODeL, with a view of coming up with strategies to improve on the programme performance. The study sample comprised of 50% of the in-service teachers-students in KU-ODeL. Other respondents were the lecturers of the units offered through e-Learning. Statistical Package for Social Scientists (SPSS) was utilized for data analysis. The study concluded that the challenges to e-Learning programme generally fell into four categories, namely lack of time, inadequacy in ICT and computer skills, poor internet access and lack of proper and adequate equipments and soft ware. The study thus recommended that in addition to putting in place strategies to create more time for teacher-students and lecturers to engage in the e-Learning process, there is need to regularly build the capacity of both parties in ICT skills and explore ways of accessing affordable e-Learning facilities.*

Key Words: Kenyatta University, Challenges, Teacher-Students and e-Learning

## Introduction

In recent times, electronic learning, commonly known as e-Learning is gaining momentum in most parts of the world. This is a web-based distance education, with no or limited face-to-face interaction with the instructors. With the growing technology and globalization, there is a steady growth in the number of e-Learning courses offered in different institutions with the core strategic motives being to transform teaching and learning experience, accommodate growing students' enrolment, sustain academic diversity and gain competitive advantage (EDUCAUSE, 2003).

E-Learning with all its challenges especially in Africa is a major breakthrough in academic education and professional training. Various Universities world wide have incorporated e-Learning in their curriculum. Following the same trend, Kenyatta University (KU) has embraced e-Learning in its teaching programmes. In order to facilitate students-teachers and other prospective learners with limited infrastructure in rural areas to access ICT, the institution has established e-Learning centers in different regions country-wide. This is a commendable effort in the learning/teaching process as majority of the communities in Kenya as in the rest of Africa are widely spaced out in rural settings and would arguably gain most from distance education, provided it becomes feasible and affordable to access

ICT tools. The same works well for the learning institutions in the sense that many students are reached faster and with minimum human resources.

There are however challenges when ICT is adopted without giving adequate thought to students level of ICT skills and competence (Zake, 2007 [ajmuwanga@une.edu.au](mailto:ajmuwanga@une.edu.au)). In this respect, the developing nature of ICT not only makes it essential for students to be equipped with the necessary ICT skills, but also continue updating in order to keep up with the best and the latest ICT programmes. Since e-Learning involves electronic communication, teacher-students are supposed to visit the course site regularly in a day to view new announcements and read e-mails to peruse and respond to course information. In some cases, this may pose a great challenge to some students who may not manage to access internet on daily bases because of lack of computers, financial limitations or poor internet connectivity. Worse still is the lack of electricity in sections of rural areas where some students are based. On the other hand, the ICT supported distance education systems need not only be available but also efficient. As such, those engaged in facilitating learning should have sound level of familiarity with ICT, so as to not only be effective educators but also to pass the same skills to future educators.

For Kenya the adoption of the e-Learning mode of knowledge delivery remains a viable option, given the current high competition for higher education and the limited number of institutions. One of the advantages of e-Learning is its flexibility which allows many people with limited time to access education and training. For students, this is a major advantage in trimming down tuition fees expenses and other miscellaneous costs related to their academic pursuit (<http://drpfconsults.com/14-advantaes-of-e-Learning/>). Additionally, expenses for books and other learning materials are extremely cut down since e-Learning only requires a computer with an internet connection and the minimum fee that one has to pay to the E-Learning provider. Further, students are able to tailor e-Learning solution based on their work schedules and the particular field of expertise they want to target.

With regards to the majority of students who live far away from their learning institutions, e-Learning is a facility that reduces the travel time and associated costs. It eliminates the expense and inconvenience of getting the teachers and students together. The students who pursue higher education while in service through e-Learning are free from any compulsions and are able to participate and complete course work according to their will and free time. This advantage has made e-Learning a viable option for those that have to carry on with the other commitments while pursuing higher education. It is these advantages and the growing demand for access to higher education in Kenya that has made Kenyatta University to adopt the Distance and e-Learning mode of learning for both undergraduate and post graduate students. This is a shift from entirely print module to interactive blended learning that focuses on collaborative problem solving, and social constructive approaches through e- learning and teaching.

Kenyatta University has therefore re-branded the institute of Open Learning to include e-Learning. It now becomes the Institute of Open, Distance and e-Learning (ODEL). The re-branding of the institute is geared towards improving the delivery of educational services to students, which in essence improves the quality of the distance learning programmes. By introducing e-Learning, the University intends to add value to the existing programmes by placing the students at the centre of the learning process. Currently the e-Learning mode of delivery has been introduced in selected units to students pursuing Bachelor of Education in the ODEL. As majority of these students are teachers in service, this study sought to investigate on the challenges they are facing in the utilization of e-Learning in the course of their studies.

