



**FEDERAL UNIVERSITY OF TECHNOLOGY  
MINNA**

**GOOD QUALITY SCIENCE  
EDUCATION FOR SUSTAINABLE  
NATIONAL DEVELOPMENT:  
IMPLICATION FOR COUNSELLING**

*By*

**IRENE NWAMU MOGBO**

*B.Sc. Edu. (UNN), M.Ed. (ABU), PhD (Jos), MSTAN, MFAWE, FCASSON, JP  
Professor of Science Education and Counselling Psychology*

**INAUGURAL LECTURE SERIES 29**

**21<sup>ST</sup> AUGUST, 2014**



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## 1.0 PREAMBLE

I feel highly thankful, delighted, honoured and humbled to deliver this 29<sup>th</sup> inaugural lecture of this great University. I am also immensely grateful to the Almighty God for His love, mercies, grace, favour, and faithfulness for making this day a reality. To Him be all the glory, honour and majesty in Jesus Name. Amen. I sincerely appreciate the Vice Chancellor, the University Management and the Inaugural Lecture Committee for giving me this golden opportunity to present this lecture.

Inaugural lecture is a forum where the gown and the town meet to share some academic contributions, ideas, issues that make for sustainable development, progress and advancement of the society and Nigeria as a Nation. It is an opportunity to establish a professional chair, hence defending the trust vested on that professional chair. It is a forum to appreciate all the people who were instrumental to the person's educational development and those who have greatly made impact on the lecturer's career development over years of teaching, nurturing, learning, working and researching in the academic community.

In this lecture, educational issues that are basic to sustainable national development, which if not addressed will hinder us from achieving the year 20-2020 Vision will be discussed and examined.

As this distinguished audience is diverse in nature; the Lecture will carry everybody along by explaining in simple and practical terms such as the following: education, educational Reforms, the challenges for vision 20-2020, as well as Sustainable National Development vis-à-vis the implication for guidance and counselling.

*Irene N. Mogbo, PhD, FCASSON*

## **2.0 INTRODUCTION**

Many stakeholders of Education in Nigeria are increasingly dissatisfied with what education seems to achieve. There is great need for accountability, transparency in education. These questions are being asked by Nigerians.

- Is there value in the traditional education?
- Is there value for the education curriculum?
- Is there value for technical education?
- Where are the jobs for curriculum?
- Is it possible to get jobs today?
- What are institutions actively doing that leads to competences – from basic education to graduation? What can you do to have performance base education?

They are asking for functional and relevant education that will give relevant skills to prepare people for future jobs after graduation. How do we solve the problem of shortage of qualified teachers and insufficient competence of teachers? The Federal and state governments established Grade II Teachers Colleges, NCE and faculties of education which are interested massively in teacher education from 1960 till date. However, many Nigerian teachers are not sufficiently effective because quality of teaching is judged by performance of pupils and students in science which over the last three decades is unsatisfactory. Also quality of character of youths is unsatisfactory to the society. Teachers blame parents and parents blame teachers for students' underachievement. We need to do something about this. What do we do?

## **3.0 CONCEPTS DEFINITION**

### **3.1 What is Education?**

The word education is coined from the Latin word “*educare*” which means to lead out, to instruct, to impart knowledge. Education is the process by which ideas, skills, potentials which are hidden in a person are brought out to awareness and

knowledge. The genetic make-up of every individual carry a lot of potentials that can be brought out (or discovered) for manifestation through education. Education is the formal or informal conscious moulding of man by man in which, the individual being moulded acquires knowledge to tackle the inherited problems of life according to his age, ability and attributes. This implies that he will have the ability to live a good, wise, useful and meaningful life in his community, if he, she is educated (Mogbo, 2004; FRN, 2005).

Education is the most worthy investment. Education is the veritable instrument for the growth, development, survival and emancipation of the human race. Education delivers a people from mental slavery. It makes a people easy to govern and difficult to enslave. Education is the key that opens the door that ensures access to great possibilities for a successful and peaceful life style. Education is the key to success for teaching and training the man power in any society and nation.

### **3.2 What is Quality?**

Quality is fitness for purpose. It is ability of the personnel, curriculum, space, equipment, methodology to be adequate/ideal for the purpose they are meant to serve in education. Quality also means employing the best practices for achieving our purpose or objective. Quality relates to working with efficiency, working with speed to meet time targets, and completing the work effectively.

Quality leads to the cost competitiveness and efficiency in achieving more at lower cost unit. Quality science education cannot happen by magic or accidentally, it must be planned for and people must be committed to implement the plan. This means that for quality science education to occur, we need a team work rather than leaving the work for a few workaholics.

Why should we be concerned about quality science education?



The reason is that quality adds value to our products and because our products are valued, quality consciousness in us will increase. Quality of education shows in the type of staff and students, the curriculum, facilities, and available resources we produce. See Figure 1.0 for what quality entails.



Fig. 1.0: Components of Quality

Source: Author

### 3.3 What is Quality Education?

The term quality means an attainment of a flawless, excellent product. This product is needed for its value to the recipient and conforms to the generally accepted standards as defined by institutional bodies, and professional communities. Quality education protects the students from poor quality programmes, so that the credibility of their qualifications will not be questionable anywhere they go.

Quality education increases the confidence of public and other nations about our educational products "*educates facilitia*". It also helps in "self evaluation" which is very necessary, so that we can operate efficiently and increase mobility of products across borders for global recognition of the good qualifications of the products.

Wholistic quality education does not reside only in head knowledge of factors, facts and figures of the subject matter of the discipline or disciplines. Quality Education should touch and influence the heart of the educated person for him/her to be worthy both in character and in learning (Okeke, 1976; Mogbo and Achalu, 2014).

According to Martin Luther king, education for intelligence is not good enough. Luther opined that a good educational goal should be for intelligence plus good character. Socrates posits that knowledge is a virtue while ignorance is a vice. This means that to know good is to do well, and not to know good is to do evil. This implies that you can not use evil means to achieve good ends.

The federal government realized these benefits of education when she put down the goals of education in the National Policy for Education of (2004) that education should be for a free and democratic society, just and egalitarian society. Education should be for a united strong and self reliant nation. Education for a great and dynamic economy and education for a land full of bright opportunities for all citizens (FRN, 2004:7). Also the FGN in (2005) in the Millennium Development Goals report stated that all human capacity development of the nation should be anchored on strong learning and education particularly science education systems which are central to the attainment of the Nigerian vision 20-2020. A vibrant quality education system ensures maximum development of the potentials of individuals and promotes a knowledge driven society (Obanya, 2008; Mogbo and Achalu, 2014).

### **3.4 What is Science?**

Science is the study of the natural things around us, animate or inanimate. Science is an intellectual activity which makes man to understand and appreciate nature via an organized body of knowledge which is testable and verifiable (Okebukola, 2002; Mogbo, 2005).

Science provides man with the wheel in which technology and economy of the nation moves. Science provides man with knowledge of the environment, social behaviour, improvement in the economy, industrialization and policy making. Science inculcates in man scientific and technological attitudes such as curiosity, creativity, honesty, objectivity, critical mind, open mind, and fastidiousness, self-esteem, which are all qualities for national development, self-actualization and self-reliance.

### **3.5 Relevance of Science Education**

The relevance of science education in the advancement of technology in many nations has been a topical issue in academic cycles. Science however is a systematic process of obtaining testable, verifiable knowledge about nature and natural occurrences precisely to find out how the universe works using careful observation, and experimentation (Okeke, 2007; Mogbo, 2001). When this is done, it yields dependable data information that drives technology for the improvement of human life. The concepts, principles, theories and practice of science contribute immensely to the technological growth of nations (Abimbola, 1997; UNESCO, 2002; Usman, 2003; UNESCO, 2006; UNESCO, 2011).

### **3.6 What is Science Education?**

Science education is an initial training programme in pure sciences, Agriculture, Engineering and environmental technology with subsequent trainings in the rudiments of teaching. Science education could also be a simultaneous training in the pure basic sciences and in the rudiments of

teaching such as school management, supervision of schools, instructional strategies, production, use and maintenance of instructional materials, development and evaluation of school curriculum, establishing of (Nursery, Primary, Secondary, and Tertiary institutions), setting up guidance and counselling units etc. to offer PGD, M.Tech and PhD degrees in science education. Sometimes students perform poorly in science education because they have poor science foundation, poor interest, anxiety. Some science concepts are abstract in nature which is confirmed by recent WAEC results of 2012 as shown in Table 1. Despite this poor performance, specialists in science subjects and well meaning Nigerians are saying that adequate teaching materials should be provided for teaching science and technical subjects, particularly in this internet revolution age with corresponding knowledge explosion as a result of information and communication technology (ICT). The role of quality science education cannot be overemphasized because it is a key instrument that has made man comfortable, improved his thinking process, his health, his transport vis-à-vis his self-reliance, growth and national development. Science without application of technology becomes sterile, while technology without science becomes moribund as is shown in the WAEC May/June 2012 results of 19 Northern states of Nigeria. See Table 1.

