

## EDUCATION AND CONTEMPORARY ISSUES IN NIGERIA (TECHNICAL EDUCATION)

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### **Abstract**

This paper examined education and contemporary issues in Nigeria: Matters arising via technical education. One of the problems identified was unemployment resulting to youth restiveness. Materials were drawn from internet, textbooks, newspapers, journals and magazines. The methodology employed was descriptive and analytical. Education is a process of instruction designed to give knowledge and develop skills. Technical Education was to provide citizens at all levels of education with skills for self-reliant and national development in all fields of human activities. Government realizing the importance of Technical Education is embarking on an expansion of facilities for training and acquisition of skills. One of the major findings of matters arising is: the programme is loaded with a lot of courses for self-full-filling and national growth but implementation is a bane. Based on these findings, it was concluded that technical education if well implemented will lead Nigeria to compete favorably with other world powers technologically, it was recommended among others that federal and state government should give priority attention to the budget of technical education to ensure provisions of equipment, teaching facilities and accountability policies for effective take-off of the programme.

Education is an important social institution, the totality of structures and roles, processes, relation and material instruction built up around society's interest in the enculturation or socialization of the young (Akinseye, 1987). 'Education must play the role of producing the trained manpower required for industrial progress, political development and social advancement, it must also create an adequate social base to undergone development aims adequate in terms of values, attitudes and motivations as well as skills to support modern national objectives' (Gbamanja 2001). The underlying National Objectives of Education were to achieve self-sufficiency through self-reliance. The National Policy on Education (1981) was programmed as a vehicle for translating into reality the use of education as an instrument for national development.

From the foregoing, education is of two types: general and specific. General education is aimed at producing a certain type of persons as well as maintaining the culture as it is, a well integrated and interactive whole that is, those forms of knowledge, skills, values and attitude that motivate and control conduct, that enables the members of a society to discriminate between right and wrong and true and false in all situations of everyday life. Special education is aimed at producing people with a special role, one directed towards the interest of a special class or group. It is one that requires the application of skills, skills of critical thinking, problem analysis and research, people who can employ themselves after graduation. (Akinseye, 1987)

In view of the laudably provisions of the National Policy on Education, it is worthy to note that education is yet to produce the needed manpower required in national development hence the numerous contemporary issues in Nigeria as viewed from technical education.

### **Technical Education**

Technical education is a special education that leads to the acquisition of practical and applied skills together with basic scientific knowledge. Technical education is preparation of students for jobs involving applied science and modern technology as well as laying emphasis of understanding and practical application of basic principles of science and mathematics in solving problems (Akinseye 1987). Technical education is aimed to produce technocrats who can repair automobiles, electronics or electrical devices by applying mechanical tools to screw nuts and bolts. Ita (1971) described technical education as education for the 'Head', the 'Heart' and the 'Hand', it is education for self-reliance and self development, to buttress this assertion he exemplified in his WAPI school where he taught pottery on potter's wheel, printing ceramics etc this singular art culminated into our present day polytechnics and universities of science and technology.

Tai Solarin (1990) posited that technical education is education for self- development, one that directs students to use their 'Head' and 'Hands' to be self- reliant and self-fulfilled human beings; according to him students should be made to study and work at the same time- produce their own food, build and maintain most of their infrastructure and other facilities in the school. Tai exemplified his ideas of technical education in his 'Mayflower' school by emphasizing the dignity of labour, by ensuring that all students in the school belonged to one of labour-oriented societies: the hair designing society, the plumbing society, the electrical society, the piggery poultry and agricultural society and the block making society etc. Technical education is one aimed at preparing graduates for occupations that are classed above skilled crafts but below the scientific or engineering profession, people so employed are seen as technicians.