## **Problem Statement**

Technological advancement has brought with it advantages in the education sector such that learners can now access education at a distance, and not necessarily through direct teacher-learner contact. While learners of all categories and professions have taken advantage of this, teachers already in service have enrolled in huge numbers as they are able to earn and learn at the same time. As the oldest and leading teacher educator institution in Kenya, Kenyatta University has witnessed an overwhelming enrolment by teachers from all corners of the country and the East African Region. Consequently, the University in response to the demand and in a bid to offer equal opportunities to all has introduced an Open-Distance and e-Learning programme. However, given the country's regional, social-economic and infrastructural diversity, this well intended programme may not realize its goal and objectives. It was out of this concern that this study was conceived. The study thus intended to investigate specific challenges that the student-teachers face in pursuance of further education in Kenyatta University.

## **Purpose of Study**

Appreciating the advancement in ICT and the commitment of Kenyatta University to contribute towards the promotion of society's literacy and enhancement of social-economic and political development, this study intended to unearth the challenges that the Bachelor of Education student-teachers face in the utilization of e-Learning mode of delivery in the Kenyatta University ODeL. Most importantly, the study aimed at identifying challenges and related practical strategies for policy action to ensure that the Open-Distance and e-Learning programme realizes its goal, namely to expand access to higher education to qualified teachers who are unable to enroll in full-time residential programmes.

## **Theoretical Framework**

This study was guided by Emile Durkheim's structural functionalism theory. The argument that is advanced in this theory is that a system consists of various components or sub systems, which must function together for the entire system to work. At any point when a subsystem or an element within the system fails, the whole system is in jeopardy and will cease to work. Accordingly, a learning-teaching institution is like an organism, which is made up of structures. Each of the structure is expected to perform so as to sustain the learning outcome.

The theory further postulates that the structures are coordinated from a central authority so as to enhance and maintain harmony and stability. Each structure is interrelated and interlinked. A malfunctioning of one structure is bound to have ripple effects on the whole unit. In this study which examined the challenges faced by teacher-students of Kenyatta University in accessing further education through e-Learning, the central authority or the center was taken to be the University while the structures were its e-Learning facilities, the student-teachers and the instructors. For the University to achieve its set objectives in the provision of education through e-Learning, all the related sub-systems must be efficient and fully operational, at all times. Any challenges on any of these sub-systems, will jeopardize the outcome of the entire e-Learning programme. To counteract the challenges, the study came up with some interventive strategies on the part of Kenyatta University, teacher-student and instructors.

## Methodology

The study adopted a descriptive survey design. The advantage of the design was that it enabled the identification of a larger sample of study respondents among student-teachers and hence the collection of detailed data on the basis of which valid conclusions was drawn and recommendations made. The study locale was Kenyatta University which is one of the seven public universities in Kenya. It is situated in the vicinity of Nairobi city in a conducive environment for research and learning. The vision of Kenyatta University is to be a dynamic, inclusive and competitive centre of excellence in teaching, learning, research and service to humanity. Its mission is to provide quality education and training, promote scholarship, service, innovation and creativity and inculcate moral values for sustainable national development.

Consequently, Kenyatta University aspires to grow to a centre of excellence of knowledge delivery and acquisition and expansion of access to higher education by offering alternatives to qualified candidates who are unable to enroll in full time residential programmes. In recognizing the significance of e-Learning to students country wide and in Eastern African region, the University has re-branded the institute of Open Learning to include e-Learning dubbed as the Institute of Open, Distance and E-Learning (ODEL). The objectives of the institute are to create access to higher education through a network of regional centres, offer affordable quality higher education, facilitate skills training and professional upgrading, provide opportunity for lifelong learning and self actualization and contribute towards promotion of societal literacy and enhancement of socio-economic and political development. It is in line with this aspiration that the University has introduced e-Learning mode of knowledge delivery in the Bachelor of education programme in four selected units, namely Development Studies, Creative and Critical Thinking, Entrepreneurship and HIV/AIDS and Drugs/Substance Abuse. The institute has a strategic plan for e-Learning and an Institutional e-Learning Policy that is supposed to address issues of the newly established ODeL.