Table 1: May/June 2012 WAEC Result in 19 Northern States

S/No	State	% Pass	S/No	State	% Pass
1	Yobe	1.5	11	Kwara	17.6
2	Gombe	4.2	12	Taraba	18.25
3	Adamawa	5.26	13	Kano	22.7
4	Kebbi	7.44	14	Niger	23.27
5	Bauchi	9.2	15	Plateau	25.98
6	Zamfara	9.5	16	Nasarawa	29.9
7	Sokoto	10.69	17	Benue	37.8
8	Katsina	10.74	18	Kogi	40.18
9	Jigawa	13.3	19	Kaduna	44.4
10	Borno	13.8			

Source: Federal Ministry of Education (FME), 2012

### **3.7 Quality Science Education for What?**

- \* For self-reliance as a nation.
- \* Paradigm shift from traditional chalk and talk to ICT use for teaching and learning.
- \* Better use of ICT pedagogy in building and developing Nigerian youths in ICT use and ICT focus in education policy.
- \* Better instructional media use in the teaching and learning process.
- \* Better management of class size (population management).
- \* Human capacity building to support small and medium scale industries.
- \* Good environment conducive for the teaching and learning process.
- \* Bio-fuel research and food security.
- \* Genetic improvement of livestock.
- \* Train Nigerians to be good as Nigerians trained abroad.

### **3.8 The Concept of Sustainable Development**

In 1987, the United World Commission on Environment and Development called (Bruntland Commission) defined sustainable development as the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs. This definition means that sustainable development has physical, social, economic, ethical, cultural, political, ecological and political implications. Sustainable development will require effective administration and management of all human and natural resources, particularly managing the interaction between science, technology, society and the environment. Sustainable Development according to WSSD (2002) stands on three major pillars: social pillar, economic pillar and environment pillar. See Figure 2.

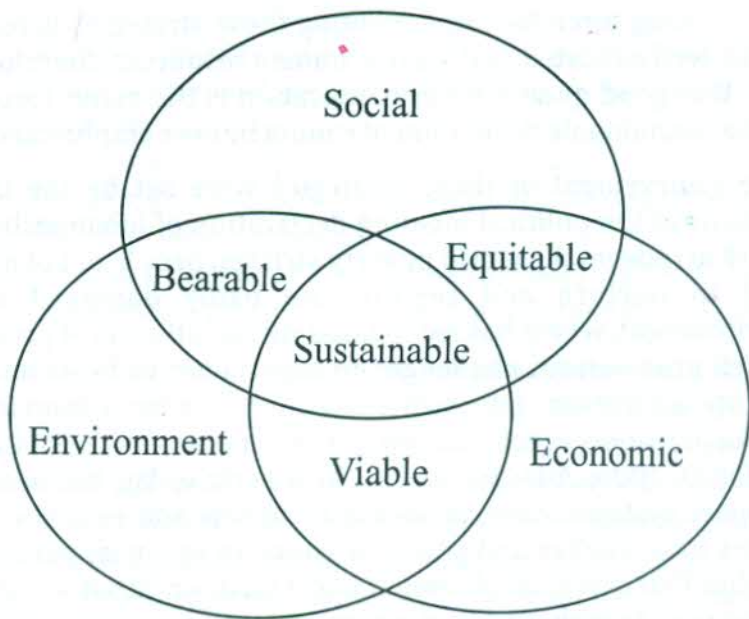


Fig. 2.0: Three Pillars of Sustainable Development

Source: World Summit on Sustainable Development (WSSD, 2002)

Sustainable development implementation strategies and steps were also highlighted by WSSD 2002 as:-

- \* Making globalization work for sustainable development.
- \* Poverty eradication and sustainable livelihoods.
- \* Changing unsustainable practices of consumption and production.
- \* Promoting Health through sustainable development.
- \* Access to energy and energy efficiency.
- \* Sustainable management of ecosystems and biodiversity.
- \* Managing the world fresh water resources adequately
- \* Finance and technology transfer.
- \* Sustainable development initiatives for Africa, and to
- \* Strengthen the systems of international governance for sustainable development.

The driving force for implementing these strategies is reliable, solid, well educated and trained human resources; therefore the fact that good quality science education is the major force that drives sustainable development cannot be over emphasized.

The achievement of these strategies were set by the United Nations at the political meeting declaration of Johannesburg in 2004 to redeem the world poverty stricken people out of misery, and to nurture and restore the badly damaged world environment, which has led to flooding and all sorts of problems which pose serious challenges to Nigeria not to focus on good quality education, that will sustain the nation's human and national resources for this and future generations (WSSD, 2004; UNESCO, 2005; Adesina, 2005). In Nigeria today, the basic life support systems such as access to health and education, air, water, food, shelter and good environment are in jeopardy. This implies that every development effort focus or initiatives should make sure that these life support systems are guaranteed and maintained, and preserved for the benefit of the present and future generation of Nigerians.

In order to guarantee that good quality education life support system is preserved, there should be an organized framework for adequate training of manpower to manage human and material resources using data from local, state and national levels to ensure sustainable national development. Also, the following steps were suggested by UNESCO (2008) for sustainable national development. These steps include among others:

- \* Creating awareness through environmental education and capacity building.
- \* Population stabilization.
- \* Integrated land use planning.
- \* Maintenance of sustainability in agriculture through the restoration of healthy farmlands.
- \* Conservation and rational exploitation of forest resources.

- \* Conservation and protection of biodiversity.
- \* Control of environmental pollution of land, water, and air.
- \* Development and use of non-polluting renewable energy resources.
- \* Recycling of wastes and industrial residues.
- \* Imposition of ecologically compatible human settlements and slum improvement.
- \* Constant review of environmental laws and standards and enforcement of environmental laws and standards.

The crystal clear issue here is that none of these steps can be correctly implemented without proper quality education and counselling, therefore a proper orchestrated, concerted, coordinated and monitored effort is urgently needed in Nigeria in the science education and other programmes/sectors to make the voyage to 20-2020 dream a smooth voyage. See Fig 3. The figure illustrates suggested wheel of progress for various sectors in Nigeria for a successful journey to sustainable development (UNESCO, 2005).

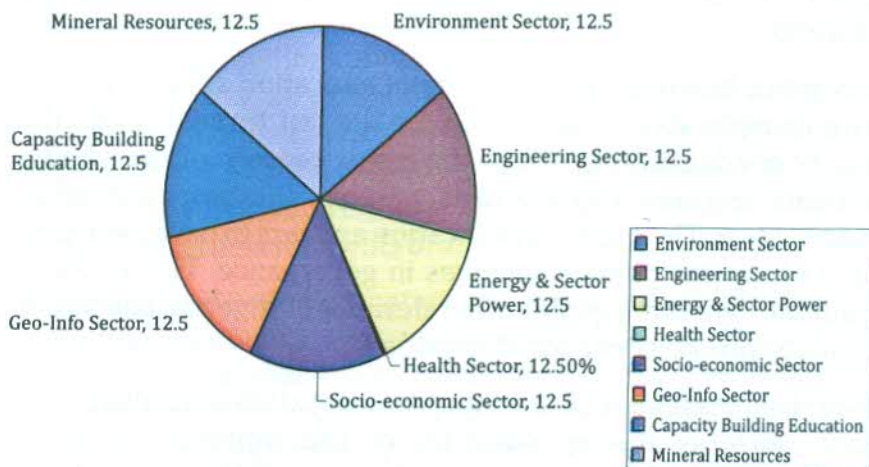


Fig. 3.0: Wheel of Progress for Sustainable Development

Source: (Igbokwe, 2012)



The wheel implies that no sector should be ignored or neglected because all sectors are core-related for example. There is apparent evidence that the plight of the Nigerian education system has been dwindling and may move to its lowest ebb if not attended to urgently. The future of the education system appears to be at its lowest ebb because of the consistent fall in standards and quality for the last two decades (Mogbo, 2012).

Today the world is knowledge-driven, hence there is a world demand for good quality education to bridge the information divide of developed, developing and under developed nations. Globally or internationally education is the option for all wise nations for no nation can ever consider illiteracy as an option. Many African nations realized this and had a paradigm shift from policy utility to policy contribution which focuses on formal networking and building of consortia to bridge their information divide among education managers. These nations have done considerably well and can be said to be developing e.g. Ghana, Kenya, and most South African nations and other interested African nations, will do so, if they can focus, on good quality education.