Technical education is an old-long education system leading to learning a trade, it has existed as man became aware of his survival instinct thus, our fore fathers transmitted their cultural heritage to their young ones by acquiring a trade through participation, by learning and knowing through seeing and doing and behaving appropriately. In traditional African setting, people engage in communal labour in erecting physical structures, construction of roads and bridges, thus the various skills were learnt and acquired. Furthermore, people acquire technical trade through apprenticeship and experimental method of learning. This act cuts across the entire length and breath of Nigeria, consequently, in the Midwest the trade then was brass work, Eastern region was wood carving, Northern part was leather work and iron work was in Central Nigeria.

During the colonial days, industrial and vocational courses were introduced leading to the introduction of a trade institution in 1853, courses taught were carpentry, cooking, household management, tailoring and metal work (Gbamanja 1997).The British also introduced vocational courses in pre-primary curriculum with grants for agriculture and prevocational courses (Alexander 1974). Technical education also received boost when companies like Railway Corporation, public works, shell-BP, united technical company and united Africa established training for their technicians (Osokoya, 1987).

### **Aims of Technical Education (National Policy on Education 1981)**

1. To provide trained manpower in applied science, technology and commerce particularly at sub-professional grades.
2. To provide the technical knowledge and vocational skills necessary for agricultural, industrial, commerce and economic development.
3. To provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man.
4. To give an introduction to professional studies in engineering and other technologies.
5. To give training and impart the necessary skills leading to the production of craftsman technicians and other skilled personnel who will be enterprising and self-reliant and
6. To enable our young men and women to have an intelligent understanding of the increase complexity of technology.

### **Types of Technical Education Institutions**

There are about five technical education institutions besides universities these are: the pre-vocational and vocational schools at post-primary level, the technical colleges, polytechnics and colleges of technical teacher education at post-secondary level.

In a developing country with vast resources awaiting exploitation and development, technical education is ideal because it provides skilled manpower to cope with the demands of the emerging social-political and economic order; consequently there is a lot of emphasis on technical subjects at different levels of education pursuit.

### **Primary Level**

In this level education should try to achieve the fifth item of the general objectives of primary level 'providing basic tools for further educational advancement including preparing for trades and crafts of the society'. To this end, pupils are exposed to using their hands in making, repairing and assembling things; and also use local crafts of the society in knitting, broom making, basket making, chair making, hat making, shoe making, mat making among others.

### **Post-Primary Level**

This level comprises the junior, senior, and trade schools. In the junior secondary level, technical education has been given maximum attention. It is seen as a talent hunting stage in which children are exposed to both academic and skills with a view to identifying their aptitude and talents; core courses that will make the child self-reliant were introduced on the heels of the 6-3-3-4 educational curriculum. Introductory to technology was introduced via: woodworks, electronics, metal works, mechanics, and local crafts of the immediate society among others. It is believed that students having acquired these skills will establish a workshop to practice the practical skills already acquired or to branch off into technical college. Better still, they can enroll into trade centers for more knowledge (Gbamanja 1991). The trade schools are centers where skilled manpower is acquired. Some of the trade centres include: Government trade centre Port-Harcourt, Government trade school Tombia in Rivers State, Government Trade Centre Ahoada now converted to Federal College Ahoada among others. Students having completed their course and obtained maximum skills can be employed in any field of their specialization or be self employed. Furthermore, bright students who wish to further their education can do so through jamb to any technical education of their choice.