Respondents for this study were drawn from the teacher-students pursuing the Bachelor of Education degree programme in sciences, Arts, Early Childhood Education, and Special Education. These programmes were selected because this is where majority of the teacher-students in Kenyatta university ODeL programme are enrolled and it is also in this programme that e-Learning mode of learning /teaching has been introduced. The 250 students who are engaged in the e-Learning formed the population of the study. The study sample composed of 125 students (50% of the entire population). The study sample was selected using stratified random sampling technique on the basis of the four units being offered through e-Learning mode of delivery. As such each of the four identified units formed the strata from which proportional sample was selected to a total of 250 respondents, as follows:

	Unit Name	No of students	Study sample
1	Development Studies	18	9
2	Critical & Creative Thinking	40	20
3	Introduction to Entrepreneurship	80	40
4	HIV/AIDS and Drugs Abuse	112	56

Table1: Study Population and Sample

Other respondents who provided vital data on the basis of which the findings, conclusions and recommendations were drawn were 10 Kenyatta University lecturers teaching the selected four units through e-Learning and the Institute's Director. Data was collected with the use of semi-structured interview schedules which allowed for probing on the students experiences and related challenges in the utilization of e-Learning.

### Findings and Discussions

The study established that the University encourages collaborative learning where students are encouraged to form small learning workgroups of five or six students called Group Learning Sets (GLS). Each group is provided with one computer. The learning sets should be within reach of one another. Training is then done online in a virtual classroom situated in Regional Open Learning Centres. To facilitate learning, students have access to the e-resources: an e-calendar, e-course outline, and other additional internet resources.

The challenges faced by teacher-students generally fell into four categories, namely time, inadequacy in ICT and computer skills, poor internet access and difficulties in coordination of group activities. On the other hand, there were also institutional challenges.

#### *Lack of Time*

All the students-teachers respondents claimed that they were constrained<sup>1</sup> by time. Among them, 51(41%) cited commitment at the place of work as the main hindrance to their learning. This seemed to negate one of the envisioned advantages of e-Learning; that its flexibility would allow learners to attend to their learning materials during their free time. These respondents reported that they had limited time outside their work schedule during the day. On the same breadth 34(27%) were limited by the conflict between employment responsibilities and the scheduled time for on-line interaction. Another group comprising of 40(32%) teacher-students who had no computers and had to access the internet from the regional centres claimed they experienced major time constraints since they had to use slow public means to the centres, which in effect wasted a lot of time. Figure 1 demonstrates the various aspects of time constraints experienced by teachers-students in the e-Learning process.

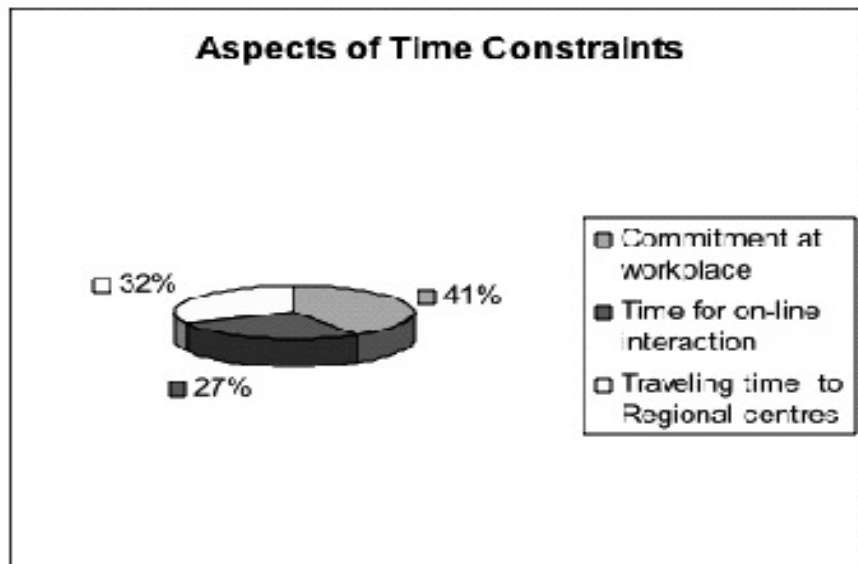


Figure 1: Aspects of time constraints



### *Poor Internet Access*

Poor internet access was identified by a substantial number of teacher-students among whom 53(42%) cited poor internet connection and limited bandwidth, 44(35%) slow internet, and 83(66 %) lack of necessary equipment/ computers that can be used in online discussions and conferencing. In addition, 76(61%) asserted that poor internet access was complicated by the fact that signals became weaker when they tried to download materials from the net. Table 2 illustrates these concerns. The findings were also collaborated by lecturers who attributed the poor internet access across the centres to dial-up computer connections which were mainly done through copper wiring and on poor phone lines and being far away from signal boosters.

Table 2: Identified Access Problems

Access Problems	Number of respondents Affected	% of the total number of respondents
Poor internet connection	53	42
Slow Internet	44	35
Lack of equipments	83	66
Weak Signals	76	61

### *Inadequacy in ICT Skills*

Inadequacy in ICT Skills was identified as a major challenge among the student-teacher respondents. Majority, 91(73%) of them admitted that they lacked technical skills needed to participate effectively in e-Learning. Among them, 34(37%) for example had no basic computer skills. Although 80(88%) claimed to have had some training in basic computer operations 39(49%) admitted that they had forgotten most of what they had learned due to lack of regular practice. In addition, 70(77%) had inadequate typing skills which seriously affected their speed in performing assignments and therefore compounded the limitation of time.

