COMPARATIVE VOCATIONAL TECHNICAL EDUCATION SYSTEMS IN U.S.A.,
GREAT BRITAIN AND JAPAN:
LESSON FOR NIGERIA

O.N. AGBULU
AGRICULTURAL & SCIENCE EDUCATION DEPARTMENT
UNIVERSITY OF AGRICULTURE MAKURDI

AND

S.O. OLAITAN
DEPARTMENT OF VOCATIONAL TEACHER EDUCATION
UNIVERSITY OF NIGERIA
NSUKKA.
ACKNOWLEDGEMENT

The authors wish to acknowledge the works of the authors quoted directly or indirectly in this book. The authors also acknowledge the contributions of some experts in vocational Technical Education, who read the manuscript with dedication. The authors are especially grateful to Mrs. Ima Etukuwoh who did the typesetting and the Editors at Aboki Publishers who worked on the manuscript before publication.

Dr. O.N. Agbulu and Prof. S.O. Olaitan

2002
Nigeria is heavenly blessed with abundant human and material resources that are not perfectly put into judicious utilization. The quest to avert wastage of both human and material resources calls for total rejuvenation of ‘aristocratic’ type of education to ‘utilitarian’ one.

Vocational education is intentionally designed to assist all categories of desirable human beings to understand the principles of production process develop and master the skills involved and be prepared for occupation gainful to their existence and the society. There is no gainsaying that the job market is glutted with less to zero skill-oriented graduates. This apparently has affected the nation’s economy. It has equally put the nation into fearful habitation due to activities of hoodlums and ardent law breakers in the society. It is at the instance of this ugly situation that the authors have carefully analysed the practices abound in the United States of America, Great Britain and Japan. Experiences borrowed from these countries will perfect the operation and functionality of vocational technical education in Nigeria.

This book is written to meet the needs of students in Universities and Polytechnics studying vocational and technical education, and allied courses. It also satisfies the needs of post-graduate research fellows and other researchers in the field of vocational and technical education allied programmes. Technical teachers, technicians, technologist, engineers and vocational educators will find the book of great value.

O.N. Agbulu and S.O. Olaitan
CHAPTER ONE
HISTORICAL DEVELOPMENT OF VOCATIONAL/TECHNICAL EDUCATION IN U.S.A., GREAT BRITAIN AND JAPAN

In the United States of America, the earliest form of vocational education was the apprenticeship system. The system was brought into the United States of America from Europe. It was the prevalent system in the country prior to 1989. At that time, children were mainly sent to private schools under the canopy of religious denomination. However, apprenticeship was able to meet the occupational skill needs of the youths then. Two patterns of apprenticeship system existed. The voluntary system which followed closely the pattern imported from England in which a youth 'abound himself' by his free trade; and the involuntary apprenticeship which provided a means under the poor law to take care of poor children and orphans (Edmund, 1979).

In the case of the volunteer apprenticeship, the town governments provided law relating to apprentices which involved authorities providing some supervision to see that agreements between the apprentice and his master were honoured. Under the involuntary apprenticeship, the apprentice was bound over to a master who was responsible for his personal occupational needs. In general, the agreement provided that the youth would be given good, clothing, shelter as well as general education as needed in the trade and skills.

The industrial revolution provided the foundations for trade and industrial education in the United States. It was not until after 1812 that manufacturing got well started in the United States. The factory system bred new desires which were not readily met through the apprenticeship system. Population growth, the rise of the factory system, increased mechanization, and shortcoming of the apprenticeship system highlighted the need for occupational education in the United States. Private trade schools developed: although they served small numbers very well, they were not the ultimate answer to meeting industrial labour requirements.

During the last part of the 19th century, manual training, which was based on the concepts of faculty psychology with its idea of transfer of training spread rapidly in to the schools of the nation (Edmund 1979).
In 1905, Governor Whithmen A. Douglas of Massachusetts set up a commission known as the Douglas Commission. Through the recommendation of the Douglas Commission, Massachusetts established the first state system of Public Vocational Education. On January 20, 1914, the congress appointed a commission on National Aid to Vocational Education, to consider the subject of National Aid for Vocational Education. However, it was not until the passage of the Smith Hughes Act in 1917 that a more comprehensive program in Vocational education was evolved.

The historical development of vocational schools in Britain followed the hierarchical organization of the entire society. Literature reveals that, the great public schools, which were really wealthy and exclusive church and private schools, catered for the sons of the upper and middle classes. Their products had a virtual monopoly of places at Oxford and Cambridge Universities and subsequently of positions in the civil services and the professions. A great stride in vocational-technical education emerged when the country experienced two world wars in the 20th century. Some soldiers, youths both males and females were recruited and trained in different skills.

In the early nineteenth century. John Pounds, coffer, started ‘ragged schools’ for destitute children, waits and strays. They taught the three R’s together with some trade instruction, and gave one meal a day to the pupils. In 1807 a Parochial Schools Bill aiming at two years schooling for all children between the ages of 7 and 14 was passed by the House of Commons but was rejected by the House of Lords. In the early 19th century two religious bodies, the National Society (church of England) and the British and foreign School society established a number of elementary schools for boys and girls. Children were taught various skills in different trades. This system was controlled by teachers and monitors. Gradually, higher vocational centres were put up in consonance with high demand for skilled personnel to manager their industries.

In Japan, vocational-technical education was established by municipalities and private commercial or missionary organisations. However, government’s intervention was highly recognized. Japan’s dire need for vocational technical education coincided with the warring period and also when girls were mostly engaging themselves in early marriage without further effort to proceed academically. These
girls could be converted into starter products; based on this premise, they were taught some practical skills and the schools were eventually concerted to war factories. In this factory, items like uniform, weapons, knife and other war items were manufactured. Japan’s quest to challenge Russia in 1904-1905 made the country to invest enough resources on railways, telegraphs. Public utilities and other technical aspects. The operators of this various positions needed technical skills. Similarly, experts were required to work in paper mills, textile factories, ship building and merchant marine. As a matter of fact none of these things could be developed without vocational technical education. As a result of this, Japan embarked on adequate construction of schools, buildings for effective training of skilled personnel right from the primary school to the tertiary level. However, prior to this development Japan’s early strength lay not solely in the ‘Samwai’ schools for the warrior classes, or in the private education of burgesses ‘but in the tarakoya’ or village schools dotted throughout the country side, and still more in the meticulous craftsmanship dutifully learnt in family enterprises. This serious attachment on the family enterprises could be one of the reasons underpinning Japan’s towering achievements in education and science in recent times.

To salvage Japan from a suspected invasion from Russia and also cater for the need of every Japanese, the new masters of Japan recognized the need to develop her states by cultivating communities at all levels that is, at all levels of social order (including the peasantry, down trodden for years) and at all levels of behaviour and interest: democracy must be embraced. Certainly, skill education must be for all and not just formal education for a few elites.

In the adaptation of European or American education, Western clothing, western interest and pursuits (such as music and dancing – even western haircuts) were all encouraged. Western food, including meat, began to enter Japan – a country where animals were not previously eaten. Western for of dresses and relationship were encouraged, so as to serve the needs of industry and a new kind of service. These changes admittedly crowned the peak of vocational/technical education in Japan. Japan now leads the world in several technological fields – not least in consumer electronics, the very symbol of tomorrow’s communications society and Japan is also well to the fore in other technologies. It is not merely an advance in techniques,
which we speak of, but a deep concern about their social and educational implication, with which Japan has been particularly buffeted. The three educational revolutionary in Japan worth’s mentioning are the Meiji transformation, the pre-occupation period from 1945 onward and the critical phase of the later 1570s.

PHILOSOPHY AND OBJECTIVES OF VOCATIONAL/TECHNICAL EDUCATION IN U.S.A., GREAT BRITAIN AND JAPAN.

Vocational technical education meets the demands economics, political, social etc) of various countries at different times. For instance in U.S.A. the first objective of vocational training was to develop skill in using weapons. With weapons man obtained food for himself and his family; with weapons, he confronted his enemies. Group safety being vital, this kind of training was possibly the first to take conscious and organized form. Next in importance from the stand-point of social survival and progress was the gaining of an appreciation of youth as a resource of the future, that is, a labour asset hence recognition of the need to give what may rightly be called vocational education to social recruits.

The supply of land demand for skilled workers in USA brought about new pressures on schools. The support of general education alone, therefore, was unthinkable in these times unless it had some direct application to the employability of an individual, or it equips him directly for a more advanced education of a vocational or professional nature. The structure of the society demands schools provide an education for its citizenry, which will enable its people to be self sufficient and productive individuals. United States educational system provides no placement opportunity for those without employable skills. A person must attain a level of educational proficiency that prepares him for future occupations and possible openings after graduation from school. Philosophical concept of United States education system does not only consider the youths currently involved in academic business, it also caters for the continued existence of the unemployed adults, the over-aged low achievers, the under-employed and the drop-outs fro academic or general education.

Great Britain on her part has manpower development as the major philosophical ideology behind instituting vocational technical education. Evidently, an employment and training Act in 1973 led to the setting up of the manpower services commission,
which in turn through its subsidiary organs encouraged special support for apprenticeships and other post compulsory “16 to 19” training together with an expanded and improved guidance service. The emphasis on manpower services became so high to the level that triggered manpower services commission (MSC) to have a direct educational influence on education. It could use some of its fund to buy places to establish colleges of education for specified courses. Full-time education courses, combining general education with a core of training to the agreed specification of industrial training boards, grew in scope and number. The unified vocational programme was introduced in 1976 with joint sponsorship by the department of education and science (DES) and a branch of the manpower service commission. More expanded programmes grew out of their projected objectives of meeting up with the required number of skilled personnel to manage their industries. This led to the establishment of a technician education council and a business education council in 1973 and 1974, to link older courses and devise new training programmes more relevant to industry than many previous courses and most patterns of apprenticeship (Edmund, 1979).

Japan, in the 19th century (the world war periods) faced a great doom due to the effects of the war. Also it was a period when Japan could not have escaped the attention on her by those who before 1917 were plotting the Russian revolution. The effects therefore spurred Japan to concentrate and objectives of her education now changed to an aggressive survival technology. Another notable area which of course uplifted Japan today to be recognized all over the world is the effective use of adapted technology, to perpetuate inventions most especially in engineering – cars, electronics, computers etc. In fact, everything seems to point to Japan as an object lesson for the whole world. In its turn the world is still one vast school for the eager Japanese, though they have had noble prize-winners in the sciences, and have long passed the stage at which they merely imitate and adopt. Another influence on the educational reform was the population pressure on the land area. Japan’s population raised to about 110 million in the mid 80’s with a land area of ¾ the size of California in USA and only 26% of this area could be cultivated. Other areas were occupied by hills, mountains and effects of earthquakes. The continental shelves of Japan were polluted by chemicals from the world wars. These influence made Japan’s
educational reforms focused on invitation and adaptation of technologies for survival
as a short term measure for the survival of Japan.

The countries which invented and later exploited industrialization are now obliged to
observe this nation which has not simply progressed through their pioneering stages,
but has leapt over them to the different view of education’s possibilities. This
Japanese dedication to the effective use of education is especially potent at the
present time. For the total amount of scientific knowledge in the world is doubling
every 15 years; three quarters of all the scientists who have ever lived are still alive
and experimenting; and half of all the knowledge acquired in many university
courses will be more or less useless after another 10 years. This is a quite new world
of instance communications of horizontal (rather than hierarchic) relationships
served by the computer and electronics generally, and of consuming the present in
the confidence of an ever improving future. This is the climate of Japan’s hastening
modernity.

THE STRUCTURE OF THE SCHOOL SYSTEM

A. UNITED STATES OF AMERICA

In the United States of America, about half of the schools provide or benefit
from kindergarten classes (UK nursery classes or nursery schools’). A few
have nursery schools (UK ‘day nurseries); many of these were derived from
welfare provision during World War II. A large number of school systems
operate head start or similar programmes for disadvantaged children, with
federal support. This pre-school provision is usually for the four (4) to six (6)
age-ranged (some systems do not start compulsory schooling till the age of
eleven and kindergarten may then be extended to that age).

Elementary schools usually provide for the six to twelve or six to fourteen age-
ranges. There are now more children in six grades than in eight grade schools
(the older pattern organisation).

The secondary phase is generally agreed to begin grades 7 and 8 (with more
formal instruction in subjects), no matter whether the 8-4 or the 6-3-3 pattern
of schooling prevails. In the later, ‘high school’ is divided into ‘junior’ and
‘senior’ high school. Most pupils learn core subjects (English, Social studies,
mathematics, science and physical education), together with some elective’s (such as a foreign language, fine arts, or pre-vocational – training). By about the 9th grade, about half the work may consist of electives.

In states where the education is well organized in USA concept (like the state of New York) the work in any subject for any grade may be offered distinct levels – for example, elementary, intermediate or advanced and students can have a profile of quite different levels across their school subjects.

Structurally, the secondary school system in the United States consist of junior high schools, senior high schools, traditional high schools, combined junior and senior high schools and of particular interest to this book, technical and vocational high schools.

