

**EVOLUTION, ADMINISTRATION AND MANAGEMENT OF VOCATIONAL AND
TECHNICAL EDUCATION IN NIGERIA: IMPLICATIONS ON SELF RELIANCE
AND SUSTAINABILITY**

BY

ALADEMERIN, EDWARDS ADESEYE, PhD

PROFESSOR OF VOCATIONAL AGRICULTURAL EDUCATION,
DEPT. OF AGRICULTURAL SCIENCE,
TAI SOLARIN UNIVERSITY OF EDUCATION,
IJAGUN, OGUN STATE,
NIGERIA. alademerinea@tasued.edu.ng

BOLAJI, STEPHEN DELE, PhD²

COURSE MANAGER; MASTER OF TEACHING (MTEACH),
CHARLES DARWIN UNIVERSITY,
DARWIN,
NORTHERN TERRITORY,
AUSTRALIA. Stephen.Bolaji@cdu.edu.au

AND

OJO, ABIODUN, PhD.

DEPARTMENT OF EDUCATIONAL FOUNDATIONS,
TAI SOLARIN UNIVERSITY OF EDUCATION,
IJAGUN, OGUN STATE,
NIGERIA. abiodunojoade@yahoo.com

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Objectives

After reading through this chapter, the readers or students will be able to ...

Explain the meaning, historical background and the concept of vocational education and training in Africa

Discuss the Colonial interventions and other International engagements in the evolution of vocational education and training in Nigeria and parts of Africa

Explain the theorems and components of what makes education truly vocational through the teacher preparation programme

Describe teacher education in relation to vocational education development and capacity training model

Identify effective administrative management techniques of vocational and technical education and training in Nigeria

Outlines

Historical background and the concept of vocational education and training in Africa

Functional education is the greatest investment to emancipate all from poverty. Colonial education concentrated mainly on cognitive domain of learning and little focus on affective and ignored the psychomotor domain. Vocational education emphasizes doing aspect of curricula by making the school programmes practically oriented. Africans depended heavily on agriculture for foreign earnings before the era of oil boom and solid minerals. The educational system in a country determines to a very large extent the level of development and economic growth. Functional and qualitative educations are key components to survival in all nations of the world. In reality, a lot still needs to be done to make school leavers become job creators and not just job seekers as they grow into adulthood. In Africa, poverty is the primary cause for the lack of a decent education that can assure the youths and teeming populations of an independent future living. This type of education can appropriately equip individuals to face the challenges of the society. Vocational education provides appropriate skills, knowledge and attitude for a successful living. Vocational education, vocational technical education and technical vocational education are terms that are used interchangeably to mean the same concept of “education and training for those who need it, want it, and; can profit by it”. In this paper, we will use any of the terms to make justifications on some issues in relation to technological and transformation agenda through colonial era up to the present day in the educational development on the African continent. Vocational education is, and continues to be known by many names as industrial education, technical education, manual education and more recently career education (Grubb and Lazerson, 1975). The 1997 UNESCO International Standard Classification of Education definition defines technical and vocational education and training (TVET) as vocational education and training to “acquire the practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupations or trades.” (UNESCO and UNDP, 1995).

“What I hear, I forget; What I see, I remember; What I do, I understand” - Chinese proverb. *“Mihil intellectu quod non fuit prius in sensu”* which literally means *“there is nothing in knowledge which has not first passed through the senses”* (Commenius, 1972). These aptly describe the concept of vocational education in our formal and informal settings. An extract from the declaration of the participants in the UNESCO meeting of TVET experts on Learning for Work, Citizenship and Sustainability, Bonn, 2004 indicated that “Since education is considered the **key** to effective development strategies, technical and vocational education and training (TVET) must be the **master key** that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development”

The primary objective of all technical and vocational education and training programmes is the acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area. The need to link training to employment (either self or paid employment) is at the base of all the best practices and strategies observed world-wide. In recent years, in view of the rapid technological advances taking place in the labour market, flexibility, adaptability, and life-long learning have become the second major objective. The third objective, which is particularly important for Africa, is to use TVET as a vehicle for economic empowerment and social mobility and for the promotion of good governance and regional integration (African Union. 2007).