In Nigeria, before now the quality of education at all levels has been considerably adequate but for the last three decades the quality of education has been the major concern of everybody; students, teachers, educationists, parents, educators and other stakeholders. The quality of education appears to have dwindled due to frequent political changes in governance. This concern about the dwindling quality and relevance of Nigerian education has led to several educational reforms.

Several efforts to remedy the educational system were also put in place, such as the introduction of the Universal Primary Education (UPE) in 1976; introduction of Universal Basic Education (UBE) later and several conferences, seminars and workshops were also organised out to ensure that schools

function effectively and efficiently in attaining educational goals and standards. Despite these efforts the Nigerian educational system has faced many challenges with consequences, such as poverty, growth in unemployment and underemployment, drug abuse, political and ethical upheavals or crisis such as kidnapping, bomb blasts, destruction of government regulations and structures, insecurity of life and property and poor academic performance in school and external examinations as is shown in Table 2.

Table 2: Enrolment and Pass Rate of Three Basic Science Subjects in SSCE and GCE Ordinary Level Examination 2005-2009

Year	Biology	Pass% rate	Chemistry	Pass% rate	Physics	Pass% rate
2005	1,051,557	35.74	349,936	50.94	344,411	41.50
2006	1,082,556	35.61	352,452	50.95	345,225	43.84
2007	1,072,607	33.57	432,230	45.96	427,398	58.05
2008	1,285,048	33.94	428,513	44.44	424,893	48.26
2009	1,903,552	33.87	442,091	45.97	429,174	43.56

Source: WAEC Office Minna, Niger State Nigeria

This table has revealed that in the five years under consideration, more than one million candidates registered for Biology, but the percentage pass at distinction level is between 33.57% and 35.74%. While for Chemistry it was 44.44% - 50.95% and for Physics it was 41.50% to 58.05% which are poor performances in such cardinal subjects that are relevant for scientific and technological developments of any nation.

Nigeria as a developing nation will need quality education to raise the manpower that will manage the construction and maintenance of good roads, good water supply, good transport, doctors to man the hospitals, good railway workers, petroleum and power engineers, good agricultural engineers, ICT, telecommunication workers who fear God and love one another, who have zero tolerance for corruption, firm, fair and

transparent who will give birth to positive values and be transparent in giving account of their job for adequate and functional public service delivery or in their private entrepreneurial venture for the development of Nigeria as a nation with focus and integrity.

### **3.9 Concept of National Development**

Nigeria is classed as developing country with low human capacity development index compared with developed nations. A country with low standard of living, 63% of the population live in abject poverty of less than 1.25 dollars per day and life expectancy is 52 years for males and 54 years for females (WHO, 1990). Such countries as Nigeria have the following characteristics:-

- \* Low standard of living
- \* Poor infrastructure facilities
- \* Low level of productivity
- \* Low level of technology
- \* Rapid population growth
- \* Unemployment and underemployment
- \* Reliance on foreign trade
- \* Poverty and low per capital income
- \* Low level of manpower
- \* Dependence on agriculture as the only means of sustenance.

### **3.10 National Goals and Objectives of Education Implementation**

The national goals and objectives of Education, and science and technology education in particular should be articulated for easy operation of the policy. Policies should be flexible and adaptable for an appropriate micro delivery mechanism. Federal government should get the input of all stakeholders before policy formulation. Education policies appear good on paper but may fail to meet all the reality of needs on ground and not be relevant to issues that the reality of needs on ground should address. Also

may not be relevant to issues they are supposed to address. The implementation of policies properly is also a challenge hence, before education policy implementation; there should be adequate preparation of material and human resources and adequate fund before implementation. A clear example is what happened during the implementation of information communication technology (ICT) subject programme. It was made a compulsory subject in the new SSS education curriculum (SSSEC). The policy failed because some rural schools and some urban schools were not equipped with computers, light or alternative power source before introducing ICT as a subject in the curriculum.

Currently, realizing this mistake, the Ministry of Education has agreed to partner with civil society organizations in the delivery of youth and adult literacy programmes for proper implementation in line with the four year's strategic plan for public education and advocacy before proper implementation of policies in Nigeria (Okeke and Oranu, 1993; FRN, 2004; Mogbo and Achalu, 2014). Improper implementation of education policies is affecting the quality of education as clearly shown in Table 3.

Table 3: Candidates with 5 Credits in 5 Subjects plus English and Mathematics

English	Mathematics	Candidates with credits in any 5 subjects focusing on English and Mathematics
25.51	37.96	8.63%
23.00	41.54	9.92%
22.00	46.91	9.46%
28.00	56.90	9.80%
28.00	45.29	10.02%

Source: Federal Ministry of Education (FME) 2009

- \* WAEC Result from the Federal Ministry of Education here is showing candidates with up to 5 credits in any 5 subjects focusing only on Mathematics and English. The result is a national eyesore. Quality education is the responsibility of all stakeholders.
- \* This result in table 3 testifies to poor performance in two basic but key subjects for effective reading and learning of science and technology.

The issues above call for changes, in the education system, however there are several challenges that must be surmounted before there will be quality education in Nigeria that will meet global needs in a world that is knowledge driven. Some of these challenges that must be surmounted before there will be quality education in Nigeria are listed below.

#### **4.0 CHALLENGES TO QUALITY SCIENCE EDUCATION**

Some of the key and other challenges that must be dealt with before we can achieve good quality education in Nigeria are listed and some of them discussed in this section; they are as follows:-

- \* Inadequate funding of education.
- \* Students and parents attitude to good quality education.
- \* Examination malpractice.
- \* Frequent policy changes and inconsistency in educational policies.
- \* Incompetent teachers and students with poor motivation or weak students.
- \* Frequent strike actions by teachers.
- \* Lack of basic amenities, infrastructure and poor maintenance of infrastructures in schools.
- \* Female under representation in ICT and other technical school programmes.

- \* In Security of life and property in some school environments.
- \* Lack of transparency and poor accountability with facts and figures by some school managers and administrators.
- \* Overpopulation of classrooms in some schools.
- \* Youth unemployment and underemployment after graduation.
- \* Poor supervision, monitoring, evaluation and re-evaluation of schools.
- \* Poor community participation in the implementation of educational goals in schools.
- \* Inadequate guidance and counselling services in schools.
- \* Poor desire for entrepreneurship by some young graduates.
- \* Inadequate facilities for teaching and learning (Henry, 2003; Miller, 2005).

It is important here to note that challenges are sometimes good catalysts for change. For where there is no challenge, there may be little or no need for a change. However, if changes come, there will be a healthy, strong, good quality educational system that will produce quality manpower to benefit Nigeria as the giant of Africa. If she can change urgently, as a stitch in time saves nine. The new world order demands for good, solid quality education that will give the nation good healthcare, good water and other facilities without problem but with fair justice, equity, transparency, accountability with social and good socio-economic well being void of corruption (Okebukola, 2003; Mogbo, 2004).

These challenges above provide the background for this lecture. How these challenges can be surmounted for Nigeria to have the good quality education that will deliver her from intellectual bankruptcy to move forward as a nation will be the next issue for discussion?

#### **4.1 Inadequate Funding of Educational Facilities for Teaching and Learning**

The federal, state and local governments should adequately and comprehensively fund old and new schools for good management and administration and to enhance their efficiency. The funding should be captured and provided for in the annual budget. If science and technology education are not adequately funded schools and other sectors will suffer loss. This is because science education is the mother, central knob and bedrock of all other developments in agriculture, engineering, medicine and pharmacy etc. (Olaitan, 1996; Mogbo, 2004).

It is a good idea to establish new schools, but if their funding source is not guaranteed and the relevance of courses to be offered in such new schools to meet societal need is not obvious then it is better to comprehensively fund old schools before establishing new ones to avoid white elephant projects. Funding of infrastructural facilities can be very expensive, however this must be done to get the full benefit of education in such school establishments; hence making sure that the government yearly budget estimates for running schools in Nigeria is guaranteed cannot be overemphasized (FRN, 2005).

Adequate funding of schools can be a heavy responsibility that the government may not be able to carry alone, so it may be necessary to solicit the support of partners such as Non-Governmental Organization (NGO's), philanthropists, communities, co-operations, private sector initiatives and oversea partners such as UNICEF, UNIDO, etc. They can be approached to assist. These partners may assist in offsetting the shortfall on the yearly budget on education to complete the ongoing school projects or to start new school projects. The town, the gown and foreign partners can start new school projects. There should be a careful use of the fund available to achieve the educational objectives. There should be enough political will

power to keep the prescribed United Nations Agenda formula to fund and improve the education standard and quality of schools in Nigeria. Some states appear to lack adequate political will power and commitment hence has declining interest because of educational outcomes. This posture should change to improve school results. For example, see Table 4. It shows poor results which probably may be due to poor funding of the schools.