These challenges are consistent with the finding of Muwanga-Zake (2007), in a study done in 23 schools in South Africa which revealed that 45% of teachers had not been trained in using computers. Dr J Muwanga Zake further quotes some studies that demonstrate this fact. Among these studies is one by the International Telecommunication Union of ICT in Education (2001) that found low internet access and use in schools and lack of IT training as key challenges. In addition, teachers in Ugandan schools were found to be both ignorant of modern advances in ICT, and lacked access to ICT. This situation is likely to differ from the west as many people in Africa grow up in rural areas where access to modern technology is seriously hampered by poverty and poor infrastructure. However, as Penn State's Berner observed, even students who are comfortable using the computer may not possess all the necessary skills. Consistently, Karen Harp of Colgate University found the need to teach students how to use the technology well. Thus, although the problem may be more pronounced among beginners like the Kenyatta University students-teachers under study, the ever-evolving ICT requires continuous learning and improvement of skills.

### *Institutional Challenges*

The study identified some institutional based challenges that originated with the facilitators/instructors of e-Learning in the identified course units. All the 10(100%) instructors indicated having had time constraints in attending to students in e-Learning courses. The majority attributed this to the fact that they had other teaching load as well as other university responsibilities. Additionally, 7(70%) of these lecturers admitted that they had inadequate skills in handling IT equipments. While 5(50%) lacked computers, other 5(50) did not have up to date computer equipments and programmes. Moreover 8(80%) of the lecturers indicated that they would prefer the traditional face-to-face contact as opposed to e-learning. These findings are reflected in figure 2.

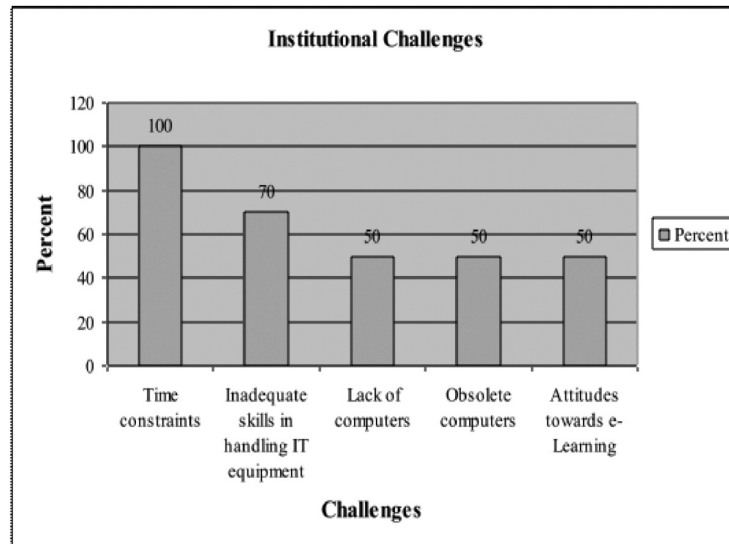


Figure 2: Identified Institutional Challenges

### **Conclusions and Recommendations**

The study came up with specific strategies to ensure that the e-Learning programme realizes its mission in Kenyatta University. In order to address the issue of time constraint, the employers of the student-teachers in the ODeL programme in both public and private sectors need to be incorporated as key stake holders. This would allow for negotiations for less teaching load and flexibility in time to enable them engage more effectively in the learning process. Further, intensifying rural electrification and enhancing the net-working of fiber-optic cables could enable teacher-students to access internet from their homes. This would minimize on the time and cost incurred traveling to the University's ODeL regional Centres. It is also important for the University to organize regular capacity building sessions on ICT skills for student-teachers as well as instructors. Such training would enhance their competence in e-Learning interactions and enable them to cope with the ever evolving technology.

The study further recommends that the university devises strategies to enable student-teachers and course instructors acquire affordable e-learning equipments and related soft ware. This could be achieved by establishing linkages with many financing institutions and donors. While appreciating an existing Kenyatta University-Equity Bank computer loan programme, engaging other financing intuitions is likely to create competition that would make the equipment more affordable. To facilitate the efficiency and effectiveness of instructors' on-line interactions with teacher-students, the university

should consider allocating them less teaching load and administrative duties.