Vocational training of the old took the form of subsistence farming, animal husbandry, fishing, hunting, weaving, blacksmithing, and trading etc through indigenous or traditional form of education under the tutelage of an experienced professional. In his book “History of Education in Nigeria” Babs Fafunwa (1980) indicated that “Recreational activities were also encouraged in the form of swimming, dancing, drumming, wrestling, singing etc. At the end of each trainings demarcated by age level or years of exposure, the child was given a practical test relevant to his experience and level of development and in terms of job to be done. This was a continuous assessment which eventually culminated in a passing out ceremony or initiation into adulthood”.

In the rural areas of Nigeria, pre-school and early childhood education through traditional means have been particularly appealing intervention by which parents on one hand and the teachers on the other have encouraged their wards’ life participating in domestic subsistence agriculture and other forms of craftsmanship like weaving, hairdressing, sculpture, textiles, art works etc. The teaching of agriculture and other practically oriented subjects at the primary and secondary school levels of our educational system is a mixture of trained professional teachers and others who through their interest or added responsibility find themselves in the classrooms and on the farms. In the course of the teaching, some other practical arts are taught in combination – cookery, home making etc consciously and unconsciously.

Before technical-vocational schools were established, the formative training of working class youth occurred outside the public school system. After completing a number of years of primary schooling- when it was available- working class children sought apprenticeship training in artisanal and industrial trades under the tutelage of a master craftsman or worker (Unwin, 1904, Scott 1914 and Dunlop and Denman 1912). On the

continental level, formal vocational education were largely initiatives that came from international agencies particularly ILO and UNESCO and much later by private US organizations like Carnegie Corporation, Ford foundation etc.

Since the beginning of the 20th century and after independence, Nigeria as a country has been undergoing reforms to improve skills training and vocational education as poverty reduction initiatives to ensure productive, competent, and flexible workforce which is a prerequisite for furthering economic development base for the country.

To achieve this, the teacher preparation programme must be well focused and strengthened. Over the years, teacher training institutions have transformed through various stages of certification in Grade III, Grade II, Associateship Diploma in Education, Nigerian Certificate in Education, Bachelor's of Education etc for various educational levels. Some of the institutions saddled with this manpower development have either been phased off or restructured in tune with contemporary needs of the society. The various policies on education – Universal Primary Education (UPE) of 1974, 6-3-3-4 system of education of 1978, the Universal Basic Education scheme of 1999 etc all came with appropriate teacher training programme for the capacity development. Of recent, one major significant event in the development of teacher education in Nigeria was the establishment of the first University of Education - Tai Solarin University of Education in 2005.

The role of the teacher in sustainable development cannot be quantified, especially in training personnel in various areas of the workforce (Ogunyinka et al. 2015). For national development and peaceful co-existence to be attained, there is need to give priority to investment in human capital through teacher education and training. The Nigerian educational system needs to be responsive to the technological social and economic needs of the society and provide the type of human resources needed in the industrial and economic sector. The role of effective teacher education programme therefore is to translate the needed skills, knowledge and attitudes to meet their needs and the societal ones.

Africa is faced with a lot of challenges particularly regarding the youths which make them vulnerable. Many have little or no access to education, employment and livelihoods, healthcare and basic nutrition. In the last few years, political conflict, armed violence, and the HIV/AIDS pandemic created a crisis of unprecedented proportions for younger generations of Africans. But within this stressful environment, the youths need to organize and make sense of their daily lives (CCP-AU 2010).

Nigeria's formal education system follows a 6-3-3-4 structure introduced in 1982, following the adoption of the National Policy on Education (1977). Primary education begins at six years of age and lasts for six years. Secondary education begins at 12 years of age and for a further six years, comprising two three-year cycles. Technical and vocational education is now offered at the secondary level. Tertiary education is for an average of four years. Pre-primary education is predominantly private and starts at 3 years.