Table 4: Results of Students' Performance in WAEC, 2009

English	Mathematics	Candidates with Credits in any 5 Subjects
25.5%	37.96%	8.63%
23%	41.54%	9.925
22%	46.91%	9.46%
28%	56.90%	9.80%
28%	45.29%	10.02%

Source: Federal Ministry of Education (FME), 2009

This result is pathetic, because only few candidates had up to 5 credits, which is not up to 20%. The best was 10.02%. It is a national eyesore. What are the practical solutions? Who is responsible for that? For a better standard or quality of education in Nigeria, who are the key players in this game?

Teachers, parents, society, student need a closer relationship where teachers will learn not to pass a weak student because the **teacher** did not do his work or finish the syllabus. **Parents** will learn to checkmate what is done in school and the **students** will live up to the huge sum of money invested on them by parents. Mass promotion of the good, the bad and the ugly is like a tale told by an idiot, full of sound and fury, signifying nothing (Shakespeare). The **managers** of schools who do not plan, organize, direct, supervise, co-ordinate, communicate, relegate duties to junior workers or who did not do proper budget will need to also live up to expectation.



It is suggested in this lecture, that the directorate of MAMSER made up of the Ministry of Information and Culture, Public Enlightenment (PE) the war against indiscipline (WAI) and National orientation movement NOM staff can facilitate and socially mobilize Nigerians to re-orientate them on the good values of education in Nigeria and educate them on how to embrace and properly implement the Nigerian Policy on education for effective national development. This is important, for if we do not change, we will continue to be seen as people from the dark continent of Africa. Racists believe we are slothful, lazy, dreaming, sleepy, torpid, lethargic and hence indigent, totally destitute, needy, poverty stricken, disfavoured, and impoverished. This is so because with poor performance in schools, there can hardly be any inventions, innovations and discoveries. UNESCO (2006) has this to say about the lazy intellectual Africa. Africa is a trail blazer, some still call it, "the dark continent" for the light that flickers under the tunnel is not that of hope, but of an approaching trail with countless blazers who keep waiting in the way of the train. Millions die and many remain decapitated by the day. It is amazing how you Africans all sit there and watch yourselves die. We have to all get up and do something to the challenge of inadequate funding of education as stakeholders of education.

#### **4.2 Students and Parents Attitude to Education**

In view of these challenges students are expected to imbibe and acquire scientific and technological process skills, correct intellectual attitude, and other practical skills from home and school that are needed for learning scientific concepts and principles for survival and contribution to national development. However, experience and research has shown that most of these skills and attitudes are not acquired by students hence they perform poorly in school and external examinations as clearly shown in Table 5.

Table 5: WASSCE Results 2005-2009

Year	No. of students	No of students Nov/Dec	% with ≥5credits	% with ≤5 credits
2005	1,091,676	398,689	27.53	-
2006	1,184,384	423,518	15.56	11.6
2007	1,275,330	378,018	25.54	19.87
2008	1,369,142	372,600	13.76	-
2009	1,373,009	342,442	25.99	31.07

Source: Federal Ministry of Education, (FME) 2010

Even if some manage to pass with enough credits for employment, the dwindling national economy make such school graduates jobless because they lack credits in the relevant subjects and skills needed in the current world of work or entrepreneurial skills needed to start their own private practice or business venture (Imogie, 2002; Durosaro, 2006; Adaramola, 2012).

This poor performance in school and public examinations and mass failure in West African School Certificate Examination and National Examination Council and NABTEB and the inability of some university graduates to write and speak correct English has been a serious cause of concern for all Nigerians. Parents, teachers, school administrators and the whole nation are worried. They complain that, it is not like yester years when students understood the meaning of studying their books and making good results. Some scored "A" grade in all subjects. They were serious and very determined. Students of today appear to do as they like. They lack discipline and would prefer to be browsing internet or with their cell phones than facing their studies, squarely, hence they have poor results. Students also make poor choice of subjects leading to the choice of the wrong career. This is probably because of busy parents who do not know if their children are reading or not instead of hiring a lesson teacher to help them. Some parents do not also provide adequate

friendly learning environment at home for children to read. No furniture, inadequate light, poor ventilation, poor feeding, and no lesson teacher for coaching children, which offer great opportunity for all round development of the learner at home at the time for home work. Some students because of parents too much interference develop some social and psychological problems of worry, anxiety and fear of school work, hence they perform poorly. Some serious cases even drop out of the school.

The issue of access, retention and completion of school work is another challenge that affects students' academic performance particularly for the girl child. Some parents withdraw them to serve as house girls or for early child marriage, some withdraw them, when they need money to train the male child or for other personal reasons, the trauma of their actions affect performance and the frustration that leads to dropout of many students particularly girls out of school.

Also, there is large class size or overpopulated class challenge. Some classes that are meant for 40 students accommodate over sixty students, hence facilities are over stretched without adequate resources that are relevant for effective teaching and learning. This is a serious challenge that needs to be addressed urgently. Legitimate right to science and technology education or any other education for that matter is the right of all. The responsibility to make sure all Nigerians acquire at least basic education is the responsibility of all Nigerians. There should be support for the girl child to be educated effectively because she is the mother of Nigerian nation, bridge builder and she stays closer to children in their impressionable years. She can only give what she has.

All physically challenged children, all children who are out of school in the streets should be integrated into the basic education scheme for future security of everybody and to achieve the basic objectives of science education which are as follows:-

1. Development of knowledge and understanding of the world.
2. Development of desirable scientific skills and attitudes.
3. Development of scientific and technological manpower.
4. Recognition of social functions of science.
5. Production of scientifically literate society (FME, 2009).

These objectives cannot be achieved in the face of these challenges of students with poor attitude of not focusing on, and reading their books adequately to succeed and contribute to national development.

### **4.3 Examination Malpractice**

This is an unlawful behaviour in an examination process by students, teachers, non-teaching staff, parents and even owners of schools. This wicked action conceals, makes the hardworking student to live in a fool's paradise, that when called upon to defend his so called "first class "degree award he/she will not be able to defend it. Examiners should call a spade a spade and let Nigerians stop deceiving themselves and damaging the quality of education in the Nation The challenge of examination malpractice is what students, parents and stakeholders must address.

To reduce or mitigate examination malpractice, absenteeism from lectures, non-challant attitude to taking notes in class, desire to be too cordial with lecturers, should be stopped. Also, laziness, poor use of teaching methods, peer pressure to go for parties, poor management of time, and lack of confidence as a student must be stopped. These vices should stop, so that it will not be a vicious cycle among students that will be passed on from one generation to another generation of Nigerians.

Another, suggestion for mitigating of examination malpractice is proper orientation of new students, proper handling of examination question papers, proper spacing of candidates in

the examination hall, thorough searching of students before they enter the hall for examination, provision of adequate number of invigilators and security staff, giving out the correct punishment to offenders when guilty e.g. suspension or expulsion to serve as a deterrent to intending offenders. Ultimately thorough teaching and learning of the subject matter is important. If all these suggestions are carried out at all levels and examination malpractice is mitigated; Nigeria will take her place in the international education market that is knowledge driven, thus redeem the high quality and standard which will restore the confidence people had in a Nigerian certificate some decades ago.

Examination malpractice is a monster that kills good quality education excellence and integrity. It kills an individual's God-given potentials, initiative, creativity and he will depend on others even when he is better endowed by God because of this value for short cut. This exam malpractice cancer virus that has eaten deep into the fabrics of the Nigerian education system must be mitigated for quality education to thrive. The golden vessels to be used for this mitigation are teachers. Good teachers make good schools and such good teachers have the capacity to implement school programmes without constant strike actions. The importance of the teacher in the education enterprises can never be over emphasized; therefore, the teacher should be recognized and appreciated because teachers are the foundations of quality education in schools. It is the teacher's efficiency, quality, number and effectiveness that the future of sustainable organized educational system depends on. The teachers are the ones who in the final analysis translate education policies, ideas and principles into action. What teachers do can make great differences in the life of every child under their care and what the teacher fails to do can cause an irreparable damage or loss on the learner. Indeed today's teachers are the builders of tomorrow.