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## **Web Support**

- <http://www.e-Learning.in/advantages-of-e-Learning.html>
- <http://drpfconsults.com/14-advantages-of-e-Learning/>

# Perception of Students and Teachers on the Classroom Factors that Influence Mathematical Thinking and Reasoning Students

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## Abstract

*The perception of students and teachers on the classroom factors that influence mathematical thinking and reasoning in students was examined in the study. Six hundred and forty science students and one hundred and twenty science teachers from State Secondary Schools in Anambra State, Nigeria, were included in the study. A descriptive survey instrument was constructed for the study which incorporated 20 items, 10 on the classroom based factors that influence mathematical thinking and reasoning, 5 on good tasks that support them, and teaching strategies/ methods that support them. The research outcome suggest that the process of teaching mathematical reasoning should be taught and practiced by deliberate planning to make reasoning part of mathematics lesson; and student science teachers should be taught those instructional methods and strategies that support high level mathematical thinking and reasoning in students.*

**Key words:** Mathematical thinking, good tasks, senior secondary school, student science teachers.

## Introduction

Mathematics is the noble art of reducing the entire process (and even more) to an intriguing and interesting game of numbers and symbols (using symbolic logic); it is an art of the possible. Moore (1999) defined mathematics as the science of size and numbers (of which arithmetic, trigonometry and geometry are branches). Thus, mathematics is a science and also an art. It is a science because it is among those subjects that require intellectual rigour and it is an art because it is also among those subjects that require creativity. To combine both intellectual rigour and creativity, one must be able to think effectively.

Thinking is the process of using the mind to consider something, to form connected ideas and try to solve problems so with knowledge of mathematics, one should be able to think mathematically; that is, using mathematical knowledge to solve real life problems. It is natural, that every student should be able to think mathematically when given mathematical knowledge but some factors support or inhibit this thinking. Mathematical thinking is the thinking that makes a student applies mathematical knowledge to solve real life problems (Henningsen & Stein, 1997). Mathematical thinking like higher order thinking teaches students reasoning and processes to be better lifelong learners rather than teaching recall of facts. A great process in this thinking is the use of Scaffolding in the classroom which plays an important role in supporting students' high-level engagement by encouraging divergent thinking. Scaffolding is a process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his or her unassisted efforts. Scaffolding as a strategy is effective when used to improve the pedagogical process, ineffective when it becomes boring and not all scaffolding results in high level mathematical thinking and reasoning in students. Therefore, for any

instructional strategy to support high level mathematical thinking and reasoning it should be used at intervals and appropriately.

In discussing the problem of mathematics teaching, Lampert (2003) pointed out what she did in order to establish a classroom culture in which reasoning thrived and students participated and forgot external problems disturbing them. Her main goal was to have students participate in mathematical thinking and reasoning and using this thinking to study mathematical concepts. In using this method, Lampert planned for instruction, beginning with the first day of class, her thoughts about the task, how she interacted with students, and how they interacted with each other. She also reported how she began to have her students develop and practice mathematical thinking and reasoning. In this way, they were able to connect some of the whys for what they were doing to something they were familiar with because her examination to the students showed that being able to revise their work may be as a result of rethinking their work and being able to change their minds, fostering participation in thinking and reasoning even further.

Furthermore on math teaching, Okigbo & Chinweoke (2009) blamed; poor background knowledge in mathematics, incompetent teachers in primary school, lack of mathematics teachers in quantity and quality, lack of interest and students not interested in hard work, perception that mathematics is difficult, large class syndrome, psychological fear of the subject, lack of relevant teaching aids, poor method of teaching, nature of mathematics, apathy towards mathematics by the general public. Okigbo and Chinweoke advocated for the Mathematics Teacher Education (MTE) to be revamped at all levels of educational system and government agencies inject more funds and encourage corporate individuals to invest in sound educational ventures, among others.

The problems of mathematics teaching hinder high level mathematical thinking and reasoning in students. If these panaceas are considered, high level mathematical thinking and reasoning will be enhanced. Also, good questions from mathematics teachers enhance high level mathematical thinking and reasoning in mathematics classroom. Sullivan & Lilburn (1997) asserted that mathematics teachers ask many questions, sometimes 60% of the things said by them are questions and most of them are not planned. They pointed out that questioning emphasizes problem-solving, application, and the development of a variety of thinking and reasoning skills. They recommended that teachers should use more questions in mathematics lesson to develop their students' high level of thinking and reasoning.