Since 1992, the Nigerian Government introduced the nine-year schooling program, as the universal basic education, from six to 15 years of age, which is to be free and compulsory. This policy is designed to ensure 100% transition from primary to junior secondary level in order to widen access to basic education and eliminate present gender, social and geographic inequalities in enrolment.

Colonial interventions and other International engagements in the evolution of vocational education and training

The history of the existence and survival of man since the earliest period of creation is woven around vocational education. The use of the brain and the hands to eke out a living and also to guarantee sustenance in life started with the early men. During the colonial period, the formal education given to the people then were chiefly aimed at propagating the ideals of the Christian doctrines and beliefs. They concentrated on the 4R^s of Reading, wRiting, aRithmetic and Religion. This type of liberal education was also accompanied with recreational activities – swimming, dancing, drumming, singing, wrestling etc. This type of education produced Civil Servants, Clerks, Administrators, and Clergies etc. It obviously slowed down the pace of the Nation's technological development.

Modern day vocational education development started with the foreign Christian missions in the mid 19th Century. The Missionaries and the instructors of Vocational education identified the four concepts thus:

The Learner

The Environment – school or workplace

The subject matter – or content

The teacher – or instructor.

At the centre of all these concepts is the learner.

The learner gets attention and focus from the teachers and the instructors so as to be able to make good use of all that he or she has been taught or exposed to during the training.

TVET in Africa is delivered by both government and private providers, which include for-profit institutions and non-profit, NGO and Church-based institutions. School-based government training institutions are generally fewer in number than those in the private sector.

The African Union (AU) has a vision of “an integrated, peaceful, prosperous Africa, driven by its own people to take its rightful place in the global community and the knowledge economy. ”This vision is predicated on the development of the continent's human resources. In its Plan of Action for the Second Decade of Education (2006 – 2015), the AU recognises the importance of TVET as a means of empowering individuals to take control of their lives and recommends therefore the integration of vocational training into the general education system. The AU also recognises the fact that vast numbers of young people are outside the formal school system, and consequently recommends the integration of nonformal learning methodologies and literacy programmes into national TVET programmes (African Union. 2007).

It is within this framework that the African Union Commission is spearheading the development of a new strategy to revitalize TVET in Africa. The objectives of the strategy are:

To revitalize, modernize and harmonize TVET in Africa in order to transform it into a mainstream activity for African youth development, youth employment and human capacity building in Africa;

To position TVET programmes and TVET institutions in Africa as vehicles for regional cooperation and integration as well as socio-economic development as it relates to improvements in infrastructure, technological progress, energy, trade, tourism, agriculture and good governance;

To mobilize all stakeholders in a concerted effort to create synergies and share responsibilities for the renewal and harmonization of TVET policies, programmes and strategies in Africa.

The increasing importance that African governments now attach to TVET is reflected in the various Poverty Reduction Strategy Papers that governments have developed in collaboration with The World Bank and other international agencies. One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of poverty (African Union. 2007).

The colonial masters encouraged education that was at that time good for administrators and clerks. This was done basically for their own economic interests in the continent of Africa. As the time progressed, the education of Reading, wRiting, aRithmetic and Religion (4Rs) soon became obsolete and Nations now needed education that will assure of technological growth and economic development. The quest for vocational education became paramount all over the continent.

According to Andrew Gavin Marshall (2011) in his book, “To prop up a domestic elite which would be subservient to foreign (i.e. Western) interests, an educational system had to be constructed which would produce foreign elites that were indoctrinated with hegemonic ideology, and would thus come to see ‘cooperation’ with the West, and the opening up of their domestic resources to foreign corporations not as a capitulation to a foreign dominator, but as a necessary part of the process of development”. He went further to indicate that “The education which facilitated American imperial expansion around the world was not situated within the Western imperial powers alone, but was simultaneously expanded into the ‘Global South’, those regions of the world which America and the West sought to dominate. This was a pivotal aspect of the imperial project, as it was imperative for America to rule the world, but in a fashion not so reminiscent of the previous age of empires, where domination and empire were openly acknowledged and propagated. Following the two world wars which were the result of a clash of empires, the notion of imperial domination outright was largely discredited. Therefore, the era of ‘informal empire’ came to dominate: imperialism without formal colonization”.