If education unlocks the door to modernization, science and technology; it is the teacher who holds the key to the door. It is a national sorrow for any nation either by design or by ignorance to have her best brains who should build roads, cure the sick, draft and interpret her laws, drain away from schools saying they hate the teaching profession while her poorest brains teach her youths. The consequence of this is that such a nation will not have good roads, telephones will always be out of order, the hospitals will only be accessible to the highest bidder (Mogbo, 2004; Miller, 2005; UNESCO, 2011).

#### **4.4 Frequent Policy Changes in Education**

Policy is a process of putting down structures to justify the programmes, and to monitor as well as evaluate the implementation of the programmes for good results. The focus should be on the credibility of a policy for common good and interest of the able and disable people in Nigeria education, who are about 22 million people. Policies should be properly designed to meet socio-economic, religious, cultural and economic issues that will ensure good life for the people. Proper implementation of the programmes for good results should be the goal. Occasionally, policies should be reassessed and redesigned. Laws, rules and regulations that cause impediments to proper implementation of the policy should be removed or reformed; particularly those that are related to gender, fairness and good enabling environment for performance and female under representation particulars in ICT and technically related programmes and careers.

Government has witnessed in Nigeria this 21<sup>st</sup> century a radical and ever changing social economy which has globalised education, trade and commerce with rapid technological changes in information and communication technology (ICT) and the reign of knowledge economy which is a big challenge in the world today and the Nigerian education system in particular

hence to meet the demands, there has been frequent changes in the Nigerian education policies that are different from the former colonial pattern of education from the colonial master Britain. These policy changes have produced institution bound and jobless graduates rather than skilled manpower for the world of work leading to unemployment of youths who graduated from schools (Nwachukwu, 2008).

This is the reason why, in 2004, the 6-3-3-4 system of education was introduced to produce skilled science and technology manpower akin to Asian Tigers (Japan, Korea, Malaysia and Indonesia) (Akpan, 2008). The 6-3-3-4 system failed because of poor implementation due to misconception of the programme by end users, non-existence of professional teachers and counselling services in schools programmes to manage this dearth of science and technical and business education teachers clearly indicates that probably the government would have trained science and technology teachers and counsellors for schools before the 6-3-3-4 school programme introduction.

- \* In 2004, the UBE Act which provides for 9 years basic education curriculum merging primary with junior secondary school curriculum was introduced for basic science and technology.
- \* In 2006 SSEC introducing computer studies, one trade, entrepreneurial subject from 34 entrepreneurial subjects for self employment as compulsory for all students separating subject matter into four fields Science, Mathematics, Humanities, Technology and Business Studies was installed.
- \* In 2009 TVET Technical and Vocational Education Training was established.
- \* In 2010 Restoration, reclamation and sustenance of Quality and ethics in Education was done. The summit took

place in Abuja 4<sup>th</sup> to 5<sup>th</sup> October, 2010 to vocationalise secondary education programmes in Nigeria (Nwachukwu, 2008; UNESCO, 2011).

- \* It is hoped, that all of these innovations will be relevant to the current needs of the Nation, to give the individual the right values, attitudes, skills, abilities, competencies, and expertise for survival and contribution to national development.
- \* Science and technology education are expected to inculcate in individuals attributes, skills, knowledge and competences that will make them to have positive image, be confident and ultimately come to be self actualized, to the point of being self employed, employers of labour, and not to be roaming the streets for employment (Mogbo, 1997; Miller, 2005; FRN, 2005). A good quality science and technology education curricula and policy which is steady is expected to inculcate in the graduates these skills and competencies to be able to contribute to national development.

#### **4.5 Corrupt Administration and Bad Governance**

Close examination of appointments of teachers and school administrators reveal political appointment of administrators who know little or have no knowledge of even the rudiments of the job they are employed to do displacing career professionals who had been thoroughly trained and groomed over the years in pedagogical and administrative skills. The implication of installing such novices into the schools system negates the values of doing things right, which if neglected leads to unwholesome behaviours, lawlessness and mass failure, which presents education as a caricature. There is need to do a one to one, house to house education value reorientation in the 774 local government areas of the country to return the efficacy of “we are ready for the business of education in Nigeria.”



Today, some school administrators appear not to meet the expectations and responsibilities of adequate running of the schools under their care for some decades. Some were indefatigable and had good results, some were indolent and weak hence schools started to dwindle progressively to this era of mass failure.

Recently, Nigerian students in Ghana are over 0.7 million and in other west African nations and overseas. What is it that those nations have done, that Nigeria has not done? We need to find out and do it. The rationale and benefits of the education management and policy, the role to be played by stakeholders should be discussed in a pre-education reorientation publicity programme to ensure the success of science education, ethic and quality education in Nigeria."

The government and the school administrators should ensure transparency, accountability, firmness and fairness in carrying out their duties. Corroborating this fact are four basic factors which must be well fixed for good governance these are:

- \* The political state of affairs in the nation
- \* The economic conditions in the nation.
- \* Manpower development via education.
- \* The educational provision in the nation, all these must be adequate but education is the key to other factors because adequate use of any other resources depends on the educated human resource factor (Durosaro, 2006).

Also, education is the one power greater than "the power of the action" which man has created either for his progress or for his destruction. Education can kill or heal, education back up or tear apart. Lift up or deprive. Yes! Education is so powerful that, it can make a mule dance, much depends on the kind of education provided, who provides it, to whom it is provided, how it is provided, and who controls it. The power of education is measurable so let us use education to sustain development in

Nigeria through good governance. (Ovie, 2010; Uduaghan, 2011).

#### **4.6 Incompetent Teachers**

Good teachers qualification, experience and classroom interaction with students does not significantly influence teacher behaviour, claims and preference hence science education teachers should be assisted to improve their repertoire of teaching skills in yearly workshops, seminars and conferences (Aina, 1991; Mogbo, 2006; Akpan, 2008; Usman, 2008).

Teachers should be assisted to develop a plurality of teaching skills to be able to cope with the new technological age, for quality education requires professionally trained and competent teachers in English, Mathematics and other subjects in the school curriculum. Teachers are key players in the success or failure of any school. Some teachers are good, some are not good, such do not have respect for time, have no sanctity in teaching particularly when facilities are overstretched e.g. when a class of 40 students have 60 students i.e. large class size. Some teachers pass all students, inadequate coverage of the syllabus, poor record keeping and retrieval. Competent, hardworking teachers deserve better treatment in life and a good working environment.

Also, the welfare of teachers, their promotion, retirement benefits should solely be the responsibility of the state government and states should make sure that teachers have roof over their heads, access to mobility and be able to care for their children, parents and dependent relatives. There should be a formidable staff strength in schools who are doing things the right way.

All obsolete infrastructures should be replaced with modern functional infrastructure, facilities and equipment. Teacher training education programmes should aim at training and

graduating men and women of honour and integrity, who should manage the schools in an enabling school environment where the focus is quality academics, quality behaviour and quality sports. Alas, today the reverse is the case! When you ask why? They say it is the Nigerian factor! It is not Nigerian factor. Students cheat in examinations because the issue or tendency to cheat in examinations is an old and worldwide phenomenon carried out by students who did not prepare adequately for the examination.

Wherever it occurs in other nations, that nation takes pains to minimize or stop it. Here, in Nigeria, something should be done nationally, it should not be orchestrated or condoned. There must be change which can only come, if teachers are trained, retrained annually through seminars, workshops, television, public lectures etc. concerning the consequences and ills of cheating in examination and be encouraged to be part of implementing the examination malpractice policy so that certificates from Nigeria will have recognition.

Consequently for qualified teachers to improve in their performance, there is need for micro teaching skills centres and equipment in all colleges of education and schools of education, universities, where teachers will learn lesson presentation skills, such as set induction, verbal, non-verbal and paraverbal communication skills, questioning skills, explanation, and dramatizing skills, reinforcement skills and topical and social closure of lesson skills and be thoroughly supervised in teaching practice for at least twelve weeks. Teachers' attitudes to teaching and the teaching profession can also be improved via learning professional teaching skills, seminar and discussions on challenging topics on education. This will gradually produce good dedicated and competent science education teachers for Nigeria. It is important to note that if Education is the road to national development, good teachers, good facilities and good

books are the wheels for the vehicles of the journey of education to national development.

Issues such as class control and management, class organization, class test administration, use of chalkboard, teaching science technology and mathematics, the role of teachers in the education industry is enormous from the construction method to prompt and facilitate discussion through asking questions that will stimulate students and lead them to develop their conclusions on the subject matter after their mental construction of the topic which is learning. The effective teacher knows that students' learning is influenced by their obita dicta, belief, attitude and emotions. Students learning are based on their unique and personal experience so he searches for the initiative and uniqueness of the student, hence the teacher does not address only the students' intellect but the entire psychology and physiology (cognitive, affective, and psychomotor domains) of the learner for good learning and brilliant performance. We need competent teachers for sustainable national development.