However, it is interesting to note that the researchers expressed their concern on how students think about the tasks assigned them and how they ask about them and not on the task the teacher requested. Teachers often struggle with asking questions that foster higher order thinking and reasoning skills. Sullivan & Lilburn (1997) makes it simple to identify, write, or modify tasks to make them good reasoning and thinking problems. According to them, the three main features of a good question are: they require more than remembering a fact or reproducing a skill, students can learn by answering such questions, and the teacher learns, and there may be several acceptable answers to the same questions. On this note, Sullivan & Lilburn suggested two methods of constructing good questions:

(a) Working backward. For example, if the topic is average. The close question might be the children in the Smith family are ages 3, 8, 9, 10 and 15. What is their average? The new question could be: there

are five children in a family and their average age is 9. How old might the children be? (b) Adapting a standard question. For example, if the topic is measuring length using non-standard units. The standard question might be: What length is your table measured in hand span? The adapted question could be can you find an object that is three hand span long?

Generally, factors that influence high level mathematical thinking and reasoning in students, include classroom norm, task condition, teacher's instructional disposition, students' learning disposition, cultural beliefs, Time factor, lack of texts, nature of environment, etc. This work investigated the factors that are experienced in the classroom only.

**Research Questions:** The following questions prompted this research.

1. What are classroom based factors that influence high level mathematical thinking?
2. What makes a good task for it to support high level mathematical thinking?
3. What is the nature of teaching that support high level mathematical thinking?

### **Statement of the Problem**

Over the years, the subject that poses major problem to students at all levels of education is mathematics. Students give the simple excuse that it contains too much formulae and calculations and difficult to comprehend. Moreover, teachers worry that after trying their best to teach students, some still fail mathematics examinations. The problem of this research, therefore, is on the issue of classroom based factors that influence high level mathematical thinking in students which can help them think mathematically?

### **Research Hypotheses**

1. There is no significant relationship between the responses of teachers and students on classroom based factors that influence high level mathematical thinking and reasoning in students.
2. There is no significant relationship between the responses of teachers and students on the good tasks that support high level mathematical thinking and reasoning in students.
3. There is no significant relationship between the responses of teachers and students on the teaching strategies/methods that support high level mathematical thinking and reasoning in students.

**Research design:** The study is a descriptive survey research aimed at identifying the classroom based factors that influence high level mathematical thinking and reasoning in students.

*Population:* The population comprises of 15,780 science (mathematics, biology, chemistry, and physics) students and 892 sciences (mathematics, biology, chemistry, and physics) teachers in government owned (public) secondary schools found in all the six Education Zones of Anambra State, Nigeria.

*Sample and sampling technique:* The sample consists of 640 Senior Secondary (SS) science students and 120 science teachers respectively chosen 15,780 students and 892 teachers in the State. The sample was selected using proportionate sampling technique, where five percent (5%) of science students were selected each from SS1, SS2, and SS3 students found in the selected 40 schools. The science teachers

selected were science teachers of the same chosen students. The choice of SS students were made because they supposed to have known the ‘how’ and ‘whys’ of mathematics before leaving secondary school but this is not so.

*Instrument and validation:* The researchers constructed and used the Questionnaire for Science Teachers and Students (QSTS) as an instrument for data collection. The QSTS was a 20 items Likert type instrument of strongly agree, agree, indifferent, disagree and strongly disagree. It was divided into three sections: section A was designed to determine the classroom norms (normal things done in the classroom) that supports high level mathematical thinking and reasoning in students so as to ascertain what to remove and what to retain in the normal classroom practices; section B was designed to find out and ascertain if tasks conditions influence high level mathematical thinking and reasoning in students; and section C was designed to find out which instructional strategy and method used by the teacher is most effective in influencing high level mathematical thinking in the students. All items in the QSTS are positive to avoid bias in response. The validity of the items was assessed by three science education experts and three experienced science teachers. The instrument was trial tested with 80 science students and 20 science teachers that did not participate in the study but within the state. The reliability of QSTS was established using Cronbach alpha because the items have multiple ratings. The coefficient of the reliability was found to be 0.85 for students and 0.90 for teachers.

*Method of data collection:* The researchers personally administered the questionnaire to the respondents in the sampled schools for three days. The copies of the questionnaire were collected immediately after completion in each day to avoid loss of time, and non-return of questionnaires. The cut-off point for regarding an item as effective in influencing high level mathematical thinking and reasoning in students is 3.00. Any mean (  $\bar{x}$  ); above 3.00 is regarded as being supportive, exactly 3.00 is regarded as having no effect, and below 3.00 is regarded as inhibitive of mathematical thinking and reasoning in students.

*Method of data analysis:* The data collected were analyzed using mean, standard deviation, Pearson product moment correlation coefficient ( $r$ ) and student t-test.