### **Post-Secondary Level**

This level encompasses: technical colleges, the polytechnics, colleges of technical teacher education and Universities of Science and Technology, which include: National Technical Teachers' college Gombe in Gombe state, Yaba Technical College in Lagos state, Federal College of Animal Health and Production Technology, Ibadan, Rivers state Polytechnic Bori, Maritime Academy of Nigeria Oron, Federal college of Education (Technical) Omoku, to mention but a few. In fact, virtually all the states in Nigeria have an institution of technical education, this in effect portrays the importance of technical education in ensuring that everybody is skilled and can fend for her self rather than wait on the government. The curriculum of technical college and teachers' colleges are geared towards craftsmanship and teacher training. In the teachers' colleges the duration last for three or four years leading to the award of (NCE) or a degree. In polytechnics, the duration of degrees last for just two years and certificates offered are OND (Ordinary National Diploma) after which one year industrial attachment is observed before HND (Higher National Diploma) thus an individual with this certificate is called a technocrat or technician. The established coordinating body responsible for polytechnics is National Board for Technical Education (NBTE) which approves courses offered in polytechnics. Besides, there are students that may be admitted into teachers' technical colleges where they will be trained as technical teachers (NCE technical) to man the existing technical trade schools. Employment is based on area of specialization.

### **Various Measures taken by Government to Develop Technical Education**

Federal and state government is budgeting massively for technical education and is to welcome aids from individuals and international bodies to assist in technical education.

The government realizing the importance of technical education is poised to train her citizens in various skills to enable them self-reliant and contribute their own quota to national development in addition to gaining employment in industries. So for her citizens to be gainfully employed in these industries there is need for skilled labour. To this end technical schools are established and equipped with facilities and manpower throughout the entire country.

Besides, technical education is seen as inferior to other forms of education, in order to boost the prestige government has to lend a full support by encouraging citizens to take to skilled labour by providing scholarship and grants to students, long term packages for technicians in form of bursary scheme will be provided to equate with their graduate counterpart. Further training programme for technicians will incorporate a service unit based on existing facilities.

The government is aware of the importance of enough facilities in technical colleges and had provided equipments, workshop, befitting structures for effective functioning of the system because the structure of technical education curriculum demands more practical works. The industrial experience of candidates will be given the greatest consideration in recruiting them for employment and as well as teachers for technical education institutions.

The government is laying emphasis on industrial attachment for teachers to upgrade their knowledge in order to maintain quality and quantity education by encouraging in-service training because technical education is the hallmark of society development; so, in appreciation of the role

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technical education plays in society, elementary technical education of drawing, painting, carving among others are introduced into the primary school curriculum and pupils are encouraged to use their hands in making, repairing and assembling things. In secondary schools, the government is intensifying effort to introduce skill forming technical courses, science and technology will be vigorously taught in an integral manner in order for learners to appreciate the practical implication of basic ideas (Akinseye, 1987). The curriculum of technical schools will be broadened to embrace basic fields which are relevant to our present and future needs; Courses in such fields as food processing and preservation, clothing manufactures and technology of service machines will be considered.

The federal government is hatching an idea to further boost technical education to include the physically challenged to use their hands in creativity, government is thinking of the possibility of establishing sheltered workshop to cater for handicapped children to enable them acquire a skill for better living.

Much effort is being made to encourage women to enter wider areas of technical education and technical institutions will be encouraged to have facilities for women.

Government is encouraging NGOs and individuals to assist in training of her citizens in skills acquisition to boost self employment and avert youth restiveness.

The government and industries will be involved in designing courses for technical education so as to give it relevance. 'Advisory board' will be constituted for each group of courses and trade; while industries and employers will have a representative in order to meet their needs.

More so, contractors will be contacted to assist in training students of technical schools so that they can acquire practical experiences.

Graduates will be directed to places or fields where they are mostly needed, technical schools are required to have placement officers on their staff, career officers will advise students on suitable areas of their choice.

The government in collaboration with multi-national companies is recruiting young OND and HND graduates and training them as technicians and operators, the multi-nationals are to ensure staff training and development drive for different cadres of staff with a firm promise to train Nigerians staff to meet the required worldwide industry standard.

#### **Problems Associated with Technical Education**

One of the major problems is that of lack of foresight on the curriculum developers and policy makers, government lack the expertise ability to formulate policies for education that will be inline with Nigeria culture and technology, besides, such policies does not create room for cross-examination; Nigeria is always in a hurry, structures are not in place, policies are stated and almost immediately they want it implemented, all these culminated to constant failures in its implementation.