In USA, the educational structure of the above schools is regarded as regular high school programmes. Students, on the completion of the programme, attain the high school diploma for entry into higher education made up of junior and community colleges, vocational and technical colleges, colleges and universities. at the junior and community colleges, vocational and technical colleges, beneficiaries obtain associate in arts or science while in the colleges and universities, students obtain Bachelor of Arts and Sciences.

On the structure we have the Masters’ degree and doctor’s degree studies for the post-graduate and the advanced study and research for post doctora (Appendix I).

**B. GREAT BRITAIN**

In Great Britain, children of 3-4 age range are admitted into nursery schools graded as pre-school. Primary education include: ‘first school, infant school, middle school and preparatory schools; the age range of pupils within this cadre is between 5 and 11 years. The schools within the pre-school and primary education levels are called preparatory schools, some of which are privately owned.

Secondary education accommodates comprehensive schools and selective grammar schools, which operate under the canopy of public schools. The
public schools also include the sixth form and tertiary colleges. Comprehensive schools culminate in colleges of further education and adult education for GSC advanced level or other certificates. The age range of students is between (11-18 years)

It is observed from the structure that separate vocational and technical schools have been absent unlike in USA and Japan; but comprehensive schools in Great Britain are supposed to take care of vocational and technical schools at the high school level.

Higher education incorporates Universities, Polytechnics, Colleges of Education, Adult education, Colleges of further education etc. Most of these colleges offer Degree, Diplomas, Professional Diplomas, Masters Degrees, Doctoral Degrees and Higher Doctorates through research studies.

It is pertinent to note that the number of colleges of education was rapidly reduced as many merged with polytechnic or alternatively, took on a new role as institutes of Higher education. Recently, Great Britain has converted a large number of her polytechnics to Universities for the purpose of encouraging further relevant research work in technology.

The concern of this book is not a critic of the structure of education of Great Britain but an X-ray of the emphasis placed on Vocational Technical Education on the structure. Unlike in the U.S.A. the expected special emphasis on vocational technical education in Britain appears cancelled until Higher education; that is, the polytechnics; it has also been observed that the youths in Britain have not accorded polytechnic education that preferential recognition it deserves in the building of British economy and hence many of the youths trained n polytechnics go to the conventional universities to acquire degree that is recognized. Edmund buttresses this assertion when he receive Robbins Report, that colleges of education and polytechnics, provided for an expanding minority of students diploma and higher diploma certificates in professional areas but on getting to the field these diplomats, however highly placed in business industry, or teaching will definitely move back into the university for a degree in Business Engineering or Education. This may be one of the reasons why many colleges of education were merged with
universities and recently many polytechnics concerted into universities in Great Britain.

This development is of great significant to vocational technical education in Nigeria since Nigeria education still reflects in her education historical benefits from colonial education (Appendix II).

C. **JAPAN**

The basic structural facts of Japan’s school system are simple and widely known. The familiar 6-3-3 system of the American School pattern was adopted during the American occupation and it is still in force but with modification. It is followed by a four-year plateau of higher education (that is four years of University may be followed by post-graduates studies).

The normal structural pattern include: the kindergarten phase with 3-6 years of age, the elementary school (6-12 years of age); junior high school (12-15 years of age); senior high schools, technical schools and technical colleges (15-19 years of age); junior college, vocational courses and part time courses. They are all preparatories for admission into universities. Graduate studies and researches top the structure (19 – 25 years of age).

Japan did not copy American education without improvement. The structure imposed pressures on the Japanese youth to achieve and perform; hence rigorous competitiveness is imposed on the system. For example, Japan is the only country in the world that admits children into kindergarten; through competitive examinations. If competitiveness is imposed on children at the kindergarten stage one wonders what will happen at the college level or beyond (appendix III).

**CURRICULUM – UNITED STATES OF AMERICA**

The United States of America has an exhaustive curriculum in Vocational Technical Education. The components of the curricula focused on programmes that could place an individual on the curriculum on skilled employment at any level. Similarly, the curriculum at certain levels gave adequate attention to the needs of people in the
districts and the community. It is the belief of the curricular which were focused on the community and district or community is great, America will be great. Therefore, the courses beneficial to the community or district formed the bases of subject matter for effective instruction at certain levels. For instance, programmes and methods cold vary enormously from districts to district. Through States and districts usually prescribe particular subjects; but child study and modern educational tendencies have long placed much emphasis on generalized skills of learning. That emphasis might seem to favour variety, especially in the passionately dependent child-centred curriculum; which held sway for so long. Yet the wide spread reliance on favourite books or similar instructional models from well known publishing houses or influential colleges still reveal the need to support instruction from available local and relevant materials to meet the needs of communities and districts.

Literature revealed the concern of the parents, especially after the unfavourable effect of Vietnam War on what should be the component of their curricular and who should handle it. To this effect, it was reported that throughout the 1970s the back to basic movement grew among parents calling for relevant curricula. This led to curriculum reform and retraining of teacher. With the support of government (State and Federal) it became necessary to introduce some kind of systematic basic skills or basic competency testing in the schools, especially in skill programmes that can make America the leader of the world.

The curricula emphasized basic human needs approach and the National interest of the Great America. The curricula create challenges for individual American to excel in his/her chosen occupation hence every American strives to be creative, inventful and to excel; that is to be first on top of the rating scale in any profession. Currently most skill programmes in vocational/technical areas adopt suitable curriculum approaches for excellence. Some of these approaches include: modular, competency based for systematic skills functions of industry, task analysis and occupational areas approach. As part of the same general movement, some states or district spelt out in some details not merely what essential content should be learned in schools, but how and in what order. This move was intended in part to make sure that the teachers too were competent and accountable.
CURRICULUM: GREAT BRITAIN

In Great Britain, curriculum innovation and development were largely left to colleges; but a firm statement of objectives and new styles of assessment gave more positive direction. Britain has a special unit called the further Education Curriculum Development unit (FEU) was established in 1977 to assist in assessing and advising on both general and ‘applied’ studies at the level. ‘Particular group’ needs like those of girls, coloured youth and students not within easy reach of training facilities, have been considered for innovative treatment such as ‘distance education’ and the provision of special research centres in technological, scientific and similar interests (Edmund 1979). He further opined that, other components of the curriculum include ‘taster’ courses and work-experience schemes. Based on this premise, students are taught various skills through effective participation. The curriculum is structured in a manner that both the adult and ‘young adults’ fully participated in the teaching – learning process. However, there was a little distinction between those going on to higher education and those who just want a course and are able to profit by it (Edmund 1979). Sequel to this dimension, the curriculum is structured to observed day or evening, full or part-time courses, ‘general’ or applied studies. This type of curriculum structured to take care of the post-compulsory education from 16 to diploma level. This means that the pre-school and primary education have their own curriculum structured to suit their level of cognitive performance. Components of their curriculum focused much attention on pupil’s activities and role-play activities. Teaching/learning approach therefore, is the student centred approach. Learning tasks are not fully tackled in the way the Britons structured their curricula. Therefore, one expects a change in the emphasis accorded vocational and technical programmes and a more positive relationship between curriculum approaches and world of work so that other n developing countries can now have basis for linking their own education to work.

CURRICULUM: JAPAN

In Japan, the elementary school and junior high school together constitute the span of compulsory education, and thus are two parts of an essential unity. The curricula code in the official course of study for elementary schools has always emphasized
skills and knowledge of the physical and natural world and the society and preparation for learning science and technology (Edmund 1979).

Literature indicates that a revised code that came into effect in 1971 provided more allowances for personal variety and choice with the specialized teaching. Literature further revealed that there was a further revision effective from 1978 which closely linked elementary with junior high school and with senior high school programmes. This latest revision helped to expand the range of choices of subjects thereby reducing some of the pressures on the content of the curricula.

The new junior and senior school curricula became entrenched in and controlled by the ministry’s bureaucracy taking little account of students experience with varied backgrounds and aspirations. This change was not to the great interest of many teachers especially the teachers-dominated Japanese society for the study of education.

The lessons contained in the curricula are usually formal by Anglo-Saxon standards. In the elementary school, every one learns Japanese, social studies, mathematics, science, music and physical education. In the junior high school, the required subject are: Japanese, social studies, mathematics, science, music, fine arts, health and physical education, industrial arts, home making, together with moral education and a choice of elective subjects and special activities.

Edmund (1979) reports that students in the general senior high schools take additional theoretical subjects, while students in the ‘applied’ programmes of other schools or departments take additional work linked with them. Physical education and home-making for girls are also taken. The foreign languages requirement is fairly recent; the Japanese are proud of their own language and this make them poor linguist, though many are quite well acquainted with the Chinese classics, which they can read in the Kanji script. It is pertinent to note at this juncture, that in Japan’s historical, institutional and industrial commercial context, the approaches to curricula give great emphasis to competitiveness in examinations at the pre university level and absorb all its repercussions on the education system.
CHAPTER TWO
ADMINISTRATION OF VOCATIONAL TECHNICAL EDUCATION IN UNITED
STATES OF AMERICA.

According to Smith Hughes in Edmund, (1979), administration of Vocational/Technical Education is a complicating one. His argument about administration of vocational technical was not to discriminate among the existing education but to apportion facts to different facets of education for clarity and understanding. Infact, administration of vocational technical education was a dual issue. Based on this conflicting issue, a lot of conflicting situations abound in the state administration of vocational-technical education in U.S.A. For instance, Edmund (1979) reports that the dual control in Wisconsin has a total independent state board and a total independent local board, many of whom have an independent taxing power. In Massachusetts, a compromise situation exists. The original state law established an independent state commission for industrial education and required independent local boards. This law was subsequently modified by the creation of a new state commission and the merger of the duties and powers of each into the new board. Detailed report of Edmund on the administration of vocational technical education in U.S.A. reveals that:

It was left optimal with local communities as to whether they would operate vocational education under a separate board or would designate the local school committee or Board as the Local Board for vocational technical education. The communities which started vocational training under the old Act, have generally continued to operate under separate boards.

The legal basis for a state’s participation in the benefits of the national vocational technical education acts is given in section 5 and 8 of the Smith Hughes Act (1977):

Section 8:
That in order to secure the benefits of the appropriation for any purpose specified in this Act, the state board shall prepare plans, showing the kinds of vocational technical education for which it is proposed that the appropriation shall be used: the kinds of schools and
equipment; courses of study; methods of instruction, qualifications of teachers; and in the case of agricultural subjects, the qualifications of supervisors or directors; plants for the training of teacher; and in the case of agricultural subjects, plans for the supervision of agricultural education, as provided for in section 10. Such plans shall be submitted by the state board to the Federal Board for Vocational Education, and if the Federal Board finds the same to be in conformity with the provisions and purposes of this Act, the same shall be approved (Smith-Hughes, 1917).

There had been a series of modifications to the above foundation based on research and experience.

FINANCING OR FUNDING OF VOCATIONAL-TECHNICAL EDUCATION IN UNITED STATES OF AMERICA

The first obvious boost occurred when in 1962 the first Morrill Act gave land to each state to establish colleges specializing in the agricultural and mechanical arts. The second Morrill act grant was given out in 1990. Grants as such under this legislation remained small. During the early 1980’s they amounted to about $14.5 million a year; but it must not be forgotten that about seven times the area of England had already been granted as foundation lands. In 1917, the Smith-Hughes Act instituted the first Federal grants-in-aid for vocational training at about secondary school level. These included support for agriculture, craft, industries, and home economics. Parents and entire community members finance Vocational-technical education through property taxation and philanthropic donations (Edmund, 1979). Today, the financing of vocational/technical education in U.S.A. involves the Federal State and Local Governments. Communities now have major roles in funding vocational/technical education and in deciding on what to teach.

ADMINISTRATION OF VOCATIONAL/TECHNICAL EDUCATION IN GREAT BRITAIN
In Great Britain, vocational/technical education is jointly controlled by the central government which is represented by the Department of Education and Science and the Local community – (authorities). Edmund reviews that Local Education authorities have wide-ranging powers and duties covering the whole of education except Universities, and extending from pre-school to higher education, together with all subsidiary of supporting services. However, much of the policy – preparation and detailed discussion in advance is undertaken by an education committee with expert advice from professional officials in vocational-technical education. At lower levels, is the district, advisory or local boards assist in the flow of major administration, apart from a far specially accepted district.

Every school, however, has its own body of manager’s right from primary to secondary school. The manager or the governors are technically responsible for the day-to-day running of a school including, in principle, its curriculum, in consultation with the head teacher. It has already been shown that delegation of authority in Britain confers on the head teacher practical responsibility for such things as curriculum, time-tabling, school rules and disciplines. Heads of departments also enjoy a great share of autonomy within a school’s or local education authorities frame work (Layton, et al 1962).