The zeal of the Western world to develop the nationals of their colonies educationally and technologically will in turn be the benefits of the colonial masters as they were to be better beneficiaries in future.

In the first half of the 20th century, the Rockefeller Foundation and Carnegie Corporation undertook joint projects aimed at constructing an education system for black Americans in the South as well as for black Africans in several British colonies. In 1911, the Phelps-Stokes Fund was chartered with the purpose of managing “the education of Negroes both in Africa and the United States.” This restrictive educational system for black Americans had already been institutionalized, beginning with the ‘philanthropic’ endeavours of Wall Street bankers and northern industrialists and capitalists at several conferences in 1898. The education was constructed on the basis that, as one conference participant stated, “the white people are to be the leaders, to take the initiative, to have direct control in all matters pertaining to civilization and the highest interest of our beloved land. History demonstrates that the Caucasian will rule, and he ought to rule.” As one conference organizer stated: Time has proven that [the ‘negro’] is best fitted to perform the heavy labor in the Southern states... He will willingly fill the more menial positions, and do the heavy work, at less wages, than the American white man or any foreign race... This will permit the Southern white laborer to perform the more expert labor, and to leave the fields, the mines, and the simple trades for the negro (Arnove, 1980).

As a follow up to this, the Jeanes Fund, headed by Dillard, instituted the concept of the ‘Jeanes teacher’: a local Negro who could make contact in the rural communities as no one else could and who could adapt the school curriculum to the conditions of these communities. Hygiene, home economics, and industrial and agricultural training were to form the backbone of the curriculum for Jeanes rural schools. In 1925, the Jeanes school concept was transferred to Kenya, largely owing to the vigorous advocacy for such a transplantation by representatives of the Phelps-Stokes Fund (Arnove, 1980).

By the mid-1950s, foundation officials had established a consensus with policymakers and business leaders “regarding the importance of the developing world for the United States.” In Africa, the Rockefeller, Carnegie and Ford Foundations undertook massive programs which led to: (1) the creation of lead universities located in areas considered of geo-strategic and/or economic importance to the United States; (2) an emphasis within these institutions on social science research and related manpower planning programs; (3) programs to train public administrators; (4) teacher training and curriculum development projects; and (5) training programs which shuttled African nationals to select universities in the United States for advanced training and returned them to assume positions of leadership within local universities, teacher training institutions, or ministries of education. (Arnove, 1980).

Available and extensive literatures indicated the preference of the whites to use the blacks as labourers and tillers of the soil for their own benefits.

Arnove (1980) went further to indicate that in 1917, the Phelps-Stokes Fund published a two-volume survey of Southern Negro education, authored by Jones: The study maintained

that the only education appropriate for the black man was that with a strong vocational/agricultural bias. Academic/literary education was perceived as dysfunctional for the black man because it (1) would open vistas that he could not attain in the rigidly segregated American social structure, (2) would fail to provide the appropriate skills that would make the black man a more productive worker or agriculturalist... (3) would seriously undermine the ability of the white ruling oligarchy to maintain its political hegemony in the face of demands for equality, which it was feared an academic/literary education would engender.

Afterwards, The Phelps-Stokes Fund/Tuskegee concept quickly became incorporated into official mission and colonial educational policy of the British missionary educators in Africa.