### **Staffing**

At any given level of education in Nigeria, staffing is always a major factor inhibiting the effective implementation of the programme. The purpose of teacher education is to produce highly motivated, conscientious and efficient classroom teachers who possess the intellectual and professional background adequate for this assignment. Nigerian teachers have not been trained in the skills of technical education, only few teachers are specialist by training or personal inclination for this task. Besides, few specialist teachers have sort for greener pastures in multi- national companies leaving the technical schools empty. Government rather than focus on teachers' welfare are busy providing physical facilities forgetting that teachers are those that can translate theory into practice so in effect, there is constant lack of professional qualified teachers or manpower to handle technical education programme at all levels.

### **Inadequate Equipment**

A visit to most technical schools reveals inadequate or outdated equipment. The subjects taught are more of practical because youths have to be skilful and self-reliant and professionally qualified in their various fields. So, the learning experiences acquired as a result of inadequate equipment is not comprehensive, memorial, motivating, vivid and concrete. Without equipment and facilities, concepts will be abstract rendering acquiring of skills null and void. Students need to be presented with automobile machines for practical works so that an automobile can work on the machine and acquire skills because equipment facilitates teaching methodology and curiosity. Equipment is essential as the Chinese proverb says ' what I hear I forget, what I see I remember, what I do I know'

Besides, technical schools equipment lacks maintenance culture. Most infrastructures and facilities are dilapidating, since their procurement and inception no repair has been done, if by chance a little maintenance ensue, the materials are inferior rendering the services a wasted venture.

### **Inaccessibility of Workshop**

Technical education is both academic and practical, subjects taught require an elaborate and well equipped workshop for practical works, there is hardly a well equipped workshop with relevant facilities that can take at least one hundred students at a time in a given subject; as a result, students are denied the ability to see, perform and make discoveries for themselves rather, they listen, hear and copy notes thereby rendering the programme certificate oriented.

### **Insufficient Funding**

In order for an educational programme of this nature to be fully implemented to achieve its intended objectives, it must be backed up with finance. The Nigerian educational programme is poorly financed in spite of the huge amount of money allotted to it in the budget. The technical education programme is practical oriented, therefore needs a lot of materials for practical. Due to the high cost of building materials, equipment and staff salaries; the federal government is sweating to fund her technical institutions. The state government is also not capable of financing theirs either, in most cases teachers are owed monthly salaries resulting in incessant strikes; money meant for education are being misappropriated; worse still some of the schools are even abandoned in oblivion.

### **Benefits of Technical Education**

If the aims of technical education are pursued with vigour, Nigeria will no doubt achieve the fourth item in the National Policy on Education, 1981, 'the acquisition of appropriate skills, abilities and competence, both mental and physical as equipment for individual to live in and contribute to the development of the society'.

2. Nigeria will be industrialized
3. Most Nigerians will be self-reliant and self-developed
4. Technical educations will reduce unemployment and youth restiveness.
5. Nigeria will be technologically developed.
6. It creates chances for economic development, creativity and innovative ideas.
7. It will bring social cultural change.
8. It ushers democracy and equalitarian society
9. Beneficiaries will be conscious of their environment.

### **Matters Arising**

Those Arising from Concept of Education and Technical Education

Education is a process of instruction designed to give knowledge and develops skills (Oxford Advanced Learner's Dictionary 2000). Technical education is in line with educational concept. Technical education leads to human resources development as well as a key to improving national development that is why it gives individuals skills to enable them work optimally as a productive citizen in the society, it provides all sectors of human activities with various skills to function in a society, it is a designed programme of courses and learning experiences for career officers to be trained as tradesmen and technicians. consequently, individuals will posses skills in the field of electrical and electronics, plumbing, bricklaying, metal works, painting, carpentry, auto-mobiles, laboratory and pharmacy technicians, vocational nurses, technical engineers among others.