Parents’ organisations and individual parents were more closely involved in ensuring a school’s well being and the pupils’ progress and welfare. In keeping with British tradition, many other bodies participate in research, advice, and teaching which bear directly on questions of management in educational system. In Britain, the partnership system of administering schools led to the establishment of industrial training board (1964) in consonance with the technician and Business Education Councils (1973 and 1974). These Boards needed the sole administration of vocational-technical education in Great Britain. Similarly, in 1977 the largest-scale joint enterprises between the Department of Education and Science and a non-education ministry began, linking educational responsibilities with the manpower services commission in consequence of the Holland report on young people and work. So partnership in the administration and development of education has taken on new guises to suit new times and conditions.
FINANCING OR FUNDING OF VOCATIONAL-TECHNICAL EDUCATION IN GREAT BRITAIN

In Great Britain, financing and funding of education went in line with the existing conditions in the entire school system. Parents of the pupils and students adequately plunged their resources both cash and kind into running the administration of the schools. Wealthier parents make contributions, that is, usually for living costs and approximates roughly to the cost of supporting the student at home. The grudging nature of most early provision for vocational-technical education and health education has made all parties in Britain now determined in principle to secure complete coverage for all needs (Layton, et al, 1962). This made all the well-to-do and philanthropists in Britain to pull together in financing vocational-technical education basically, for realization of their philosophies and objectives of vocational technical education, most especially in procurement of facilities and workshop equipment. Payment of salaries of instructors and technology teacher formed part of government responsibilities in financing the school. Communities are requested to provide some fixed assets of vocational/technical programmes in their communities.

ADMINISTRATION OF VOCATIONAL-TECHNICAL EDUCATION IN JAPAN

In Japan, educational administration is in the hands of 47 prefectures (of which one, Tokyo, is the capital) and 3271 municipalities within the prefectures. Both of these levels have certain powers of autonomy. Some educational responsibilities are in the hands of special boards appointed by the chief of the local assembly. Local boards appointed by the chief of the local assembly. Local boards can procure land books pamphlet-size for teachers; but courses are strictly drawn up by the ministry of education, which has also the sole right to authorize text books. Drafts for these are made by the central advisory committee on curriculum in the ministry. The place of classroom teachers are rarely recognized in the administration of schools in Japan (Edmund, 1979).

In Japan much attention is greatly focused on enhancing the disabled children to the level of inculcating their concerns in the administrative set up of their educational instructions. There are special schools for handicapped children and also an elaborate provision of Social Education ‘facilities’. This covers what the rest of the world would understand by ‘adult education’, recreational facilities, and an
impressive range of activities for the elderly. Since some people retire at the age of 55 and since all the changes which have over taken Japan in recent times inevitably young and old people and mothers isolated in their homes, scrupulous attention has been given to ensuring life long education of almost every kind (Edmund, 1979). Therefore, the sole administration of vocational technical schools catering for the disabled and other sets of people who needed it was in the hand of the municipalities.

FINANCING AND FUNDING OF VOCATIONAL-TECHNICAL EDUCATION IN JAPAN

In Japan, more than 90% of the municipalities provide ‘citizens’ public halls. There is a much smaller, but growing number of ‘youth houses’. Creational and sports facilities are provided generously by local governments. All of this shows much local resourcefulness, as well as central government support, since much of the financing of education is distributed between the central government prefectures and municipalities.

In 1956, the government of Japan restricted the powers of school boards because they were monopolized by the teachers of their spokesmen: they were said to be used to promote the teachers’ ideas of democracy and even to get funds for ‘political’ activities run by the teacher unions.

The municipalities finance vocational-technical education at their local school levels. Especially the disabled and handicapped children. There contributions were in the form of material resources and cash for erection of buildings, and procurement of teaching aids like Tape recorder, TV, sets, typing machine et cetera. Therefore, it is pertinent to say that both Britain, Japan and United States of America embarked upon both community-based financing and funding of their schools as well as finances from the Federal and State Governments.
Philosophies of Vocational-Technical Education in U.S.A., Britain and Japan have a focus on adequate manpower production. Skilled personnel are needed to provide maximum Economic Security in U.S.A. In U.S.A. one of the basic objectives of vocational technical education is to develop saleable skills in the youths in order to make them useful to the society and also become labour assets in the industries.

Britain addressed the urgent manpower needs in vocational-technical education through the employment and training Act of 1973; Japan that as initially known to be deficient in the production of equipment and facilities that required skills rapidly superseded every other country in the world, except, U.S.A. in technological development through aggressive manpower production, training and retraining to meet changes in development.

The issue of manpower production is of international concern, even discussed at symposia and conferences. International; organizations such as ‘UNESCO' has emphasized continuously the need to produce and retrain adequate manpower for development. Manpower, production, lingers on effective education culminates in rapid economic development of a nation. It is now realized that the problems and processes of economic growth in the developing countries are very complex; that is may take a much longer time for them to reach the pint of self sustained growth than was originally thought. It is now realized, too, that if they are to reach that point, a concerted effort accompanied with new and sustainable approaches to manpower development in technology must be put in place. The technological development of any nation rests on the competence and capabilities of manpower.

Detailed surveys of individual firms have been carried but in all socialists countries, and comparative studies have been undertaken by the Organisation of Economic Community Development (OECD) to analyse the occupational structure in relation to productivity. Similarly, in some countries like Japan, and USA, two concentric censuses are available which permit a detailed analysis of changes in the employment structure over a period of time.
A less for these three countries and another developing country is that, in planning for manpower development, it is pertinent to know that long-term forecast should be avoided as it is difficult to achieve within a given framework especially under political and economic uncertainties. The short-term and medium-term forecast should be in focus for easy attainability of desires under the present circumstances.

A UNESCO report holds that there are too assumptions involved in long-term manpower projections to make them an accurate tool for short-run needs, except by constant checking and adjustments. For this reason it proposed that the structure of manpower planning should include specific proposals for meeting short-term and middle-term needs. Therefore, planning should be backed up by careful job analysis. Training programmes including in-service training should be elaborated. Recruitment of skilled personnel from co-operating developed countries in vocational-technical education should be considered when national effort is been geared towards manpower production. Also ways should be sought to realistically improve the utilization of scarce types of manpower available.

Activities toward-enhancing skill acquisition could be built into the curriculum of primary, post primary school and tertiary levels. In fact, the bedrock of manpower development lies within the school phase. Manpower plans in vocational-technical education that are not based on a careful study of the education, training experiences of industry’s present technical manpower, but relies on the application of borrowed ratios or growth rates are likely to mislead rather than guide the development of programmes of technical education in developing countries. Comparative studies have revealed that it has been difficult to rate technical teachers in the classroom and therefore many countries in order to fully utilize available manpower have encouraged technical teachers to work in part-time in industries or firms as industrial technicians and technologists. Studies also revealed that countries that allowed co-operative school work-experience have developed an effective supervisory procedure to make technical teachers effective in vocational and technical schools and colleges.

For instance, UNESCO report reveals that the America, Great Britain and Japan, productive work ahs long been integrated with general education at lower secondary
schools. As a rule, work in its various forms (carpentry, metal work, electrical maintenance, typing, sewing knitting cooking etc.) is considered an obligatory discipline during two to three school year in some countries while emphasis is placed on them in Japan and U.S.A. Most schools in U.S.A., Great Britain and Japan, have fully equipped workshops and domestic science rooms. Pupils make various objects for the homes, repair domestic appliances, and learn how to handle tools, simple machines and processes: They also acquire good working habits. Much attention is given to working practices: the ability to plan one’s work; to use materials and time economically; to handle measuring instruments; and to keep the work place tidy.

The introduction of the latest technology into the world of work and every day life has changed the content of practical disciplines. Traditional subjects (carpentry, metal work, sewing, typing etc) are now supplemented with courses dictated by technological advances such as ‘computer technology, electronics’ information processing. In fact, the length of labour training in these countries depends upon the type of school, which a pupil enters after the elementary grades. UNESCO further reaffirmed that “more attention is now paid to the labour training of lower secondary school teachers in U.S.A., Japan and Great Britain”. There are three study streams – academic, general and vocational disciplines geared to productive work. Over 50% of secondary schools in United States have vocational sections which offer the students courses on Agriculture, industrial arts, business education, home economics, vocational trade and industrial education. These programmes generate manpower for industries and the world of work.

The report also revealed that most secondary schools in Japan have vocational sections, in parallel with general education streams, which account for 30% of the courses. In vocational sections, pupils receive training in industry, agriculture, business, fisheries, hoe economics, nursery etc. Most students choose industry and trade. Specialization depends on the choice of discipline through a system of ‘credit’. The number of obligatory general education subjects is small (native language, social disciplines, natural science) and they are taught in a simplified form. Over 50% of school hours are allotted to vocational disciplines and productive work. The content of training is constantly aligned with the requirements of scientific and technological progress.
Side-by-side with general education there are vocational sections of various types (agriculture, industry, construction handicraft, home economics etc) in the secondary schools of Great Britain. This is also found in Nigeria education system but as obligatory subjects.

**EVALUATION OF PROGRAMMES**

Programmes are usually evaluated to ascertain the achievement of the set down objectives, goals and philosophies and also to prove reasons for lapses where they occur. Programme evaluation could employ both formative and summative processes. In Vocational-technical education, adequate evaluation mechanism indicates the standing position of recipients. Vocational-technical education in-builds skills and knowledge into the recipients. To know whether, intending skills for a particular occupation, job and materials learnt are achievable, a kind of evaluation is used. Vocational-technical education requires effective evaluation of the entire processes and the recipients. The basic strategy for evaluating vocational-technical education programme is the ‘criterion – reference approach’. This helps to ascertain the perfection and performance of recipient in relation to the set down standards or criteria. It is mainly used to determine the level of psycho-productive skills a trainee or personnel has attained in vocational-technical education.

Evaluation is observed as a continuous process in vocational technical education. It is a process of providing information as a rational basis for decision-making. Decision making takes man forms and importance on most aspects of vocational-technical education programmes, providing information about entry qualification of pupils either for gaining admission or promotional purposes, planning, diagnosis of learner’s needs, funding and myriad of other elements.

Therefore, it is pertinent to make a comparative report of evaluation processes based on the educational structure of United States of America, Great Britain and Japan.

**A. United States of America**

Evaluation of pupils, students, teachers and the entire institutions in the United States of America is a collective responsibility of both the Ministry of
Education and Parents. Edmund, (1979) report that, 31 states had already introduced some kind of systematic basic skills or basic competency testing in their schools, and other 9 states were already planning such test programmes. By now, it can be concluded that nearly all the states have embraced the innovation.

B. **Great Britain**
In Great Britain it was observed that, Universities are becoming more experimental in the type of student they admit, at least as far as formal admission requirements are concerned. The normal pattern of admission is for secondary school students who are likely to get good marks in at least two of the three chosen subjects of specialization at the Advanced Level of the General Certificate of Education to apply through Universities of their choice in order to preference. Exactly, the same procedure is followed by students in Further Education Colleges who wish to go on to University education. Similarly, students at secondary education level take G.C.E. ordinary level or CSE to get into Further Colleges of Education; primary school education pupils and pre-primary schools pupils are equally evaluated and promoted upon their levels of performance.

On the basis of the Universities Central Council for Admissions (UCCA) lists of students’ preference and stats of readiness for the highly specialized courses which characterize British High Education, interviews are held at the universities, and places are offered to candidates subject to their attaining the required standard in A – level examinations. Some colleges in a few universities have their own admission test in addition. For skill programmes, evaluation involve tests in theory and practical laboratory or field work.

C. **Japan**
Evaluating procedure in Japan is so complex and rigorous right from the kindergarten to Doctoral level. Even at kindergarten level pupils are examination to quality them for the next class.
Sequel to these processes, Edmund (1979) reports that a certain amount of academic of academic in breeding is therefore inevitable. It is usual for a university to draw its faculty members from among its own students; and any transfer from an unfamiliar school to an important university, or from one important university to another, is duly pointed out by the Japanese with interest. All these adds to the grave importance of examinations, particularly those which select children for the competitive senior high schools and those who select students form senior high schools into higher education. All institutions, of higher education offering courses of four years in Japan are called Universities, they vary enormously in quality, in entry requirements, and still more in their ‘predictive’ value for one’s future life, from the very moment of admission. This reflects on the quality of students and teachers through competitive examinations. The scale of institutions is not simply academic or social as in other countries; it is quite inseparable from something distinctly Japanese – the pivotal decision on which firm one is to be admitted to for life and on what plane. For Japanese the crisis is implicitly one of life long allegiances of which occupational ‘family’ one is permanently joining with all the personalized advantages and connections that may go with it, of course. Thus, the long arm of public employment reaches down through the university structure into the secondary schools, and below that into the primary schools, and sometimes even further down in to the kindergarten. In fact Japan must be the only country in the world with pre-kindergarten test. This fantastic concern for brightness in children is caused by the wish of ambitious parents and prosperous families to make sure that their children will enter the right kindergarten which will lead to the right elementary school which will lead in turn to the right lower secondary and the right upper secondary schools with a high predictive rate for admission to the right universities, and therefore, the ‘top firm’ (Edmund, 1979).
CHAPTER THREE
SUMMARY OF NIGERIA EDUCATION SYSTEM

Nigerian’s quest for self-sufficiency in food production, production of raw materials for our home industries and total security against the invading countries triggered off a total over haul of her education system from the inherited legacy of colonialism to include the productive and utilitarian type of education (vocational-technical education).