Arnove (1980) went further that the “British colonial officials were quick to endorse the conclusions of the commissions. As Kenya’s colonial secretary stated, the educational philosophy would ensure “an intelligent, cheerful, self-respecting, and generally docile and willing-to-learn African native.” In 1925, Jones successfully negotiated for financial aid from the Carnegie Corporation to finance the establishment of a Jeanes training school in Kenya. The funding from Carnegie included direct funding for the school, as well as facilitating white educators from Africa to come to the U.S. to “investigate” the Southern educational system, as well as implementing intelligence tests for Africans (just as the major philanthropies had been propagating around the United States as part of their support for eugenics programs). Jones also turned to other major foundations for support, such as Rockefeller’s International Education Board (which had Anson Phelps-Stokes as a trustee), as well as the Laura Spellman Rockefeller Memorial, which all subsequently provided major grants to establish several schools across Africa.

After it became evident at the end of the war that the colonial world was going to be dismantled, the scramble to align the colonial territories to one or other of the emerging power blocs began. America wanted to control the resources of strategic regions such as Asia, Latin America and Africa, the major American foundations stepped to the forefront in constructing education for elites of the colonial territories that would produce leaders subordinate to Western interests. This idea brought in the likes of foreign foundations and donors – Ford Foundation, Carnegie Corporation, Rockefeller Foundation etc with the main aim of developing the human capacity of the continent.

At the same time that and Rockefeller Foundations were funding universities and managing the social sciences of African education, the Carnegie Corporation became principally interested in the training of teachers, following on Carnegie’s earlier interest in shaping the colonial education system in the pre-war years: and the Ford Foundation gave large grants for the establishment of schools and colleges.

In conclusion, Arnove (1980) indicated that the establishment of leading universities in Africa was the initial emphasis among the foundations. The Ford Foundation decided to concentrate its efforts in Africa “on the training on elite cadres in public

administration, agricultural economics, the applied sciences, and the social sciences, and to strengthen African universities and other postsecondary institutions for this purpose, [as] a logical extension of similar emphases in the foundation's domestic work," in relation to the development of Area Studies and the shaping of political science in America, itself. The Ford Foundation's most important projects in Africa were undertaken in "Nigeria, Ethiopia, Congo/Zaire, and in a combined university scheme linking the East African nations of Kenya, Uganda, and Tanzania. Rockefeller funds were concentrated on the East African interterritorial scheme" in Nigeria and in Zaire.

Between 1958 and 1969, the Ford Foundation spent \$25 million in Nigeria, of which \$8 million was used to underwrite university development, and \$5 million of that went specifically to the University of Ibadan. Between 1963 and 1972, the Rockefeller Foundation allocated roughly \$9 million to the University of Ibadan. As one official of the Rockefeller Foundation said, "our dollars will... be able to exert an extraordinary leverage." The Ford and Rockefeller Foundations then placed enormous emphasis on developing the social sciences at the universities they supported, with the aim to bring about "rationally managed" social change; the same fundamental belief that led to the emergence of the social sciences in creating a "rationally managed" America in the beginning of the 20th century, emphasizing reform over revolution. The logic was that, "the key lay in the creation of technocratically oriented elites with social science competencies which could be applied to the alleviation of the problems of underdevelopment."

The Rockefeller Foundation also initiated several funding programs for universities in Latin America and Asia, notably in Peru, Colombia, Brazil, Thailand, the Philippines and Indonesia. By the early 1980s, the Rockefeller Foundation had awarded over 10,000 fellowships and scholarships. From the Ford Foundation's inception in 1936 until 1977, it had allocated roughly \$919.2 million to "less-developed countries". The Ford Foundation even maintained "a steady stream of scholarly exchange with the Soviet Union and other countries of Eastern Europe since 1956, and with the People's Republic of China since 1973." Ford and other foundations had also played significant roles in channeling intellectual dissent in developing nations into 'safe' areas, just as they do at the domestic level. This has required them to fund several radical (and sometimes even Marxist) scholars. The Ford Foundation had also supported the relocation of displaced scholars following the military coups in Argentina in 1965 and Chile in 1973. However, such foreign 'assistance' has not gone unnoticed entirely, as in 1971 there was violent resistance by radical university students and faculty at the University of Valle in Colombia, "a favored recipient of Ford and Rockefeller monies."