The implication of this is that at the end of schooling, students should have acquired knowledge and skills for self-reliance, adaptability and employability of the products from the system; the society will be flooded with: men and women technicians with expertise knowledge in automobile that deal with cars, lorries, and spare parts to fix broken-down vehicles, textile technicians converting fibres into yards of fabrics for making cloths, curtains, carpets for home furniture, technical engineers constructing roads with drainages in addition to building solid buildings, biochemical laboratory technicians diagnosing illness for appropriate treatment, electronic technicians constructing and fixing electronic appliances, technicians displaying their various artistic expertise in metal works, woodworks technicians constructing various offices and home furniture. Technician potters producing ceramics and tiles. In fact the list of would be technicians are endless.

It is worthy to note that in spite of these expected outcome from this educational sector, the society is currently bedeviled with high unemployment rate resulting to youth restiveness due to lack of unqualified technicians coupled with poor training. Thus, every day we hear buildings dilapidating and collapsing, auto-mechanics inefficiency causes vehicle breakdown, inefficient laboratory diagnoses leads to fatal medical error resulting to death, poor road construction resulting to deplorable roads. There are also inexperienced technicians to handle environmental pollution; fake drugs are in the increase, plane crash, theft in banks because of lack of professional technicians to device soft and

hardware to tackle financial recklessness and the police inability to combat crime due to lack of qualified forensic laboratory technicians and fingerprint personnel to investigations cases. Etc

### **Those Arising from Levels**

Technical education will start right from primary school, where pupils will be introduced to elementary science and craftsman ship in using their 'head' and 'hands' to assemble things, they are to use local craft of the society as 'handwork' to create and produce things. At the secondary school level children will be exposed to both academic and technical courses, those inclined to technical will likely further to advanced technical schools to acquire professional skills. At the tertiary level candidates will specialize in various skills of human activities and will be able to deliver when called upon to do so. The implication of this is that at all educational level, the child acquires the intended fragment of learning (in all domains of learning) which culminates in the needed potential for a creative and self-reliant life in the society. This portends that every individual will have the opportunity to be exposed to technical education, with the option to terminate their study at any level and be employable.

### **Those Arising from the Aims of Technical Education**

Technical education is to provide manpower and craftsman technicians, enterprising and skilled personnel in various fields of human endeavour. Human capacity building will be centered on men and women and the physically challenged making them self-reliant to function optimally in agriculture, industries, commercial and economic development as well as understanding of the increasing complexity of technology with a view to provide solutions to environmental problems. Technical education 'Aims' as provided by the National Policy on Education appears that Nigeria is about to emancipate herself from political implication and economic backwardness. But one wonders how possible it can be with the pleasurable life Nigeria is fond of; Nigeria is not ready to actualize her dreams thus we witness in our various schools of learning incessant strikes, examination mal-practice, ill equipped schools and poor maintenance culture rendering the children ill equipped with expertise knowledge in handling technical jobs in various fields of their chosen career. When will Nigerian be a producing nation rather than a consuming one, they should borrow a leaf from Cuba 'an electronic student graduating in Cuba High School produces a radio, an adding machine as exemplification of theories learnt in the classroom'.

### **Those Arising from Government Efforts to Develop Technical Education**

Government realizing the importance of technical education to her nation is currently embarking on expansion of the existing facilities for the training of technical teachers. While the industrial expertise of individual will be considered for employment into technical education institutions, government has also given in-service training in form of industrial attachment; government has the intention to raise technicians respect and remuneration to be at par with other professionals. Government is to encourage the teaching of science and technology in secondary schools to promote practical implication of basic ideas, the government is to involve contractors to give services to students so that they can acquire practical experiences. The curriculum will be broadened to cater for future needs of the country. Polytechnics and colleges of technology are being established and managed through NUC, with modern courses to meet up our needs; while government and industries will assist in drafting the curriculum as to give a more industrial and practical outlook.