Suffice to know briefly that vocational-technical education existed long before the advent of Western education inform of home training on some skills and the apprenticeship system. Even when the missionaries came, some men were taught some skills like carpentry, carving, knitting, masonry, gardening etc. However, the focus later changed, favouring the literal aspect of education so that they could get people to interpret scriptures and other handbooks. This continued until the land grant foundation of Morrill’s Art (1890), and Smith-Hughes of 1916. Initial inception of vocational technical education was found in few schools like Akoka, Gombe, Mubi, Aiyetoro etc.

In Nigeria education system, Vocational technical education is not administered in isolation. It is relatively new, complex and tripartite in nature. Complex in the sense that both the vocational-technical education and general education operate under one confinement which may be headed by one educator, hopefully a general educator. Tripartite in nature because, the Federal, States and Local Governments are involved in the administration of vocational-technical education in Nigeria e.g. a community comprehensive High School.

The Federal Government has divided roles and responsibilities in the administration of vocational-technical education in Nigeria. Justification of this assertion rests on the fact that, there are federally owned technical colleges of education, technical colleges and polytechnics. These institutions are directly administered, financed and funded by the Fedral Ministry of education; similarly, the stats owned technical colleges and polytechnics look forward to receiving assistance from the federal government. Federal government on her own part may have indirect attention on the
state owned vocational schools/technical colleges. This may be one of the reasons responsible for inadequate funding and financing of vocational/technical institutions at the states level.

The state government finances vocational technical education with assistance from the local government in form of revenue generation through taxations and community based assistant techniques.

Administration of vocational-technical subjects within the general education system in Nigeria is in the hands of general educators with less facilities and qualified staff. The administration of pre-vocational and vocations subjects in the general education schools makes vocational-technical subjects receive less attention in terms of implementation of favourable policies, appropriation of funds, procurement of facilities and equipment, recruitment of qualified staff and production of skilled manpower for production work. Because of the bias toward academic education only about 20% of our youths are found in technical colleges and polytechnics where skills for productive work are taught while in the conventional and dual education system, about 80% of our youth are recorded. These youths graduate to stock the labour markets with non-job skilled experiences. This administrative problem has led to the production of non-job skill graduates into the inadequate manpower/labour market. Vocational/technical subjects are never allocated adequate resources for funds for equipment or qualified teachers. There is always frequent transfer and retrenchment of available technical teachers. This experience in the educational system is in consonance with UNESCO’s report which observed that further development of labour training in Nigeria is hampered by the lack of an adequate material base, qualified teachers of the subjects and effective links with industrial and agricultural enterprise. However, with the recent restructuring of the educational system, prospect and achievement of manpower production may be attained in the nearest future, if realistic administration is put in place. There are three levels of formal technical education within the administrative set up in Nigeria education system. As presented in the National Policy on Education; they include; pre-vocational education at the junior secondary school (SSS) or technical colleges, and technical education at post-secondary level. This fragmentation of vocational-technical education at the primary and post primary school levels is to prepare
students adequately for future placement in various occupations after graduation. Good as it may be structurally, it requires effective administration to make it work.

The objectives of vocational-technical education in Nigeria vary from primary school level to tertiary institution. At primary school level, awareness is created in the students about the meaning of vocational-technical education as it relates to future occupational openings. Vocational courses are taught theoretically and practically at the junior and senior secondary school levels respectively. And at the post-secondary level, skills and knowledge acquisition are mostly emphasized. However, the entire objectives focus on skills, knowledge, interest and awareness on the part of the students and to meet up with the desired level of manpower production in the country.

HISTORICAL DEVELOPMENT OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA

During the nineteenth century, movements from Southern to Northern Nigeria were severally limited. The United Africa Company Limited and John Holt Limited were the only two companies which provided cargo services to the North through the River Niger. The bulk of the passengers and cargo handled by these companies were for their trading groups and agents. In addition to transporting passengers and cargo, the marine services provided regular employment for many Nigerians, between 1925 and 1935 over twenty thousand Nigerians were employed as regular staff. Among the people employed were a few clerks, mechanics and draftsmen. Over ten thousand others were employed as casual labourers on daily paid rates. Because the Dockyards provided a limited amount of technical training ground, the government realised for the first time that formal technical education was necessary to enable more Nigerians to take up skilled jobs.

In 1925 a class of apprentice masters was established on a part-time basis for a few selected Nigerians who were already in regular employment with the marine department. In 1929 a technical instructor was employed from Britain and a technical training scheme began on a permanent basis. However, it was not until 1946 that the conscious planning of a system of technical education started.
The conscious planning of a system of technical education in Nigeria dated from 1946 when it was given a major place in the Ten-year plan for development and welfare. Before this date, the colonial government’s attitude was that the provision of technical education for Nigerians (beyond very limited artisan training for governmental departments) was neither necessary nor feasible. Even as late as 1942 educational officials were unable to recommend the establishment of single training institution. It is doubtful whether a big trade school or a technical college is necessary at the present stage. Such a school would be extremely expensive to build and equip, required a large European and African Staff and there would be no great demand for its products when trained.

NEED FOR VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA

Events have shown that austerity measures, structural adjustment programmes and other economic policies are examples of the fact that countries no longer rely on economic indicators such as gross domestic product, per capital income, and the rate of capital formation. These policies, as tried in Nigeria have not yet facilitated Nigeria’s economic recovery. The increasing rate of population explosion and consequently unemployment and unemployability which have continually been posing social and economic problems to both government and individuals are clean indications of the role which vocational technical education can play in reviving the economy of Nigeria.

Parents and guardians are desirous of the ability of their children and wards to find or create jobs after a course training. This training involves the acquisition and development of marketable skills that are related to the ever-changing business oriented society.

The problem with Nigeria today is basically the underproduction of graduates that will meet the demands of the rapidly changing employment community. Technical educators are, therefore, duty band to help the students acquire and develop these needed skills and attitudes for employment by aligning with practice.

Osuala, (1981) opines that:

In order that all business education students may posses vocationally acceptable office competencies, and thus, have
equal access of office employment, there must be constant evaluative efforts on the part of business educators to analyses existing business education programmes and to determine if these programmes are responsive to the needs of office employees.

**OBJECTIVES OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA**

In any educational programme there must be specific objectives. Meanwhile the five commonly accepted goals of vocational education are:

1. Prepare the learner for entry into employment and advancement in his chosen career.
2. Meet the manpower needs of society.
3. Increase the options available to each student.
4. Sense as a motivating force to enhance all types of learning.
5. Enable the learner to wisely select a career.

Secondly, as contained in Education today (1992), the following objectives were recommended for a National Plan of Vocational-Technical Education in the Republic of Nigeria.

1. To provide technological literacy to all pupils i.e. to prepare every pupil for life in a technological age.
2. To help develop the right attitudes toward work and proper use of technology.
3. To provide adequate technological orientation and preparation for advanced professional education and training in technology.
4. To equip school leavers with skills to earn a living.
5. To stimulate and encourage creativity.
6. To provide the awareness that technology does not only solve problems but creates some as well.

**ORGANISATION OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA**

Vocational-Technical Education began as an organized sector of the educational system only in the late forties (40s) with the implementation of the programme outlined in the Ten-year development plan. The programme was financed mainly from funds made available by the United Kingdom Government under the colonial
development and welfare scheme. Four main types of institutions were created: technical institutes, trade centres, handicraft and domestic science centres. They were completely under government control.

The technical institute at Yaba was the most fully developed of its type. The institutes offered three full-time programmes and special short courses. The full-time programmes were designed as junior technical, senior technical and teacher training. The junior technical course was a programme of secondary education “with a technical bias”. In four years of resident instruction it offered woodwork, drafting, sub-professional engineering, commerce and printing. These courses were designed for students who had completed eight years of primary education and had passed a special entrance examination. The senior technical course was a three year course, with two years of residential instruction separated by a year of no-the-job training in industry. This course admitted students who had completed a standard secondary or grammar school course. The senior technical programme offered course in electrical, mechanical and civil engineering a course for architectural assistants and a course in economics. The teacher training programme was a two year course for the preparation of teachers for handicraft centres and secondary school craft courses.

One of the part-time programmes of the Yaba technical institute was designed as “day release”. It consisted of continuation courses offered in co-operation with industrial concern. This programme permitted an employee time away from the job, usually two days per week, to undertake training of direct value of his work. The programme also offered courses for engineers, printers, mechanics and carpenters. Evening continuation courses trained adults who had had successful experience in the job. These courses were much longer and included two years of preliminary training for those deficient in English, History or mathematics. Advanced students were training as engineering and architectural assistants. The Yaba technical institute had a combined total enrolment of six hundred students in 1947, one half of whom was enrolled as full-time students in residence. If maintained a close relationship with industry and co-operated in the development of programmers to meet industry’s special training needs.
CHAPTER FOUR
THE STRUCTURE OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA

The structure of vocational-technical education in Nigeria could be likened to a ‘tree branch’. The structure is fragmented into four levels of education: primary education (pre-primary school): primary education (primary school): secondary education (junior, senior secondary school; technical college or craft programmes; teacher college); higher education (university; polytechnics, college of education; technical college or advanced craft programmes). Others are post graduate level; technical teachers college (TTC). Entry into the labour market is possible at certain stages of training (Appendix IV and V).

On completion of junior secondary schooling, taking the right branch to craft school invariably terminates at the labour market. Similarly, junior secondary school leads to senior secondary school at the upward direction, then left toe technical college or the craft programmes and right to teachers college all may terminate in the labour market. The senior secondary school, technical college and teachers college head towards university, technical college or advanced craft programmes, polytechnics, and college of education – all terminate at the post – graduate level.

SUPPORT FOR VOCATIONAL TECHNICAL EDUCATION IN NIGERIA.
Industries and the general public have been urged to fully assist government in supporting and financing all aspects of vocational and technical education programmes.

POLICY SUPPORT FOR VOCATIONAL TECHNICAL EDUCATION
One of the results of an education that is closely geared to the requirements of external examinations has been that, most of those who have experienced it have been conditioned to memorize rather than to think. The implications of this for life in a democratic community are obvious. For the first time in West Africa a conscious attempt was made to train children to understand and practice the duties of active democratic citizenship. The idea has spread to other schools, both primary and secondary, during the last six years. It is by no means universal but more and more youngsters are being taught the difference between the active and the passive
citizen, why rates and taxes must be paid, how elections should be conducted, why
the printed word is not necessarily the truth, how bribery and corruption can
undermine a nation, the nature of religious tolerance, and fallacy of racial prejudice.

Another disturbing feature of newly independent Nigeria is that the well-educated
Nigeria tends to keep clear to politics some intellectuals do compete at the polls and
there are some very well educated Nigerian ministers, but they are greatly out
numbered in the political arena by individuals who have not had a university
education.

The key to the translation of these or other educational theories rests; of course, not
merely with the policy makers but also with the teachers. In every country in the
world, it is the teachers who make the schools what they are. At the moment those in
the teaching profession who are prepared to work to bring about reforms are still few.

It can be said that the members of the educated elite, a somewhat self satisfied
minority disinclined to risk their hard-earned academics reputation before the
uncertain will of the untutorial electorate, are the principal critics of the political
drama but not yet the actors.

Community Acceptance
The entire community supports and accepts the concept of vocational technical
education. Vocational technical education has done a lot of good to the society, such
as employment. This has helped to a large extent to improve on their life style and
standard of living at this day of economic crunch.

Finance Vocational Technical Education in Nigeria
This is the general contribution to a programme to make it functional. Therefore, all
contributions required to make a programme successful, for instance both monetary
form and service is called financing. Financing education therefore does not mean
contribution in monetary value, only, it also include services that can be rendered in
addition to the money value. For instance a teacher can volunteer to offer his service
without pay. He/she is contributing to the financing of education.
Government is the only body that funds education; they do not actually finance it at the policy level. But at the implementation level it becomes finance. Therefore, in financing education we talk about other services which money could purchase or societal members can render apart from money. Some of these contributions are difficult to quantify monetarily, that is why it is quantified as estimate.

The government has been financing vocational technical education right from start. The financing of vocational education appears not to be different from the method of financing general education and therefore historically, government is able to finance education through the following sources:

**Sources of Financing**

Some sources are:-
- Tax – personal and co-operative tax
- Levy, sales of property, donation, custom and exercise duties loans and fines.

The government can do this by asking the village community to provide buildings, light, water, plants and support them by making use of the small tax collected for other purposes like purchase of equipment and payment of teachers’ salary. The community will be happy to do this through community efforts.

**Vocational Technical Programmes**

- This programme is given to those who want it, need it and also would like to benefit from it.
- The teacher should be a master of what he teaches.
- There should be minimum amount imposed.
- The skill is repetitive and as the learner repeats these skills he masters the subject.

The above theories should be used to assume some programmes in Nigeria. As we apply these theories, any one that hangs on this theory is a vocational programmer.