Results:

Table 1: Mean rating of students and teachers on classroom based factors that support mathematical thinking and reasoning in students

S/N	ITEM	Students		Teachers	
		$\bar{X}$	SD	$\bar{X}$	SD
1	Sitting arrangement in the classroom supports high level mathematical thinking and reasoning in students.	3.77	1.31	4.15	1.36
2	Interaction between students in the class supports high level mathematical thinking and reasoning in students.	4.33	0.36	3.74	1.63
3	Collective greeting of a teacher on arrival to the classroom supports high level mathematical thinking and reasoning.	2.83	1.62	3.16	1.94

4	Prohibition of vernacular in the classroom supports high level mathematical thinking and reasoning in students	2.23	0.98	2.96	1.15
5	Interaction between students and teacher in the classroom supports high level mathematical thinking in students.	4.43	1.27	4.19	1.62
6	Student's readiness to explain previous knowledge about a question supports high level mathematical thinking and reasoning in them.	4.37	0.33	4.39	0.68
7	Emotional state of mind of the students in the classroom influences high level mathematical thinking and reasoning.	4.33	0.76	3.82	1.66
8	Psychological view of students to mathematics influences high level mathematical thinking and reasoning.	4.17	0.74	3.48	1.90
9	Student's readiness to work in groups during classroom activities supports high level mathematical thinking and reasoning.	4.20	0.83	3.25	2.04
10	Students' readiness to ask questions during instructions supports high level mathematical thinking and reasoning.	4.40	0.57	3.31	2.17

Table 2: Student t-test for significant relationship between Students and Teachers responses

Responses (Subject)	N	Mean	<	df	t-cal	t-crit	Remark
Students	10	3.91					positive
Teachers	10	3.65	0.05	18	67.90	1.734	and significant

Table 3: Mean responses of students and teachers on good tasks that influence high level mathematical thinking and reasoning in students

S/N	ITEM	Students		Teachers	
		$\bar{X}$	SD	$\bar{X}$	SD
11	Mathematical questions that press for meaning of concepts supports high level mathematical thinking in students	4.05	1.41	4.13	0.45
12	Mathematical questions that make students understand a concept support high level mathematical thinking.	4.56	0.45	4.44	0.52
13	Mathematical questions that require finding solution to a problem support high level mathematical thinking and reasoning	4.58	0.54	4.53	0.48



14	Mathematical questions that require mere recall of facts supports high level mathematical thinking and reasoning.	3.23	1.80	3.60	1.24
15	Mathematical questions that require creativity and analysis support high level mathematical thinking and reasoning.	4.35	0.73	4.40	0.77

Table 4: Student t-test for significant relationship between Students and Teachers responses

Responses (Subject)	N	Mean	$\alpha$	df	t-cal	t-crit	Remark
Students	5	4.15	0.05	8	82.75	1.860	positive and significant
Teachers	5	4.22					

Table 5: Mean responses of students and teachers on the teaching strategies/methods that support high level mathematical thinking and reasoning in students.

S/N	ITEM	Students		Teachers	
		$\bar{X}$	SD	$\bar{X}$	SD
16	Trial and error activity in teaching support high level mathematical thinking and reasoning in students.	2.99	2.06	3.40	1.71
17	Brainstorming as a teaching strategy supports high level mathematical thinking.	3.03	1.95	3.50	1.38
18	Use of punishment while teaching supports high level mathematical thinking and reasoning in students	2.88	2.10	2.47	1.38
19	Use of reinforcement and incentives while teaching support high level mathematical thinking and reasoning in students.	3.06	1.96	4.30	0.81
20	Scaffolding student's knowledge to solve a question influences high level mathematical thinking and reasoning in students.	3.07	1.89	3.63	0.83

Table 6: Student t-test for significant relationship between Students and Teachers responses

Responses (Subject)	N	Mean	$\alpha$	df	t-cal	t-crit	Remark
Students	5	3.01	0.05	8	47.16	1.860	positive and significant
Teachers	5	3.46					

## Discussion

The discussion was done under these three headings:

### a. Factors that influence the level of mathematical thinking and reasoning in students:

From table 1, teachers agree that collective greeting of a teacher on arrival to the class supports high level mathematical thinking and reasoning in students (mean = 3.16) while students disagree with the same statement (mean = 2.83). Table 1 also shows that both agree that prohibition of vernacular in the classroom do not support high level mathematical thinking and reasoning in students (means = 2.23 and 2.96). However, teachers mean ratings are more inhomogeneous than the students mean rating since teachers on average have a higher (1.62) standard deviation than students (0.88). To determine the relationship between the mean responses of teachers and students on the classroom based factors that influence high level mathematical thinking and reasoning, the Pearson product moment correlation ( $r$ ) was used and the coefficient was found to be 0.60 showing a positive relationship. Also, to determine if the relationship is significant or not, the analysis presented in table 2 reveals that the t-calculated value (67.90) is greater than the t-critical value (1.734). Therefore, the hypothesis that there is no significant relationship between the responses of teachers and students on classroom based factors that influence high level mathematical thinking and reasoning in students was rejected.