## **5.0 GOVERNMENT EFFORTS TO SURMOUNT THE CHALLENGES**

**5.1** Universal Primary Education 1977, 6-3-3-4 and UBE are all government efforts to improve the quality of education in order to reduce poverty which has made the people sick, hungry and crisis prone. The managers of Nigeria, the President, houses of assembly and representatives should have the will power and resilience to consult with the stakeholders of education to procure the injunction for transformation to good quality education in Nigeria. It would appear that stakeholders are confused with objectives of education that are not clearcut. School administrators, teachers, students, parents, the grassroots, the town and the gown should be carried along in educational value reorientation, zero tolerance for cheating in examinations and security matters. The needs and wishes of the

people should be respected in a democracy because the people are getting tired of the antics of what is happening to the education sector and the Nigerian economy. There are numerous challenges such as frequent change in education policies, corruption in schools, inadequate funding, goals and objectives of education not properly defined, bad governance, among other challenges. These will be discussed briefly in this section.

## **5.2 Adequate Funding**

Education is the key for raising human power resources for national development. Investment in education is a worthy investment and can never be a waste. Adequate funding of education will minimize most challenges such as adequate facilities provision, inadequate infrastructural facilities, poor laboratories, classrooms, assembly halls particularly examination halls and hostels etc. The Holy Bible says that money answereth all things even though it is the root of all evils. Ecclesiastes 7:12; Isaiah 55:11; 1Timothy 6:10.

If Nigeria wants quality education, the budgetary allocations for education should be more than the proposed 26% by UNESCO. The current fund allocation of less than 10% is not adequate. To augment federal fund allocation, fund should also be generated internally in schools. Also, private donors, non-governmental organization should be appealed to, requested or solicited to assist in funding education. At the town, community, village and ward levels, fund should be raised to support, and sustain quality education in Nigeria (UNESCO, 2004; UNESCO, 2006).

## **5.3 Entrepreneurial Skill for what?**

1. Give students skills & competencies for successful transition from school to self employment.
2. Promote development of positive attitude and self confidence to be able to break even in the world of business.

Other competencies necessary for good performance as an entrepreneur according to Drucker (2005) are originality, self confidence, people result and future orientation. The details are presented in Table 6.

Table 6: Characteristics and Traits of a Good Entrepreneur

S/No	Characteristics	Traits
1.	Originality	Creative, innovative, resourceful takes initiative to do new things
2.	Self confidence	Confidence, independence, optimum individuality
3.	People Oriented	Flexible, approachable, responses to suggestions & criticism
4.	Result Oriented	Profit oriented, persistence, hard work, sees need for achievement
5.	Future Oriented	Foresight, has vision, perception, takes risks faces challenges, likes change in the face of challenges

Source: Drucker, *innovation and entrepreneurship traits New York (2005)*

Despite the beauty of these curricula at all levels of the science education system production of the learners is very poor. Students do not imbibe these science or entrepreneurial skills, rather what is seen are many dishonest students, laziness, non confident, dependent individuals who do not take correction but engage in examination malpractice.

This is a serious missing link in the education system that should be bridged for quality performance. This missing link is in the training and retraining of correct teachers for current science and technological subjects. Close monitoring of the conduct of continuous assessment of students to identify and place the round pegs in round holes. Training of enough professional guidance counsellors to help students have self confidence and positive self esteem to do their academic work effectively for proper national development.

Justice and fairness are too strong keys for peace and service in

any nation, these values should be upheld to drive away tribalism and corruption which has eaten deep into the fabrics of government leading to love of worldly things which has destroyed the moral values of many Nigerians. The current leaders should do their best to be detribalized, they should be just and fair in implementing government policies in education to have quality manpower force through quality education.

#### **5.4 Challenges for Government**

There is a thin line between education failure and success. If students perceive education as their sole source of income for livelihood, failure will never be considered as an option. With patience, confidence, determination and a desire to succeed not minding the skepticism of any body about your course of study, or earlier poor performance but nurturing your academic programme well like a baby by spending many hours studying it and facing other challenges encountered during the programme, you will succeed. Conversely, if students do not give academics long hours of attention and face the other challenges that come with academic work, it may die, resulting to poor grades leading to poor performance.

- Government should avoid selective reward or punishment of employees and other citizens based on political considerations. Teachers should be acknowledged not vilified for sustainable peace and security of lives and property as a sure evidence of good governance and exemplary leadership.
- Running a transparent, accountable, tranquil and prosperous inclusive government that respects the rule of law is the expectation of the people of any democratic government installed into office. To achieve this, the government should put some security structures in place to assist the law enforcement agencies in intelligent information gathering. The public complaints and anti-

corruption commission should be empowered to fight corruption and allow people to report misdemeanor and corrupt practices among students, civil servants (teachers) and non-teaching staff.

- Also, there should be a functional Societal Re-orientation Directorate for Citizens enlightenment, consultation and advocacy with the office special adviser on education and welfare, and non-formal education (Almajira) education and youth development directorate should guide and train youths on self-reliant trades and skills.
- Education of the children of widows, orphans and the poor should be supported and assisted so that they can be self revived and self actualized as other Nigerians.

## **6.0 IMPLICATION FOR COUNSELLING**

**6.1** The importance of understanding the concept of the twin term guidance and counselling is important here guidance is a umbrella term for a programme of services provided by the counsellor to students, teachers, administrators and parents in schools. These services are provided when the need arises, counselling is one of such services (Denga, 1987; Mogbo, 1999; Olaitan, 2004; Sadiqu, 2008).

### **6.2 What is Counselling?**

Counselling is a one to one or one to group relationship in which the professional helps the client to resolve an area of conflict or problem(s), also counselling is the act of advising a person, normal or abnormal, challenged or not challenged, special or not special to face problems, travails, issues and challenges of life with the aim of coming out of the problem victoriously. Or where it is an issue not challenge, to be confident in taking such steps, actions, and decisions that should lead him/her to an expected successful victorious end. Counselling is a process of confidence building or confidence rebuilding in an individual to realize,



understand and accept that he/she was created to be superior to other environmental issues or problems. Consequently, problems or challenges in the society, environment, and family are subject to him. If they are subject to him, he should always think of how to reconstruct the issue, matter, problem or challenge to have success or victory over the problem. In counseling some psychological theories and communication skills are used to resolve the counselee's personal aspirations, concerns and problem(s). This definition implies that counselling service can be used to help individuals or group of individuals to resolve their educational, vocational, socio-economic and personal problems.

These services assist the students to develop their innate potentials or ability, to set realistic and realizable goals for their lives. It helps them to realize their strengths and weaknesses in the pursuit of such goals. Guidance helps them to adjust to the school environment and integrate their new experience with the new self concept to improve on their total education programme pursuit (Bakare, 1971; Cook, 1973; Mogbo, 1997; Alumode, 2013).

Counselling on the other hand is a person to person interaction in a relationship in which the counsellor assists the counselee to resolve areas of conflict that has been hitherto unresolved (Mogbo, 2004; Anagbogu, 2004). In this counseling relationship the client is assisted to examine, all the facts and figures related to the plan, issue, choice under focus to make interpretations of these facts for making an informed wise decision, choice or adjustment. Counselling may be related to a person emotional, personal-social, moral, economic, political, educational, vocational concern of the client. The counselling service is seen as the heart or nucleus of all guidance services. All guidance services are implemented through counselling because in guidance, there could be counselling and in counselling there

could be guidance. Against this background, the impact of guidance and counselling on Nigeria education system need to be examined and adopted to reduce or stop the enormous waste of potentials in the Nigerian education system. Most graduates at all levels in our school system present certificates that do not match their potentials, because parents, students lacked individual and group guidance and counselling interventions which would have prevented the crisis in their developmental years when they were struggling through the implementation of a very, broad curriculum.

It is important here, to note that continuous assessment, guidance and counselling are the two major quality assurance control components for the implementation of the National Policy on Education that can measure worthiness in character and in learning of students. The key merit of the properly conducted Continuous Assessment (C.A.) records is that it has reinforcement and corrective role on the learner. The strength and weakness of the learner are identified for early correction and maintenance. The C.A. enables the learner to imbibe principles rather than memorization and regurgitation of facts.

The process of guidance and counselling emphasize the use of reliable and dependable data to resolve areas of conflict that hitherto have been unresolved for the client to realize himself and make a wise informed decision for survival or moving ahead or forward in whatsoever he/she is doing.