Examples of some programmes are:-

College of Technology, School of Nursing, Polytechnics, Institute of Management and Technology, School of Journalism, School of Catering and so on.
Any programme that will fit the environment in which the learner will work is termed as a vocational technical programme. After undergoing any programme, you find yourself a suitable job suits the skills which you have acquired. Their curriculum comprises of theory and practice. In addition, future vocational-technical education programmes would become less specific for the young and more specific for the experienced worker.

Secondary Programmes
Vocational-technical education in secondary school is a vertical programme. This programme graduates from one step to another e.g. you pass from one stage to another for instance from class one, class two, class three and so on. They are arranged in form of ladder.

Teacher Education
Under this programme we have the assistant director for Technical Teacher Education (TTE). For technical teachers to be well equipped both academically and professionally in order to face the challenges of rapid technological change and to effectively perform their roles in the successful implementation among government, industry, business and labour, education is a must. Federal and State Government should allocate and make available adequate funds to institutions of learning for the purpose of research, workshop, seminars, conference and other professional knowledge and skills of technical/business teachers, inspectors, researchers’ educators and administrators.

The past performance of vocational education, based upon the secondary and post secondary vocational schools such as vocational trade centres and technical colleges and colleges of technology/polytechnics, will continue to be the logical sources for preparation of most of these skilled workers.

In line with the above, technological know-how is constantly changing. The quality of what is taught is to a large extent dependent on the knowledge of the teacher himself, the depth of technical-knowledge imparted and industrial practical
experience of these teachers. It is on this premise and for the technical teachers to keep abreast of the ever changing technological innovations and methods.

Secondary Programmes
Moreover, as earlier stated, technology in the developed countries and to some extent in the developing nations is changing at a faster rate each year, therefore, a vocational student entering the world of work must be better prepared in the future than he/she was in the past. The student must be flexible, aware of the need for continuing education and progress, and have skills, knowledge and work habits that are up to date as possible.

Teacher Education
There are needs for Vocational Technical Teacher Education. It is the duty of the technical teacher to implement a given institution in which he founds himself or herself.

The quality of the technical component of a vocational education programme is dependent upon the willingness of and resources available for teachers to develop their technical knowledge so that they will be able to provide the level of technical instruction demanded by industry and business. For technical teachers to be well equipped both academically and professionally in order to face the challenges of rapid technological change and to effectively perform their roles in the successful implementation among government, industry, business and labour, education is a must. Federal and state governments should allocate and make available adequate funds to institutions of learning for the purpose of research, workshops, seminars, conferences and other professional activities that will help in updating the technical knowledge and skills of technical/business teachers, inspectors, researchers, educators and administrators.

ADMINISTRATION OF VOCATIONAL TECHNICAL EDUCATION IN NIGERIA
All vocational and technical education institutions were government establishments from the beginning. They were controlled and administered by the government. Only in the late 1950s did some industrial and commercial firms open a few technical and trade schools to produce skilled manpower for their own needs. These firms also
sponsored students to government institutions and made grants for the expansion of
the government system, rather than be directly involved in the administration of the
education activities. As with other institutions, the governments financed vocational
and technical schools under their control. Income from fees was limited to a few
students sponsored by private firms. Also a few fees were collected from part-time
and evening students. Most of the trade centres, including the craft schools in the
North, a flat charge for boarding expenses were imposed. Generally, students
received free education, reimbursement of traveling expenses, tool kits, uniforms
and pocket money.

In addition, the government provided the following:
1. Building and equipment of educational cilities including classrooms,
laboratories and workshops.
2. Building and equipment of auxiliary facilities such as students' halls, teachers’
quarters, recreation and sports facilities. The government also provided the
expatriate and local staff, administrative expenses, students’ maintenance
allowances and building maintenance.

**INDUSTRIAL TRAINING FUND (ITF)**
The main objectives of the industrial Attachment Programme for the technical
teacher staff is for the industries to help in acquainting the staff with new
technologies by actually working on the equipment. The multiplier effects of good
report between the industry/business/labour and education cannot be over
emphasized.

**STUDENTS WELFARE**
The students are being trained for vocational technical education in order to acquire
the necessary skills and competence required to carry out any type of job. Students
are provided with the necessary facilities in other to be able to carry out his functions
efficiently. Students’ welfare should be greatly considered before the implementation
of any programme in any institution.
JOBS/OCCUPATIONS
An occupation may be referred to as any type of job, business, career, profession, trade or work done to earn a living. In this respect, there are various occupations in which a person may be gainfully employed. Occupations range from professions such as medicine, engineering, pharmacy, to entertainment such as singing, music and dancing.

Evidence has shown that the more difficult it is for a person to qualify for an occupation, the fewer the people that are engaged in it and invariably the higher the remuneration and prestige attached to such an occupation. For example, it takes a very brilliant student about seven years study at a university after a successful basic secondary school certificate course before he can qualify as a medical practitioner, whereas it may take less than a year to qualify as a painter. In the same way, the social status of a painter and the social status of a Doctor are not the same, however, we cannot all be Doctors neither can we all be painters although both have their contributions to make for the economic development of the country.

Retraining
Visits and personal contacts with the industries and banks in cities for the industrial attachment of the Technical/business teaching staff clearly shows that there is a need for re-orientation in industry and business as to their roles in the updating, upgrading, and retraining of technical teachers in their various fields in order to achieve the successful implementation of vocational-technical education components of the new National Policy on Education of 1977. Apart from this, teacher of technical subjects are expected to keep abreast of industrial progress.

VOCATIONAL-TECHNICAL EDUCATION CURRICULUM
Curriculum meant for the new educational system in Nigeria, especially for vocational-technical education have three components: They are general education, trade practice/theory and related studies; and industrial training. The National Policy on Education (1981) stated that the junior secondary school will be both pre-vocational and academic. The curriculum should be structured as follows:

Core subjects include: Mathematics, English, Nigerian Languages, Science, Social Studies, Art and Music, Practical Agriculture, Religious and Moral instructions,
Physical Education and Pre-Vocational subjects. Pre-vocational subjects include: Woodwork, Metal work, Electronics, Mechanics, Local Crafts, Home Economics and Business Studies. The non-vocational electives include: Arabic Studies and French.

The senior secondary school is for those able and willing to have a complete six-year secondary education. It is comprehensive but has a core subject include: English, History and Geography; Agricultural Science or a vocational subject. The National Policy on Education explains that every student is expected to select 3 of those subjects depending on the choice of career up to the end of the second year and may drop one of the non-compulsory subjects of the 9 subjects in the last year of the senior high school course. Courses available at the senior high school include: Biology, Physics, Chemistry, Additional Mathematics, Commerce, Economics, Book Keeping, Typewriting, Shorthand, History, English Literature, Geography, Agricultural Science, Home Economics, Bible Knowledge, Islamic Studies, Arabic Studies, Metal work, Electronics, Technical Drawing, Wood work, Auto-mechanics, Music, Art French, Physical Education, Health Science and Government.

Technical subjects available at pre-vocational and vocational schools at post-primary level, the technical colleges, the polytechnics and colleges of technical teacher education at post-secondary level include: woodwork, metal work, electrical work, building, technical drawing, auto-mechanics, computer technology, plumbing, painting and decoration, carpentry and joinery, furniture making, bakery, shoe repairing and making, printing, sign-writing, metal fabrication, motor vehicle mechanic work, radio and TV servicing etc, tailoring dress-making, typing, shorthand, accounts, spinning, weaving, dyeing and bleaching, brick-making, boat-building and agriculture.

The National Policy on Education recommended discovery approach at the junior secondary school as against expository. Similarly, at the senior secondary and other vocational/technical courses, modular approach is recommended as against spiral approach. The essence is to meet up with the required number of manpower production in Nigeria. The curriculum is planned along the structure of the school system. Emphasis is placed on maintenance culture, to enhance the longevity and
effectiveness of the machines. This is more observed at the vocational technical institutions.

**MANPOWER PRODUCTION**

The emphasis of Nigeria institutions presently is on manpower production to manage our industries and agricultural sectors. This triggered the concern of all able Nigerians to be part of the crusade. In our educational system too, the stride to gear up manpower production rejuvenates the educational curricula and policies. For instance, in the Nigerian lower secondary school, practical subjects are gaining strength in general education discipline as parallel with the expansion of labour subjects, such as metal work, woodwork, electronics, local crafts, business studies and home economics. These courses, adequately taught will meet up with the required number of manpower after graduation. As a matte of fact, for many teenagers, basic (lower secondary) school is the final educational stage before they start in dependent life and enter the world of work. Vocational training is an important part of their general education. Practical lessons should impart to them skills in handling tools, equipment and materials, and acquaint them with different careers and with the organisation of work in industry.

Following the structural channel of educational institutions, it is observed that ground-laying for manpower production emanates from the primary education, based on the subjects taught. This clears a way for effective evaluation of the entire programme, whether it is possible to attain the level of manpower production or not.
CHAPTER FIVE
PROMOTING SKILL DEVELOPMENT AND PRODUCTIVITY THROUGH VOCATIONAL EDUCATION IN RURAL NIGERIA.

General concern for rural development in Nigeria has been on the increase in recent years. On the part of the government, after the initial lack of direction that attended the attainment of political independence, it has now been realized that rural development is the surest route to national development. After an initial neglect of rural development and encouragement of urbanization, the Nigerian Government has now realized that rural communities have been and will always be the bedrock of the country’s development. And so, like the goose that lays the golden eggs, rural communities now receive a good measure of recognition and nurture from the government.

Evidences of government’s concern for rural development include the establishment of various agencies and programmes such as the Directorate for Food, Road and Rural Infrastructure, the Better Life for Rural Women, National Policy for Integrated Rural Development. It is beyond the intention of this book to query the actions carried out under the various efforts of the government. What one may like to note is that the agencies and programmes, along with the different approaches to rural development adopted by successive governments arose from awareness that rural communities in Nigeria must be enabled to continue to serve as the backbone of national development.

The central focus of all efforts at rural development has been the struggle against rural poverty. The passage of time and the acquisition of experience in rural development have demonstrated the uphill nature of the task of banishing rural poverty. In most cases, development arising from government efforts have bypassed the rural poor who are the primary target groups of all rural development efforts. As agencies and programmes meet with failure in their bid to alleviate rural poverty and bring about rural development, some reasons have been adduced for their failure. The most common reasons adduced for the failure of development efforts to bring about desired improvements in the socio-economic well-being of rural poor include the following:-
1. Rural development agencies in Nigeria have erroneously viewed themselves as animating rural people as if these people had no appreciation for development prior to enlightenment by the urban elites in charge of the agencies.

2. Rural development agencies have unwittingly interfered with the lives and goals of rural dwellers, thereby causing them to be apathetic to the efforts of these agencies. This occurs when the conception of development held by the agencies are at variance with the aspirations of the rural poor.

3. Most rural development programmes have been predicted on ignorance about the conditions of existence of rural people. Such programmes usually exhibit inadequate knowledge of fundamental data on population, land distribution, income distribution, cropping enterprises, yields, levels of consumption, and patterns of trade and so on.

4. Rural development agencies have been politicized to the extent where one cannot vouch for those in management positions of these agencies in terms of their knowledge and experience in achieving the goals of the agencies. Other reasons such as inadequate funding, poor staffing, lack of logistics support, insincerity of purpose and lack of continuity of programmes and agencies have also been adduced as contributing to the failure of pass efforts at rural development. The position of this book is some what different in the sense that the failure of most of these agencies and programmes is seen as unavoidable because they seek to provide to people what they do not feel they need. This book promotes the position that education is the safest and surest vehicle of positive change and that education – more especially the type which fosters the acquisition of survival skills – is what rural people need more than anything else in order to be able to salvage themselves from poverty.

**VOCATIONAL EDUCATION AND SKILL DEVELOPMENT**

Vocational education is that aspect of the total experience of the individual whereby he learns successfully to carry on a gainful occupational training and organized vocational education. In specific terms, however, vocational education means slightly different things to different people. What is most certain about the meaning of vocational education is that its major focuses on equipping the individual with work
skills to enable him hold a job or survive in an occupation can be classified as vocational education.

Some individuals argue that all forms of education eventually prepare people for gainful employment. There is no doubt that some knowledge of historical precedents help lawyers, legislators and administrators in taking decisions on related issues. There is also no doubt that the memorization of verses and passages while in training help in building up a person’s writing and recalls skills. However, the distinction between these forms of education and vocational education are drawn not at the time of use but at the time of acquisition of knowledge and skill, not at the place of work but during training.

During training, the purpose of vocational education is to equip individuals with skills which are immediately relevant to a particular occupation or group of occupations. Vocational education is concerned mainly with the development of skills which the individual needs in order to be established and successful in an occupation. In the course of developing skills in the individual, knowledge and abilities required for success in the occupation may also be taught. However, the major focus of vocational education remains as skill development. Also, other forms of education develop these skills in individuals. However, these skills may not be directly relevant to an occupation and immediately useful for practice. Moreover, these forms of education may not accept skill development as the focal point of their training effort. All over the world, vocational education is the only form of education that this reputed for unyielding emphasis on skill development.