The research further revealed that in the classroom: sitting arrangement, interaction among students, interaction between students and teachers, students' readiness to explain previous knowledge about a question, students' readiness to work in groups during classroom activities and students' readiness to ask questions during instructions, support high level mathematical thinking and reasoning in students. The study also revealed that emotional state of mind of the students in the classroom and their psychological view to mathematics influences their level of mathematical thinking and reasoning. The findings agree with the findings of Lampert (2003) who established a classroom culture that helped in creating a classroom in which reasoning can thrive, students can participate and forget external problems disturbing them.

### b. Good tasks that influence high level mathematical thinking and reasoning in students

Table 3 reveals that both students and teachers agree with all the statements made on good tasks that support high level mathematical thinking and reasoning in students. The table also shows that students mean ratings are more inhomogeneous than the teachers mean rating since students on average have a higher standard deviation (0.99) than the teachers (0.68). To determine the relationship between the mean responses of teachers and students, the Pearson product moment correlation ( $r$ ) was used and the calculated  $r$  was found to be 0.98 showing a high positive relationship. Also, to determine if the relationship is significant or not, results from table 4 revealed that the student-t calculated value (82.75) is greater than the student-t critical value (1.860). Thus, the hypothesis that there is no significant relationship between the responses of teachers and students on the good tasks that influence high level mathematical thinking and reasoning in students was rejected.

More so, the findings from table 3 also show that mathematical questions that make students; understand a concept, press for meaning of a concept, find solution to a problem, recall facts, and creative and analytic supports high level mathematical thinking and reasoning in them. These findings agree with the findings of Sullivan & Lilburn (1997) who reported that teachers ask many questions which emphasize problem-solving, application and the development of a variety of thinking and

reasoning skills.

c. The teaching strategies/methods that support high level mathematical thinking and reasoning in students

Table 5 shows that the students did not agree that trial and error activities influence their level of mathematical thinking and reasoning while the teachers agree with the same statement. Also, both disagree that use of punishment supports the students' high level of mathematical thinking and reasoning. However, both students and teachers have inhomogeneous ( $SD=1.99$  and  $1.22$ ) mean rating on the teaching strategies/methods that support students' high level of mathematical thinking and reasoning. To determine the relationship between the mean responses of teachers and students on the strategies that influence high level mathematical thinking and reasoning, Pearson product moment correlation ( $r$ ) was used and the calculated  $r$  was found to be  $0.91$ , showing a high positive relationship. Table 6 further revealed that the student-t calculated value ( $47.16$ ) is greater than the student-t critical value ( $1.860$ ). Thus, the hypothesis that there is no significant relationship between the responses of teachers and students on the teaching strategies/methods that support high level mathematical thinking and reasoning in students was rejected.

However, the finding from table 5 revealed that teaching strategies such as brainstorming, scaffolding students' knowledge to solve a problem and the use of reinforcement and incentives while teaching support and influence high level mathematical thinking and reasoning in science students. The finding agrees with that of Wood, Burner, & Ross (1978) who emphasized that effective use of scaffolding plays an important role in supporting students' high level engagement by encouraging divergent thinking.

## **Conclusion**

Based on the findings in this study, the following conclusions were drawn:

There exists no significant relationship between the teachers and students responses on the factors, good tasks and teaching strategies that support high level mathematical thinking and reasoning in students. Sitting arrangements, interaction among students, interaction between students and teachers, students' readiness to explain previous knowledge about a question, students' readiness to work in groups during classroom activities and students' readiness to ask questions during instructions, support high level mathematical thinking and reasoning in students. Mathematical questions that make students understand and press for meaning of a concept, find solution to a problem, recall facts, and creative and analytic supports high level mathematical thinking and reasoning in them. Teaching strategies such as brainstorming, scaffolding students' knowledge to solve a problem and the use of reinforcement and incentives while teaching support and influence high level mathematical thinking and reasoning in students.

## **Recommendations**

The process of teaching mathematical reasoning should be taught and practiced by deliberate planning to make reasoning part of mathematics lesson.

Good reasoning tasks should reach each student on some level. That is, all students should be able to make some sense out of the tasks.

Teachers should through deliberate planning modify existing problems to make them good reasoning tasks. That is, tasks that lends themselves to being solved in more than one way.

Questioning skills, brainstorming and reinforcement should be applied by teachers while teaching for high level of mathematical thinking to be enhanced.

Questions in textbooks can be modified by teachers to be better questions to support high level mathematical thinking and reasoning in students.

Student teachers should be taught those instructional methods and strategies that support high level mathematical thinking and reasoning in students.

Little or no punishment should be used while teaching instead negative reinforcement should replace punishment so that high level mathematical thinking can be enhanced.

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