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On the contrary, the federal government through its agencies has not been giving sufficient attention to infrastructural needs of schools within its jurisdiction, especially with the post-secondary school. Most of these institutions operate in either temporary sites designed for secondary schools, and those who have permanent sites lack infrastructures such as: electricity, equipped workshop, laboratories, libraries, furniture, hostels, classrooms, drinking water, telephone services among others; the situation is worse with state owned tertiary institution having dilapidated plants and infrastructures which are non-existence. One of the cankerworm bedeviling educational programmes is the implementation; Government is always in a hurry to establish a school without due regard to the machinery on ground and no trial testing before implementation. Nevertheless, if technical education is fully implemented in Nigeria, there will not be unemployment and youth restiveness; Nigerian children will be better materials for employment within and outside Nigeria. Technical education should put Nigeria in a better frame of technological take-off.

#### **Those Arising from Inhibitors of the Programme**

Lack of infrastructures frustrates teaching and learning process because if students are not exposed to experiments in their various areas of specialization, insufficient training ensued leading to inefficiency. Enough equipment be provided to effect practical works; maintenance culture should be encouraged because it brews continuity of the system. An elaborate workshop be provided to cater for at least one hundred students in a class. Teachers of technical education need to earn better pay and their welfare improved so that they will not leave for greener pastures. Unfortunately, due to defective implementation, it appears that the more plans that are hatched the more under developed Nigeria find herself. Although, the federal government is out to finance the technical sector, but will corruption and greed give way.

#### **Those Arising from the Benefits**

Technical education is a laudable one, no doubt it will lurch Nigeria into a world power like other nations of the world like Japan who used education to build her greatness from the ruins of Hiroshima in 1954; Russia used functional education to industrialize and become a world power within short fifty years after Bolshevik Revolution in 1917; China before 1949 was a more backward country than Nigeria, but today is a world power. Israel was a mere geographical expression before 1948, but with self-discipline, today it has used functional education to Revolutionaries' its political, economical and social life (Akinseye, 1987).

For a country to be great it must have a mission, an ideology or a goal, Nigerians should aim at providing a good future for posterity sake rather than pleasure. Most expatriate engineers paid huge sums of money to build Nigerian roads are product from technical institutions. So, Nigeria needs to make her technical educational system functional by providing infrastructure- equipment, manpower, materials, workshop, laboratory, good administrative machinery and better funding for a strong immediate take-off of technical education. One factor hindering educational programmes is implementation; government is always in a hurry to establish schools without due regard to the machinery on ground, government needs to provide the enabled environment first before candidates apply for admission; by so doing Nigeria will be an industrious nation devoured of recurrent social vices.

### **Conclusion**

Technical education if properly implemented will lead Nigeria to compete favourably with other world powers technologically.

It will create employment opportunities for all citizens thereby forestalling unemployment and youth restiveness.

It is the key to national development and egalitarian society.

There should be need to train all operators and executives of the policy before take-off

Technical education has to be encouraged at all levels.

All citizens in respective of religion, gender, physical challenges, and ethnicity must possess a skill in addition to their discipline.

Government should lay more emphasis on (special) technical education than grammar schools.

### **Recommendations**

In view of the importance of technical education, government should as a matter of priority give technical education the highest budget in its yearly budget and ensure accountability. The financial implication should be a joint effort between government and parents.

Government should ensure adequate provision of equipment, teaching facilities and specialized workshop for practical works at all levels.

Government should increase training of professional teachers or specialist in universities, polytechnics and other technical colleges.

Federal and state government should pay teachers very well and their welfare guaranteed for effective work in order to avoid attrition.

Government should ensure teachers employ practical methods to teach; teaching and learning should be done through experimentation, action and doing. And on graduation, emphasis should be in the necessary acquisition of skills and abilities; students must show proof of practical experiences before a certificate is issued so as to avoid certificate-oriented system.

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