**VOCATIONAL EDUCATION NEEDS OF RURAL NIGERIA**

Vocational education is also characterized by an insistence on needs and interests of learners and the environment as determinants of content for occupation training. This characteristic was mentioned in passing in the preceding discussion. What to teach and how to teach in vocational education is also based on what the learners want and need to know. For this reason, vocational education varies with environment and groups of individuals. The vocational education needs of people in cities vary from the needs of people in rural Nigeria both in varieties of occupation
and content. The vocational education needs of rural Nigeria are highlighted as follows:

1. **Farming and Gardening:** Farming – the art of tending crops and rearing animals – is the major occupation of most rural communities in Nigeria. Consequently, vocational education in farming and gardening is a must for rural communities in Nigeria. Traditionally, farming is learned through limitation and practice as the child accompanies his or her parents or guardian to the farm. Learning was incidental and the child hardly learns anything beyond the skills possessed by his or her master-trainer. Sustainable rural development would require that new knowledge and skills be taught to farmers and would-be farmers through organized vocational training provided in farm centres, vocational centres and adult education centres as the case may be. Rural farmers and potential farmers need to be educated on the Land Use Degree and how to obtain land under the decree, application of new teaching of cooperative societies, harvesting and ways of reducing losses in harvesting and processing. Farmers also need to be educated on record keeping, accounting, decision-making and profitable marketing of their produce. The specific training needs of farmers would however, vary from one locality to the other.

2. **Performing Arts:** Irrespective of the high level of poverty in rural Nigeria people in rural areas are generally happy people. Story telling, singing, music and dancing are common practices among rural dwellers and these activities feature in most of their ceremonies, including burials and naming ceremonies. In rural areas, it is common to find people who have distinguished themselves in these activities and who earn part of their living from them. Story telling, singing, music, and dancing provide relaxation and deviation from normal activities to rural people. It creates in them a sense of cultural awareness, identify and feeling of enjoyment that makes these activities very profitable. Under a vocational education programme for rural communities in Nigeria, story telling, singing, music and dancing need to feature as means of promoting the cultural identify and harmony of the people. The arts could be taught by using persons in the communities who have distinguished themselves as performance artists.
3. **Needlework and Weaving**: Needlework and weaving are common economic/leisure activities among female folks in rural Nigeria. In certain communities, weaving is a major commercial occupation. Many rural communities in Nigeria would need instruction in needlework and weaving as part of the total vocational education programme. Rural women need training in the art of producing various designs in cloth, producing handkerchiefs, table cloths and some stitches in clothes.

4. **Woodwork**: Woodwork is important to rural communities in Nigeria. Products obtained from woodworking include furniture, doors, caskets and animals pens, cages and sculpture. There is no doubt therefore, that improved skills in woodworking would help raise the standard and quality of living of rural people in Nigeria. There is also no doubt that an expanding market for products of woodwork exists in rural Nigeria. Woodwork therefore, needs to feature in any education programme planned for rural people in Nigeria.

5. **Pottery and Clay Work**: Pottery, the art of making cooking utensils from clay is a skill peculiar to the female members of rural communities in Nigeria. Village women make clay pots of various designs for sale and for family use by applying traditional techniques and tools. With vocational training these women can be exposed to new skills and modern techniques in working with clay. Such skills and modern techniques would enable them produce high quality clay pots, jugs, tea cups, platen and other clay items and glaze them to acceptable international standards.

6. **Handicraft**: Items of handicraft produced in rural areas of Nigeria include ropes, baskets, mats, brooms, woven cloth, cane chairs and cane furniture. Vocational education is also needed to help develop and improve the handicraft skills of handicraft workers.

7. **Home Making/Housing Keeping**: One noticeable problem among rural dwellers in Nigeria is the generally poor level of hygiene in homes. Rural houses, clothes and other items are generally observed to be filthy. Compounds are untidy while foods are prepared in unsanitary conditions and without regards to proper balancing of nutrients. Thus, even though food is prone to diseases and malnutrition than urban dwellers in Nigeria. Training in hygiene and hoe management is needed by rural peoples to enable them live better lives.
8. **Technology Education:** In recent times, electrification of rural towns and villages has been pursued with greater vigour. As a result of the availability of electricity in many rural areas, coupled with the anticipation that more and more rural areas would be electrified, electrical appliances and labour-saving gadgets are now common place in rural towns and villages. Rural people need to be educated on basic principles of use and safety procedure associated with these products of technology. These people also need education to be able to comprehend the language and symbols of technology.

**Rationale for Providing Vocational Education to Rural People**

The poverty in rural communities can be traced to two factors: low productivity and ignorance. Productivity in agriculture, technical trades, commerce and local craft is low because rural people employ traditional methods in production processes. Improved productive capacity requires that these rural people be equipped with skills and abilities which would enable them make effective use of modern techniques and technologies in their work roles.

As a result of ignorance, many people blame their poverty on government action or inaction. They carry out their various vocations without seeking to know latest developments and novel techniques in the field. Presently, government tries to ameliorate the level of ignorance of rural people by providing them with extension services but this as been most ineffective due to inadequate funding and staffing. Vocational education would enable rural dwellers keep abreast of developments in their vocations and know the varieties of government assistance available to them. Vocational education would also foster a clear understanding of government actions, including laws and regulations, and how they affect each vocation.

Low productivity in rural areas is also attributed to the predominant use of small tools and implements in doing work. It is said that as a result of poor skill and crude tools, majority of the rural workforce are inefficient in carrying out the day to day activities from which they earn their living. In addition to equipping rural manpower with the desired skills, vocational education would co-ordinate and encourage all endeavours to develop more effective small tools and implements, more especially those that can be powered by animals and small engines.
As tax payers and citizens of the country, rural people need to benefit from all forms of services and assistance provided by the government. More importantly, they would want government to assist them in the aspect of their lives on which individuals tackle nature for their survival. Vocational education is known to be the best form of preparation for useful living in the society. Through vocational education, rural dwellers would become more productive, earn more revenue for their families, enjoy higher standards of living and contribute more to national development.

**Steps in Developing a Vocational Education Curriculum for Skill Development in Rural Nigeria:**

Experience has shown that most often, government reluctance in providing vocational education is based on the awareness that this form of education is quite expensive rather than on ignorance about the functions and needs for vocational education. Vocational education is very expensive and as a result, its provision should be well planned and monitored. For vocational education in rural Nigeria to be sound and functional, well defined steps and principles must be followed in the design and implementation of the curriculum. The steps to be followed include the following:

1. **Identification of Clientele Groups:** Rural communities contain a mixture of old and young, men and women, a few skilled and many unskilled people in various fields of life. Therefore, the first step in planning vocational education for rural people is proper groups of people to benefit from the curriculum. A national plan for rural development should provide vocational education to all categories of rural people. This includes children at various levels of schooling, school drop-outs who entered the world of work prematurely, school drop-outs whose energies need to be directed to productive activities, unskilled workers, and semi-skilled artisans and so on. Each clientele group would require a different form of vocational education and different curriculum, for instance, the curriculum for par-time farmers cannot be the same as the curriculum for career farmers.

2. **Formulation of Objectives for the Curriculum:** The establishment of sound curriculum objectives represents the most crucial step in curriculum of
development in vocational education. Without good objectives, a curriculum may wander from topic to topic without a focus on the skills the students are expected to utilize on the job. If objectives are to serve any useful purpose, each has to be stated in measurable terms. Since vocational education focuses on “doing” and “levels of doing” there is no option to starting exactly what the learner would be able to do after receiving instruction.

3. **Choose Content based on the objectives:** Selecting curriculum content is the next logical step after stating the objectives. Content selection for any vocational education programme could be extremely frustrating. Frustration results mainly from inability to determine what is truly relevant to both instructional and occupational settings. In a typical rural setting, the curriculum developer may be confronted with a variety of factors that may affect the task of determining what should be addressed in the curriculum. These factors – which include time, the teacher, availability of capital, internal and external pressures, environmental requirements, and the particular level of skills desired by the clientele, make it impossible for armchair content selection to be sufficient and reliable. Consequently, in most cases, the curriculum developer would find himself engaging in studies to enable him understand the factors and how they affect the objectives as prelude to content selection.

4. **Giving Due Consideration to Contents which Promote Efficiency:** In every occupation, there are special skills and habits that make individuals in such occupations proficient. These skills reflect the ability to do something in contrast with ability to demonstrate knowledge. In most cases, people can demonstrate knowledge without being able to do the real thing. To give due regards to proficiency in vocational programmes for rural Nigeria, the curriculum should foster current thinking and manipulative habits, be adaptive to the working environment, emphasize familiarity with work processes and procedures; promote the dignity of work, encourage precision in production and maintain professional decorum. Involvement of experts in curriculum development would be required to ensure that these important considerations are catered for by the curriculum.

5. **Consideration for Improving the Learner:** The curriculum should be concerned primarily with improving the learner. A worthwhile purpose for vocational education for rural Nigeria is to bring about improvement not only
to production but also to the learner. For this reason, vocational education for rural Nigeria would be said to be functional only to the extent that it is able to cater for the vocational, economic and social needs of the learners. Therefore, it should be the pre-occupation of planners and implementers of vocational education programme in rural Nigeria to ensure that the living conditions and well-being of the learners are improved through the new learning they have acquired.

6. **Try-out and Review the curriculum:** No matter how well a curriculum has been planned, there cannot be any indication that it would be implementable until it has been tried out on a small scale. The try-out is a kind of research on the actual usefulness of the draft curriculum. Through the try-out the curriculum developer would be able to ascertain whether right objectives are being served and whether the contents are appropriate. Some of the problems which would confront implementers of the curriculum would be identified at this stage. Experienced gained through the try-out should be used on correcting the draft curriculum. Also, provisions should be made for periodic review of the curriculum to cater for improvements in techniques and technologies as well as the development of new knowledge.

**Ways of Enabling Rural People to Benefit from Skill Development Programmes:**

Beyond the traditional apprenticeship system, skill development programmes in Nigeria are a rarity. This runs contrary to the provision of the National Policy on Education that a vocational centre will be established in each local government area of the federation to cater for the skill training needs of all shades of persons. Uwadiae (1991) showed that only an insignificant number of Local Government Areas have compiled with this provision. Even then, the services of these vocational centres have not been extended to rural adults who have long fallen out of the formal school system. The first task before the government therefore is to urgently establish many formal vocational education centres in rural areas to cater for the skill development needs of the people.

Vocational centres and skill programmes may be available and yet rural people would not participate effectively in the activities. Such a situation might have arisen,
probably from many oversights such as inadequate publicity about the objectives, advantages, timing and other aspects of the programme. It is therefore necessary for adequate provisions to be made for the dissemination of information concerning the skill training programmes available. Public enlightenment campaigns may be organized to sensitize the rural people to the need for them to develop new and improved skills.

Another factor that could limit rural people’s willingness to participate in vocational programme is poor organization. Many people would not participate if they find the composition of learning groups, time table for classes, venue or environment for learning and personality of the instructors to be unsuitable. Proper organisation of vocational programmes for rural people requires that:

1. Groups of people with compatible social-economic standing and training needs learn together.
2. Activities are organized during periods of the year, week and day when majority of the target participants would be free to attend;
3. The venue is conducive and close enough to the homes of target participant; and
4. Competent instructors are entrusted with programmes delivery.

A major issue which must be resolved from the onset is that of ways and means of financing the vocational centre. It is not advisable for fees to be charged until such a time when the people have fully realized the benefits of vocational training. Even then, the amount charged should be reasonable so as not to serve as a disincentive to willing persons. Vocational training for rural illiterates should be seen as a compensation for the free compulsory basic education which many of these people could not find suitable time to enjoy.

The slow rate of development in rural Nigeria has been attributed to neglect of the potentialities of the rural people individually and severally. It is argued that for the entire rural society to experience significant upliftment in standard living, the individual lives of rural citizens must be improved. None is so much in a position to improve the quality of life of the individual than the person himself; and this is only possible when the individual has been equipped with the wherewithal for personal development. This chapter has shown that vocational education is the most reliable equipment for useful living among rural dwellers.
CHAPTER SIX
THE CRISIS OF FUNDING VOCATIONAL/TECHNICAL TEACHER EDUCATION PROGRAMMES IN NIGERIA

The economic depression that has trailed Nigeria since 1982 has been a mixed grill to vocational/technical education. On the positive side, economic hard times have forced many Nigerians to recognize and accept the potentialities of vocational/technical education in insulating them from the discomfort of unemployment and unemployability. At the national level, the austere times have caused awareness to the fact that economic development rather than on the exploitation of minerals and other natural resources. A good system vocational/technical education provides a solid manpower foundation for technological and industrial growth. Thus, the attention with technical education has received since the National policy on Education was published is partly traceable to the vicissitudes of the economic down turn which accentuated in the early 1980s.