The counsellor uses reliable records from academic, psychological test records to advice on issues of concern and options open to the learner considering their needs, sustained interests, talents or ability and strengths or capacity to cope with such options (Peek, 2002; Mogbo, 2005) it also helps the counsellor to classify students into gifted and non gifted categories.

Unfortunately, some or many public and private primary, secondary and tertiary schools are yet to have professionally trained, full time counsellors on their staff list. Also, continuous assessment records are not adequately kept. How then do we expect to cope, survive and surmount the numerous educational challenges facing the nation today? Consequently, the author recommends that schools be provided with professional counsellors as one of the minimum standards that should be put in place before the take off of any school be it public or private school (Vaughan, 1970; Nwoye, 1990; Nwamuo, 1999).

- Serving school counsellors should be trained and retained through need-based workshops, work visits, seminars, exchange programmes, conferences so that they can access and benefit from current global best practices in guidance and counselling in schools (Mogbo, Tukura, Atsumbe and Maaji, 2000).

- There should also be procurement by the state government of adequate students folders, Biodata inventory files and psychological tests developed at home and abroad such as:-

- (1) Vocational Interest Inventory by Bakere (VII).
- (2) Study Habit Inventory by Bakare (SHI).
- (3) Motivation for occupational preference scale (MOPS).
- (4) Intelligence test for identifying gifted children by Kolo.
- (5) Differential Model for giftedness and talents by Gagne.
- (6) Scale for rating outstanding traits in children and Youths by Kitano and Kirby.

These psychological tests, inventories and scales will assist counsellors in identifying the potentials of the students for proper guidance, counseling and placement of their potentials and creativity in effective vocational areas for personal and national development.

The teachers, parents, administrators and society will also need

values reorientation counselling. The core values of good morals, hard work, honesty and fear of God has to be given to the students and the society, so that corruption, transparency and accountability will die a natural death for the science education industry to thrive.

## **7.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **7.1 Summary**

Effort has been made in this lecture to X-ray and examine thoroughly the challenges of the educational system of the nation. There are many challenges but only a few were considered and discussed. Some strategic counselling implications were examined and recommendations proffered. The challenges discussed in this lecture are:

- \* Governmentally based challenges such as frequent change of education policies, and curriculum.
- \* Lack of political will that is the will power to implement such policies.
- \* Corruption and bad governance.
- \* Inadequate funding of education.
- \* Issues of poor administration, teachers' incompetence, student poor reading habits, skills and culture, parents lack of concern and carelessness and,
- \* Implication for guidance and counselling.

### **7.2 Conclusion**

It is concluded that if Nigeria will achieve quality education, the calibre of teachers must be her number one priority. This implies that there should be a re-examination of the teacher training programmes to reflect the philosophy of teaching subjects particularly in science and technology in schools. The teacher training programme must ensure that before graduation teachers understand what their roles as teachers are in their subject areas. There could also be special programmes to teach fundamental principles, and basic ideas in the subject area.

Finally, when teachers had been trained and developed they should be remunerated for renewing and rejuvenating the natural manpower by teaching young ones.

The National Policy on Education has educational goals which are to be implemented by teachers whose profession has very low societal rating. To improve this poor societal image of the teachers and the teaching profession in Nigeria, we may consider adopting the Japan's International Project Education Achievement (IEA) model. This model focuses on the following critical areas:

- \* Teacher preparation institution programmes.
- \* In-service Education and Teacher Centres.
- \* Supervision of classes for effective teaching and learning.
- \* Revival of National Primary STM Project.
- \* Continuous Assessment of Educational Progress.
- \* Use of relevant language for instruction.
- \* Provision of relevant standard learning textual materials and equipment.
- \* Remedial classes for slow learners and underachievers.
- \* Periodic monitoring and evaluation of the curriculum.
- \* Relating subjects to the societal needs and aspirations.

Based on the benefit of the above model to Japan, it is recommended that to change the failure rate in public school examinations which implies a bleak future for teaching and learning in Nigeria, IEA Model should be adopted. For sustainable development the following suggestions should be considered.

### **7.3 Recommendations**

- (i) Education policies and strategies should capture the need for massive teacher training and preparation at all levels.
- (ii) The need for retraining in-service and special service programmes for serving teachers and poorly trained teachers should be considered.

- (iii) The need for unqualified teachers in the secondary sector to obtain diploma or post-graduation diploma in Education cannot be overemphasized.
- (iv) Sensitizing the public and the government on the importance of quality education driven by the use of posters, jingles, mass media, publication etc. (Archer, 2007).
- (v) Federal government should partner with Korea entrepreneurs on science and technology in agriculture, food preservation, healthcare delivery, solar technology, processing and storage and space technology.

The challenges of quality educations in Nigeria are inseparable from good professional teachers and disciplined school managers in the implementation of education policies, adequate budget and funding of education. Good quality students and parents who are ready to provide support for quality education and Parent-Teachers Association involvement. Improving the quality of education starts with selecting important challenges as has been done in this lecture.

The way forward is to reflect on current relevant understandings related to the challenge areas. In doing this, general guidelines, for particularly science education will be evolved taking care of value constraints for improved quality education practices in Nigeria. Quality education if properly implemented will improve performance in schools, and decisions about policies by addressing considerations for good evidence, that generally graduates can now perform in their work places or establish their own enterprise, employ labour and not look for jobs as the case today, because of lack of good quality education.

The final word to us is that Nigeria cannot afford to joke with education, hence the cognitive, affective and psychomotor

domains of Nigeria children must be carefully nurtured via good quality education to give them a positive self image, confidence and human security in their now and future life endeavours. This will help them to cope with challenges in their home, country, Africa and the wide world which is ICT skills knowledge education driven.

- (1) Find solutions to challenges, to meet the needs of the society and the stakeholders.
- (2) Nurture and encourage creativity and responsiveness in networking of schools to sharpen one another's ideas for better teaching, learning and performance.

The variable of institutional method is perhaps the single most important variable affecting students learning in an instructional setting. The ultimate goal of good quality education for any nation is to train, prepare and empower students for higher education from where adequate human indigenous manpower and other resources for national development will be harvested. The achievement of this goal requires the supply of well trained professional computer literate and competent teachers who will be able to face the challenges of the global world that is knowledge driven. However, there is dearth of professional qualified and competent teachers, education sector particularly in science education programmes.

There appear to be commensurate effort to train teachers, who can handle school subjects, at the N.C.E and degree levels, but there is serious challenge of retention of such teachers after recruitment because of voluntary resignation of these teachers from schools to the other professions in search of greener pastures and recognition by the society. Other reasons alluded for attrition are personal desires, family pressure, underpayment, working under insecure conditions, lack of dignity and self-esteem. Also, in developed world, it is noted that about 18% attrition rate of college grade teachers occur too, it

was high in 1977 in the United States of America. In Nigeria teachers' rate of attrition is quite high, but the challenge of double loyalty is higher. This challenge disrupts educational programmes, students learning are affected leading to poor results.

Also, it is necessary to surmount the challenge of ICT empowerment skills use which has affected teaching, learning and research outcomes. The use of ICT has the potential to accelerate, motivate, and encourage students to relate their school experience to the work place. ICT can also improve the teaching and learning of curriculum content in an open and flexible learning environment. If Nigerian education system must prepare quality teachers to embrace ICT so that they can access information on global practices in teaching and learning globally via the internet for effective teaching and good academic performance by student, there is need for paradigm shift to massively train good quality professional teachers for science education programme so that the Millennium Development Goals (MDG) education for all (EFA) by the year 20-2020 will be a reality and not an illusion. These teachers will foster good academic habits, and give not subjective, but objective assessment using ICT methods.