On the negative side, even though attention is now being focused on vocational/technical education, the economic depression has itself become a great limitation to the achievement of qualitative vocational/technical education. The funding of technical education has become difficult even though it is this same form of education that holds the greatest guarantee for economic survival. The case of vocational/technical education in Nigeria today is therefore comparable to the case of the indigent farmer, his malnourished ass and his piece of land that must be ploughed by the ass-drawn plough. Unless the ass is steamed-up and well groomed, it would not plough the land very well. Yet, the indigent farmer has not the where withal to feed his family well not to mention the ass. This parable depicts the dilemma of vocational technical education in Nigeria of the 1980s and 1990s.

The Federal Republic of Nigeria (N.P.E. 1981) stated that no educational system can be better than the quality of its teachers. This assertion is most true of vocational/technical education. Unfortunately, technical teacher education in Nigeria has also suffered from the effects of the economic depression. In this book, the state of the funding of technical teacher education, the funding requirements and alternatives of funding technical teacher education would be discussed.
Historical Review of the Funding of Technical Teacher Education in Nigeria.

Technical teacher education in Nigeria dates back to the early 1950s with the establishment of the technical teacher training course at the Yaba Higher College which was founded in 1945. That programme was established under the auspices and funding of UNESCO for that time, technical education was still neglected aspect of the Nigerian education system. Consequently the programme was more or less an experiment with no concerted efforts made at training sufficient number of technical teachers to form the knuckles of technical education in the country. Government support for the programme was also meager and unpredictable.

The department of vocational teacher education of the University of Nigeria, Nsukka was established in 1962 as the first indigenous degree programme in technical education. The programme was established with the financial and material support of the Michigan State University and in later years it received some assistance from the Ford Foundation. Today, these agencies have withdrawn their support and the programme is now entirely founded by the Federal Government.

The Federal Colleges of Education (Technical) located at Akoka and Gombe came into existence in the 1970s and also enjoyed a bit of sponsorship from foreign agencies. However, the Federal Government was mainly responsible for financing these institutions. In fact, the Third National Development Plan (Federal Republic of Nigeria, 1975) had budget the sum of 114.5 million for technical teacher training. When the fourth National Development Plan was however planned in 1981, the government had realized that it could no longer support and fund technical teacher training programmes single-handedly. Yet that was the time when the need for a geometric increase in the number of technical teachers in the country was more apparent. The national Policy on Education had just been produced and all secondary schools in the Nation were expected to start offering various technical subjects.

Since the inception of the new education system, shortage of technical teachers has been a most serious limitation to the realization of the objectives of the new system. In order to obliterate the shortfall in technical teacher supply, the federal government entered into agreement with some developed countries to train technical teachers for
the nation’s schools. The target of the programme, according to Taylor (1986), was to train over 50,000 technicians and technical educators within a period of 5 years. The federal government was almost entirely responsible for funding the programme which gulped about 400 million dollars within the period it lasted. Soon enough, the programme proved to be a white elephant and the need to look inward and domesticate teacher training became obvious, moreso, when the foreign exchange earnings to the country had dwindled considerably.

During the late 80s, many Polytechnics, Universities and Colleges of Education established departments of technical education for the training of technical teachers. The Federal Government on its part established more colleges of education (technical) at Potiscum, Bichi, Omoku, Asaba, Umunze and Gusau with a new of producing enough technical teachers for the effective implementation of the 6-3-3-4 system of education.

The foregoing shows that technical teacher training in the pre-independence era and the few years after independence was highly funded by foreign agencies. With the attainment of political independence, however, the government progressively assumed the role of financier of technical teacher education. Presently, the funding of technical teacher training in the country is entirely government’s affair with virtually no participation from communities and industries and no foreign aids. This is happening at a time when the government has embarked on an aggressive Technical Teacher Training Programme (TTTP) across the nation, and also when the financial allocation by the government has become glaringly insufficient to foot the bills of technical education.

The Funding Needs of Technical Teacher Education Programme in Nigeria:
Technical teacher education programmes in the country are in dire need of funds to enable them live up to their billings. Salami (1992) identified inadequate funding as one of the constraints on technical teacher training in Nigeria. This inadequate funding affects all technical teacher training programmes equally.

According to Olaitan (1992), a good technical teacher education programme should be adequately funded. The funding needs to technical education are quite different
from those of general education. One of the principles of vocational technical education says that there is a minimum level of funding below which vocational technical education cannot be effective and should not be attempted. Thus, unlike some other forms of education, technical teacher education is both expensive and uncompromisingly so. Apart from the usual need for buildings, staff remuneration and supply of stationeries, technical teacher training programmes require funds for the following:

1. Purchase of new Equipment: It is often said that a good technical teacher programme should be able to train people on old and emerging occupations. In reality, however, occupations hardly change, instead, the situation is that new equipment and machines replace old ones. Technical teacher training programmes should be able to acquire new models and more efficient machines as soon as they appear in the market. The situation where technical teacher training programmes still rely on obsolete machines and equipment bought training programmes still when new models have become common place in the world of work is most unacceptable and retrogressive.

2. Regular Maintenance of Equipment: Equipment and machines for training technical teachers need to be in working condition all the time. This means that these facilities have to be put through routine checks, servicing and repairs when they break down. On many occasions, worn-out parts have to be replaced or else the machines or equipment would remain grounded. The Federal Government is currently sermonizing on maintenance culture as a means of conserving scarce material and financial resources. What should be realized though is that maintenance also costs money even though it is less expensive in the long run.

3. Funding of Students’ Work Experience Programme: Supervised Work Experience is a component of a good technical teacher education programme. Like the one-year overseas trip usually undertaken by students of some foreign languages, a work experience is expensive but necessary for a qualitative technical teacher education programme. The expenses involved in the programme include payment of stipends to trainees, remuneration to supervisors and transport allowances. Yet, this programme is in addition to the normal teaching practice undertaken by all teacher-trainees.
4. Regular Supply of Expendables: Machines and equipment for technical teacher education are provided to enable students practice. This does not mean running the machine to see how they are operated but using them to perform the functions for which they were designed. Each machine or piece of equipment has its functions and expendable materials needed for it to function. Student-teachers cannot practice with woodwork equipment unless a regular supply of wood, nails, glues and other materials are provided. Wielding machine cannot be used without electrodes and metal, gravel and rods. It therefore, goes without saying that regular supply of expendable materials is as important as regular update of machines and equipment themselves.

5. Security Needs: Because technical equipment is expensive, adequate security arrangements have be made for them. This may require the construction of special workshops, the installation of burglary proofs and the employment of security men. A major theft of technical teacher-training programme could disrupt training and sometimes lead to the phasing out of the programme. Funds therefore, have to be available for the provision of security for technical equipment.

6. Payment of Allowances to Technical Teacher Trainee: Technical teacher trainee require personal tools for practice which they have to own. Because of the depressed nature of the economy, these tools have become very expensive such that most teacher-trainees would be unable to procure without assistance. This is partly the justification for the payment of allowances to some technical teacher trainees, and where funds are available; all students of technical teacher education should be paid some allowances. The payment of allowances to technical teacher trainees will also help attract students into the profession.

Reasons for the Poor Funding of Technical Teacher Education Programmes in Nigeria:
Generally speaking, the funding of technical education in Nigeria is far below the level desired. The situation is even more critical with the funding of technical teacher programmes. The following factors account for the poor funding of technical education in Nigeria:
1. Government Attitude to Technical Education: Before the new education system took off, successive Nigerian governments found it easier to train teachers for liberal and general education than for technical education. Before 1979, there were more than 30 Colleges of Education and 12 Universities offering courses in Education. Yet not more than 4 of these had programmes in technical education. Government only began to show interest in technical teacher education when it was evident that the objectives of the 6-3-3-4 system cannot be realized without technical teachers.

2. Poor Image of Technical Teacher Education: The Nigerian society of our time regards technical education as a form of education meant for people who are backward academically. Added to this is the generally poor image of the teaching profession. Thus, most people only enroll in technical teacher education as a last resort option. For the same reason, people and communities would rather invest or contribute to Science and Liberal education than invest in technical education.

3. The Products of Technical Teacher Education Programmes: Are not end products to people and societies. Technical teachers are expected to be national instruments for the development of manpower in all technical fields. Therefore, the benefits of a technical teacher training programme are not directly appreciated by industries and communities who deal with final products of technical education. Thus, it is easier for industries and communities to understand the need for their participation in funding technical manpower training than technical teacher training.

4. Merger to Technical and Science Education in Ministries: As has been noted earlier, the various governments have been almost entirely responsible for funding technical teacher education since the 1960-1970’s and this is achieved through the Ministries of Education. Olaitan (1986) traced the stunted growth of technical education in Nigeria to the merger of general and technical education. The merger results in a situation where administration of technical education are those who have little or no understanding of the peculiar funding requirements of technical education. Consequently, they are either under-estimating the needs of technical education or diverting funds for technical education with science education or any other form of education also results in a situation where the administration could be systematically
desensitized to the needs of technical education and ascribe superior status to science education including mathematics.

5. Sole Funding of Teacher Education by Government: They sole dependence of technical teacher education on government for all her needs has also contributed to the problem of under funding. Because of the nation’s poor fiscal base, the government alone can no longer meet the financial requirements of technical teacher education. Adequate funding of vocational technical education would require the participation of communities, industries, organisations and agencies outside the government’s usually contribution.

A Perspective to Financing Technical Teacher Education Programmes: The crisis facing the financing of technical teacher education in Nigeria can be summed up in three sentences. First, the nation’s demand for qualified technical teacher is much more than ever before. Secondly, the government which has been the sole financer of technical teacher education now has very limited resources as a result of the global economic depression. Thirdly, communities and industries cannot easily contribute directly to technical teacher education because the benefit of technical teacher education is not easily visible to them. In order to seek alternative sources of funds for technical teacher education, there is therefore, a need to see it in the perspective of the technical manpower production set-up.

In technical manpower production, technical teacher training is an input into the system rather than an output. In other words, technical teacher education is a means to an end rather than an end in itself. This position is represented schematically in fig. 1 as follows:

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Process</th>
<th>New Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technical Teachers</td>
<td>Various Levels of skilled Technical Teachers</td>
</tr>
<tr>
<td></td>
<td>Technical Manpower Production Institution</td>
<td>Programme Evaluation &amp; Follow up on placement</td>
</tr>
<tr>
<td>2</td>
<td>Initial Structures/Equipment</td>
<td></td>
</tr>
</tbody>
</table>
Fig1: Schematic Representation of Technical Manpower Production System through IPO.

The scheme shown in fig. 1 implies that technical teacher production is the first and primary component of technical manpower production. Consequently, the funding of technical teacher education must be seen as a component of the funding of technical education in general and the most important component for that matter. The primary source of funding for technical teacher education must therefore, comes from the funds available for technical manpower production. The recommendations of this book are based on this understanding.

The scheme also shows the update of technical teachers as the 6th input into technical manpower production. This update refers to the retraining of teachers for currency and greater effectiveness as improvement of technical teacher training programmes. The position of this aspect in the scheme does not mean that it is the least important input but that update of technical teacher programmes is the final seal to an effective technical manpower production system. As long as technical teacher programmes are up to date and effective, technical manpower production in the country would be enviable.

The second, third and fourth input components of the scheme relates to the material resources needed by technical manpower production institutions as well as technical teacher training programmes. The initial supply of structures and equipment must be regularly maintained and updated. At the same time, materials needed for students practice and instruction must be provided when needed.
Recommendations for Increase and Consistent Funding of Technical Teacher Education:

The position of this book is that adequate funding of technical teacher education would be achieved if the funds for technical teacher education come from the funds for technical manpower production. Based on this position, the following recommendations are made:

1. The administration of technical education should be severed from science or general education so that budgetary allocations and funds meant for technical education would be judiciously appropriated.

2. All multinational corporations and firms employing up to 50 technical staff should be required by law to contribute 5 percent of their pre tax profit on an endowment fund for technical education.

3. About 20 percent of the total money available for technical manpower production from all sources should be set aside for technical teacher education.

4. About 10 percent of the property tax (including tenement rates) obtained from each local government area of the federation should be paid into the endowment fund for technical education and used in funding the technical training institutions located in or nearest to the local government area.

5. Technical training institutions should not supply students with certain tools such as T-squares, drawing boards, tool kits, typewriters, sewing machines and other tools which they should have on their own. They should be encouraged to purchase their own simple and basic tools. This will greatly reduce the material resource needs of training institutions.

6. Certain expendable materials such as wood, nails, rods and glues should be bought from proceeds realized from the sale of materials produced from the technical training institution. The fact that training of technicians is not an economic venture does not justify the confiscation of products made during the training process. The sale of products should at least generate revenue for replenishing the stock of expendable materials in each and every technical training programme.

7. Each technical training institution should establish a consultancy unit which must render account through the head of the institutions to the Ministry of Education. The consultancy unit should not operate as an independent entity
but as a commercial venture of the instructions. Therefore, financial matters should not be directly handled by members of the committee in-charge of the consultancy unit.

8. Stolen equipment and equipment damaged through bush burning should be replaced by a special levy on the students/ PTA and the community, where the training programme is located. The levy should be collected through the Local Government Council in case of the community. Caution should be entertained here so as not to make the community become more disinterested in technical education.