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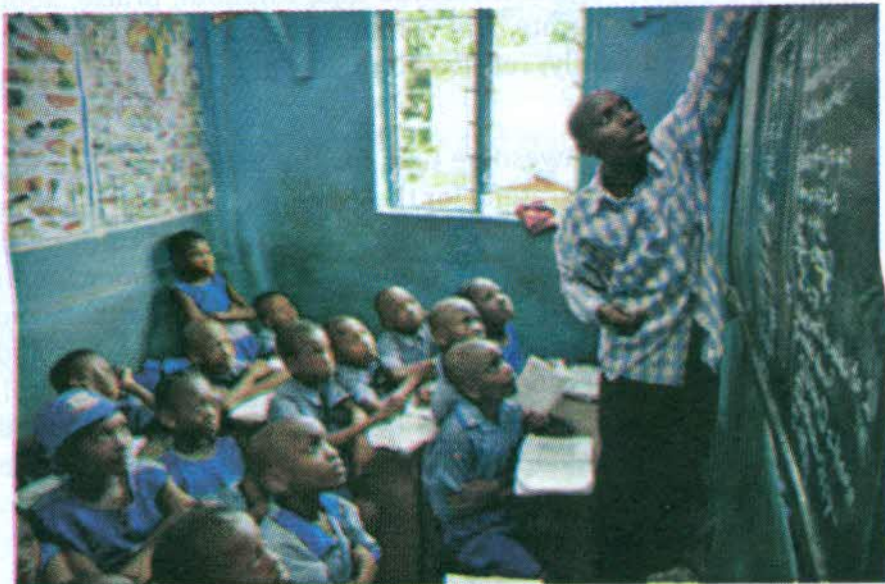
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*Professor Irene Nwamu Mogbo*

## Counselling and Guidance for Quality Education

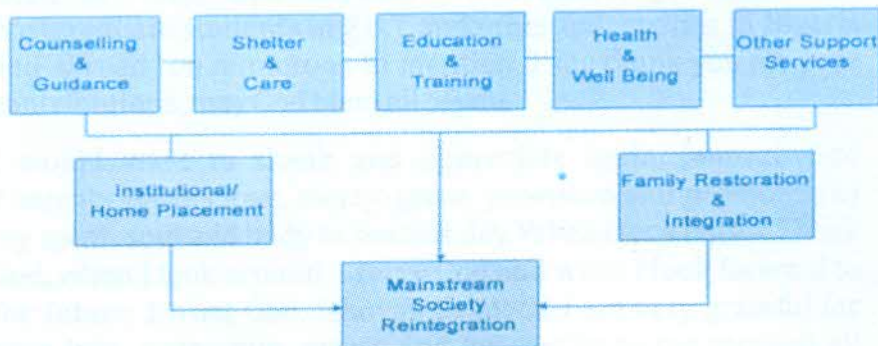


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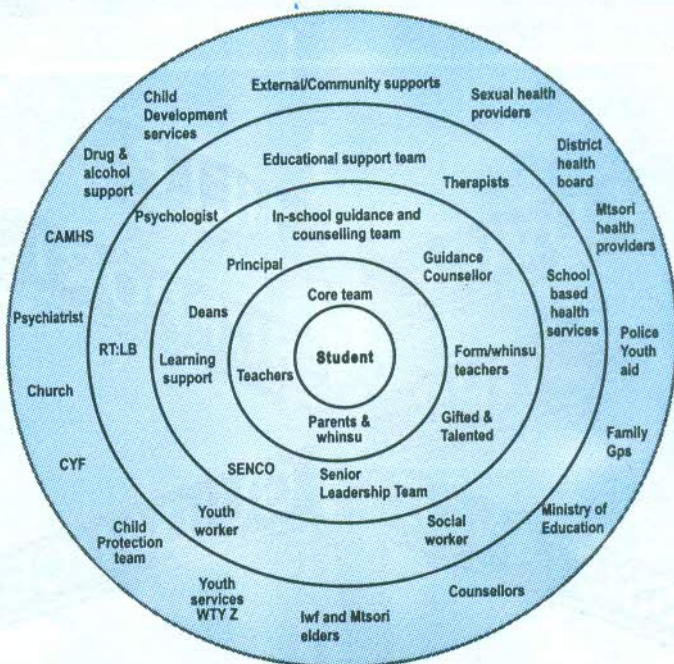


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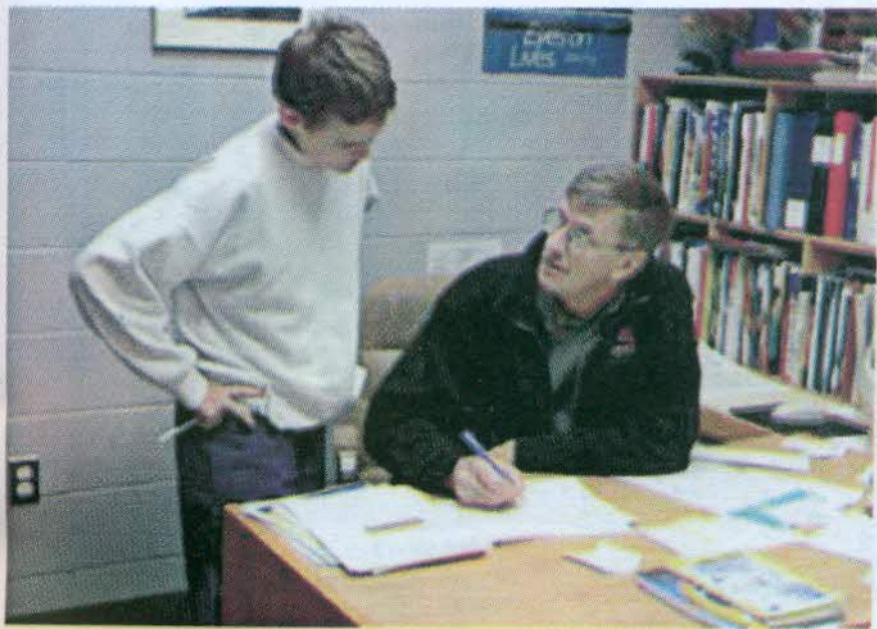


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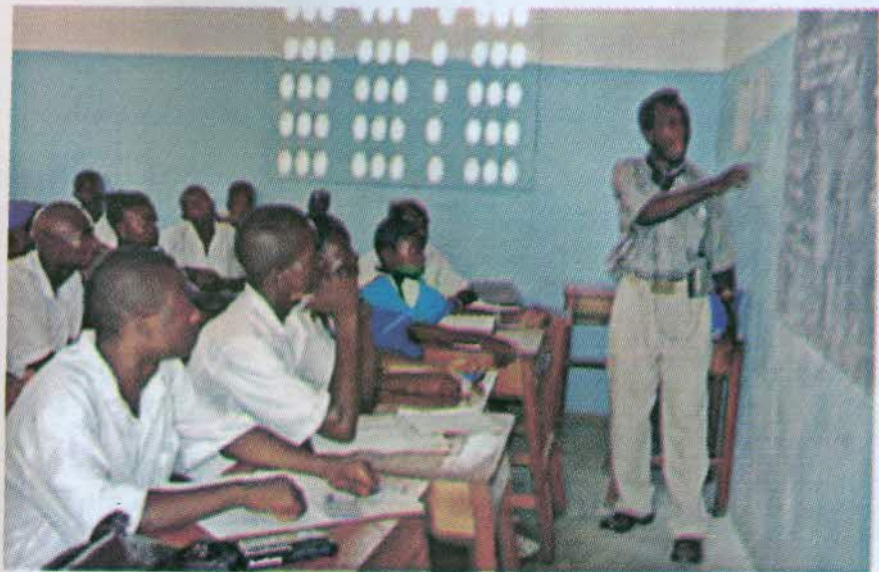
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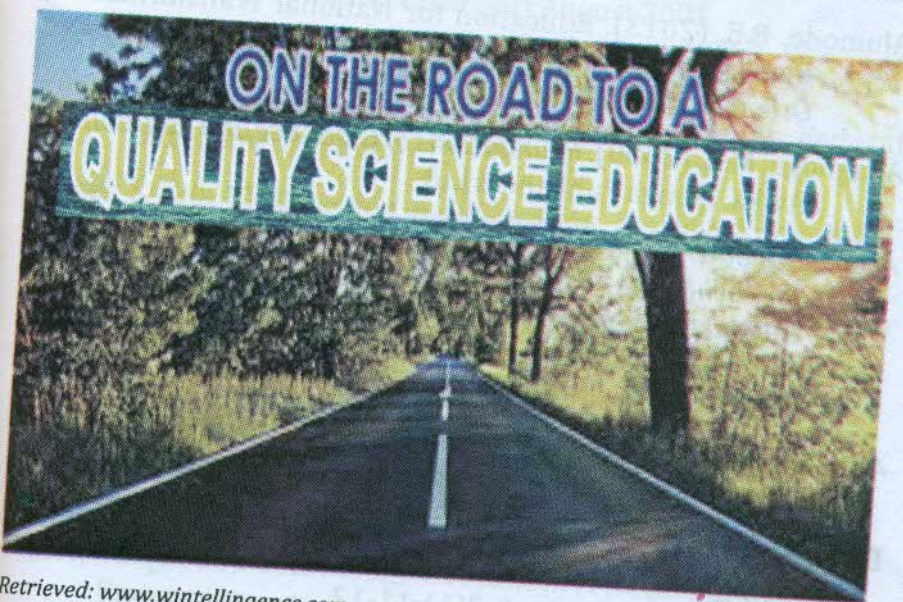
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