9. Community involvement or participation in the financing of technical education is necessary. The community should be made to supply certain things into the school such as classrooms, seats and other materials within their resources. Communities use to feel very proud about materials that belong to them and they co-operate more in their maintenance. Some members of the community who want to render services to the institution should be encouraged.

10. Religion institutions and other agencies should be requested to set aside about 10% of their annual income to assist a technical teacher education programme closest to them without any conditionalities.

11. Institutions should be encouraged to establish or effectively support maintenance culture in the school. Accountability should be encouraged among the managers of maintenance culture of the institution.

12. Since technical education programmes have been encouraged to generate some money for themselves and also source for some simple materials and tools within the locality, there is need for government too to match this encouragement with some modifications in the government’s financial operation policies as they affect institutions. Administrators should be able to obtain money from their allocations to meet urgent and local demands on technical materials and tools without subjecting the illiterate local suppliers into the rigour of the financial operation policies of the bursary. Many technical programmes have suffered from obtaining materials locally through inability of meeting on the spot payment for materials and tools at source.

13. Managers and Administrators of Vocational – Technical education programmes should maintain credibility and prudence in the disbursement of
funds allocated for running their technical education programmes. There must be a clear and progressive understanding between the administrators and finance officers of the institutions. Therefore, workshops and seminars on financial management should be organized for Managers and Administrators from time to time. There also should be dialogue between the sponsors of Technical Education Programmes and the managers/administrators on the field from time to time on financial matters affecting their programmes. Government should have first hand information about the financial problems of her technical programmes and suggestions on how they can be solved.

14. Technical Manpower Production Trust Fund: Since the government has decided to accord technical education a good recognition as stated in the National Policy on Education, it is necessary too for technical education to obtain a regular supply of fund for progressive work. The demand on government for fund from many sectors is now an indicator that technical teacher education will continue to suffer from the supply of fund for operation. Therefore it is suggested that government should establish a technology of technical manpower production trust fund with seed money of about one billion naira and with a board of trustees. Technical teacher education will now have an appreciable share regularly from the profits of this Trust Fund. Government will then have a little bit of relief since technical teacher education will obtain additional money for progressive development from government investments.

Although the global economic recession is the necessitating factor responsible for this search for alternative means of funding technical teacher education, it must be understood that it is quite in place for industries, business organisations and communities to foot part of the bills for technical education. The reason for this is that industries, business organisations and communities benefit immensely from the labours of products of technical education. In fact, technical training programmes and teachers exist primarily to satisfy the needs of industries, business organisations and communities for skilled technical manpower. Thus this book would still have recommended community and industry’s participation in the funding of technical teacher education even if the Nigerian economy were buoyant. Technical teacher education holds the key to effective technical manpower production in Nigeria. Every thing must therefore, be done to ensure that technical teacher education
programmes are well funded. Poorly funded technical teacher education kills the ingenuity and motivation of teacher trainers and results in the production of half-baked teachers who would end up doing more harm than good. All hands must therefore, be on deck to ensure that quality is installed into our technical teacher education programmes through adequate funding.
CHAPTER SEVEN
MANAGEMENT OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA

Efforts have shown that vocational-technical institutions are not just establishment everywhere for the sake of increasing the number of institutions. Assurance on effective manpower and adequate facilities are confirmed before an approval for establishing one is effected. This effort goes beyond that. The National Board of technical education ensures that for any institution to be called vocational technical institution, certain standards ought to be met. In doing this, national Board for Technical Education (NBTE) embarks on accreditation, supervision, inspection and wastage management of programme in Polytechnics and Colleges of Agriculture. Experts from the NBTE office will visit the institution, making sure that facilities, course contents, qualified teachers are almost enough for the take off of the programmes. Before, embarking on accreditation programme, certain standards are readily available. These standards will be the yard sticks to determine the possibilities of setting up the institution. If even the institution, has been established, experts drawn from the NBTE can disallow the existence of such institution if the required standards are not met.

At the same time, teachers in such institution can be improved upon their methodology through effective supervision. Supervision per se is merit to correct errors and improve the performance of teachers. Adequate supervision will actually lead to positive output and manpower production.

Similarly, after the setting up of the institution, another visit could be made for the inspection of all the facilities and general maintenance of the institution. The inspection visit could also be likened to the accreditation visit. All the countries compared embarked on this management techniques since their basic motive centred on manpower production. As part of management of effective instruction the Federal Government has embarked upon effective retraining of existing technical teachers through the Technical Teachers Training Programme (TTTP) which aims at equipping teachers with knowledge and skills in modern technology and methodology of imparting them to the youths in schools.
EVALUATION OF VOCATIONAL-TECHNICAL EDUCATION IN NIGERIA

‘Generic root’ of evaluation emanates from the informal school system in form of apprenticeship. Youths are assessed by their ability to perform tasks apportioned to them; like making of heaps and clearing of farm land. Daughters are equally assessed by their performance tasks on domestic duties.

In the formal school set up, pupils and students are subjected to some screening exercises before admitted and promoted into new classes. Similarly, in vocational technical institutions and polytechnics, students are normally assessed for their skills in their intending subjects to be offered in schools.

Based on this premise, students and pupils are assessed for entry behaviour. There are series of assessment tests and examinations. These include: G.C.E. O’ Level, Diploma examinations and Advanced G.C.E. Standards or criteria used for evaluating students and pupils vary from institution to institution. At the same time, Federal Ministry of Education set up certain standards for assessing G.C.E. O’ Level performance and high school certificates. The entire institution could also be evaluated by experts from Federal Ministry of Education. This could be in form of accreditation and inspection of facilities, students and teacher.

In the final analysis, evaluation in Nigerian Institution is a rigorous and comprehensive one. It emanates from the primary education level to the Tertiary education level with different examinations and tests. The evaluation is much more conspicuous now in the technical areas, where students are given a piece of work and are expected to carry out the skill immediately. Effective, evaluation may help us to meet up with the manpower needs and will at the same time tell us at what level we are educationally.

LESSONS FOR NIGERIA

Any study on comparative education cannot be complete without cross references and pin-pointing of lessons worth learning. In the foregoing discussions on the development of vocational education in the U.S.A., Britain and Japan, certain patterns could be isolated. Some of these patterns (or features) and the lessons they portend for Nigeria are highlighted as follows:
1. **Vocational Education is a child of Necessity:** The development of vocational education in America arose out of the need to develop weapons of war and dominate the world physically and economically. In Japan, vocational technical education was catalyzed by effect of the war; desire to overcome the impact of increasing population pressure. Reforms in the apprenticeship system were made inevitably by the industrial revolution while formal vocational education was necessitated by urgent needs for war weapons during the world war years. In Nigeria, the major catalysts for educational reforms have been perennial shortage of skilled manpower, high rates of graduates unemployment and prolonged economic recession.

2. **Vocational Education Programmes are Utilitarian and Dynamic:** At any point in time, programmes of vocational education serve pressing local and national needs. These programmes are either modified or completely jettisoned as soon as these needs have been met or as soon as they are no longer tenable. With vocational education, as exemplified in USA, Britain and Japan, there are no eternal verities, no sacrosanct curricula and no fundamental curriculum. Programme offering is strictly based on needs and the best route to serving the needs as they arise amounts to the best curriculum. In Japan for instance, war technology was the focus of vocational education during the world war era. Today, emphasis is on computer technology and electronics for home applications.

3. **Vocational Education as a Component of Basic Education:** In U.S.A. and Japan, skill education is glorified over and above liberal education. The British education system hitherto revered liberal education has shifted ground significantly in favour of vocational education due to stiff competition in the world of technology. Thus, skill education has now acquired the reputation of a necessity for all rather than the consolation of the poor masses. This is evident in the fact that basic education in developed countries is now considered incomplete unless the child has received occupational/vocational education. The introduction of vocational subjects in to secondary school curricula in Nigeria via the National Policy on Education is consistent with this enhanced image. However, the paragraph of the policy which connotes that vocational education in Nigeria is meant for those who cannot stand the
academic rigour of 6 year secondary schooling negates the spirit of this innovation.

4. **Promotion of Indigenous Technology Stimulates Vocational Education:** The experiences of U.S.A., Britain and Japan showed that vocational education keeps peace with the level of technological development in the country. Courses and programmes offered depend on available technology rather than the universal level of technology advances. A country that depends on imported technology must aim to develop her own technology if industrial growth and concomitant expansion in vocational education can be sustained. Like in Japan, initial efforts may amount to invitation and adaptation, but eventually, the country would be able to develop her own technology and complete favourably in the production of new technologies.

5. **Consumption Pattern Affect Vocational Education:** The growth of technology in Japan in particular showed that the consumption patterns of the people cannot be ignored in the search for industrial and economic development. The taste and fashion of the people must be such that encourage the expansion of local industries, stimulate industrial growth and consequently lead to increased demand for vocational education. If the consumption pattern is in favour of imported goods, efforts must be made to either produce those goods locally or encourage alternative consumption patterns that can be satisfied locally. Also, the people must be discouraged from developing a miserly and austere attitude to products of technology. Aggressive consumption of home made goods stimulate industrial growth and leads to expansion in vocational education.

6. **Manpower Development is central to vocational Education:** In U.S.A., Britain and Japan, the primary objective of vocational education is manpower development. Consequently, manpower development agencies are fully involved in the management of vocational education. In Britain for instance, the manpower service commission is fully involved in the sponsorship and funding of vocational education. The involvement of relevant manpower development agencies is particularly necessary in order to ensure that training programmes align with manpower needs. The manpower development agencies furnish the training institutions with manpower surveys; assist in the placement of products and contribute to the funding of programmes.
7. **Evaluation of Vocational Education is Performance Based:** In the course of their development, countries such as the U.S.A. and Britain have long realized that evaluation must focus on the objective of the programme if the objectives are to be realized. Consequently, the evaluation of students’ learning in vocational education in these countries is through performance-based tests than achievement tests. The ineffectiveness of certain vocational subjects in the Nigerian school systems is partially due to the use of achievement tests rather than performance based tests.

8. **Diversification of funding is Desirable:** In U.S.A., Britain and Japan, the funding of vocational education is a shared responsibility of all arms of government and industry. Each Local, State and National Government makes specific contributions to the funding of vocational education. Through special levies and other legal requirements, firms which utilize the products of vocational education are made to participate in its funding. Funding of vocational education in Nigeria is at present ineffective because the Federal Government is almost entirely responsible.

**SUGGESTIONS FOR IMPROVEMENT**

On the basis of the lesson learned from the development of vocational education in the USA, Britain and Japan, the following improvements are desired in Nigeria:

1. The philosophy and objective of vocational education should be revisited to ensure that prevailing needs are served. In these days of prolonged economic depression, vocational education should aim at returning the country to a sound economic footing rather than self-reliance. A nation first has to survive well in this competitive world before aiming at self-reliance.

2. The current approaches to curriculum development in vocational technical education at the secondary school level needs to be re-examined and harmonized. In the mainstream secondary school vocational subject such as agriculture are treated as the pure sciences in content arrangement and methodology. In technical colleges however, vocational subjects are treated more as practical arts and learning by doing is fostered. Improvement in secondary level vocational education would require that approaches to curriculum development which foster learning by doing are adopted.
3. The concept of industrial training for tertiary level students of vocational education needs to be revisited. As a result of the way the ITF is conducted, students often find themselves in jobs which bear no direct relevance to their training and which do not assist them in their occupations and goals. At the end of their training many graduates discover that they are yet to acquire the competences and confidence which exposure to practice work should help them acquire. The concept of work experience should replace our understanding of industrial training so that persons in training can be exposed to practical work situations that are directly relevant to their education and occupational goals.

4. The improvement of vocational education in Nigeria can only be sustained through active research and development activities. In Nigeria however, no institution exists that has a specific mandate to conduct research and development studies in vocational education. The NBTE the NERDC make impacts commensurate with their manpower and funds but considering the importance of vocational education in the world today, a fully fledged centre for vocational-technology education research is desired. This centre should be charged with the responsibility for:

(a) Appraising the effectiveness of curricula for all vocational technical subjects or programmes.
(b) Conducting and sponsorship research on the impact of vocational technical education on the economy.
(c) Development instructional materials for vocational technical education.
(d) Monitoring development of vocational education around the world and within the country and their implications to National interests.
(e) Developing testing innovative approaches to vocational education.

5. In the wake of heightened unemployment in the mid-1980s, the national directorate of employment (NDE) was set up to assist young school leavers under artisans and apprentices. Most times, these artisans are persons who have no formal education while the apprentices find themselves learning trades which are irrelevant to their previous education. The leads to the production of new artisans who cannot do better than the masters who trained them. The needs of these school leavers would be better met by establishing vocational or occupational training centers to provide formal vocational
education in relevant occupational areas to both school leavers and artisans. Products of these centres, more especially the artisans can establish on their own while a few can serve as technicians to pro-vocational subjects in junior secondary school to make these programmes effective. The propose vocational or occupational centres will also serve to meet the training needs of adult, a situation so much valued in Japan and U.S.A.
REFERENCES