The traditional theories and how they truly make education vocational through teacher preparation programme

Teacher education in recent time is becoming a complex programme because of the ever changing demands of the society. It has moved from the traditional curricula setting to a more dynamic area of active and positive community engagements. The traditional belief that

teachers are mirrors of the society is still being held with reverence in most communities in Africa. It is believed that they must have an ‘all-round-knowledge’ as they are to impart knowledge to the young and old. This is well in line with the arguments of Obayan (2011) as he indicated that “with the uncertainty that characterises today’s knowledge economy, curriculum emphasis is shifting to *how well one has learnt to learn*, away from *how much one has learned*. Today’s teacher needs both a broad knowledge base and sharpened capacities for learning how to learn”.

Adewuyi and Ogunwuyi (2002) opined that teacher education is the provision of professional education and specialized training within a specified period for the preparation of individuals who intends to develop and nurture the young ones into responsible and productive citizens. It is informed by the fact that teaching is an all-purpose profession which stimulates the development of mental, physical and emotional powers of students. Such educated citizens would be sensitive and equipped with peaceful co-existence, environmental management and democratic process.

Teacher education relates to policies and procedures designed to equip prospective teachers with the knowledge, attitude, behaviours and skills they require to perform their tasks effectively in the classrooms, school, the church/mosque and the local and wider society. The outputs and outcomes of a successful teacher preparation programme will be a society of sane and responsible citizenry.

Dr. Charles A. Prosser, the first National Director of Vocational Education in the United States, developed and publicized the following sixteen theorems as a basis for sound and successful programs in vocational education.

1. “Vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work.”
2. “Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools and the same machines as in the occupation itself.”
3. “Vocational education will be effective in proportion as it trains the individual directly and specifically in the thinking habits and the manipulative habits required in the occupation itself.”
4. “Vocational education will be effective in proportion as it enables each individual to capitalize his interest, aptitudes and intrinsic intelligence to the highest possible degree.”
5. “Effective vocational education for any profession, calling, trade, occupation or job can only be given to the selected group of individuals who need it, want it, and are able to profit by it.”

6. "Vocational training will be effective in proportion as the specific training experiences for forming right habits of doing and thinking are repeated to the point the habits developed are those of the finished skills necessary for gainful employment."
7. "Vocational education will be effective in proportional as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach."
8. "For every occupation there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally or socially effective."
9. "Vocational education must recognize conditions as they are and must train individuals to meet the demands of the "market" even though it may be true that more efficient ways of conducting the occupation may be known and that better working conditions are highly desirable."
10. "The effective establishment of process habits in any learner will be secured in proportion as the training is given on actual jobs and not on exercises or pseudo jobs."
11. "The only reliable source of content for specific training in an occupation is in the experience of masters of that occupation."
12. "For every occupation there is a body of content which is peculiar to that occupation and to which has practically no functional value in any other occupation."
13. "Vocational education will render efficient social service in proportion as it meets the specific training needs of any group at the time that they need it and in such a way they can most effectively profit by the instruction."
14. "Vocational education will be socially efficient in proportion as in its methods of instruction and its personal relations with learners it takes into consideration the particular characteristics of any particular group which it serves."
15. "The administration of vocational education will be efficient in proportion as it is elastic and fluid rather than rigid and standardized."
16. "While every reasonable effort should be made to reduce per capita cost, there is a minimum below which effective vocational education cannot be given, and if the course does not permit this minimum per capita cost, vocational education should not be attempted."

The above theorems have significantly helped to distinguish vocational education from the general education. In addition too, the following characteristic features have gone a long way in determining what a truly vocational education is thus:

Education is vocational when it stresses the **specificity, practically, applicability, and immediate usefulness** in the development of a competent worker in a chosen occupation.

Education is vocational when it is designed specifically to improve the **efficiency** of an individual in a specific occupation – either as preparation for employment or supplementary to the duties of employed workers.

Education is vocational when it is taught and learned in its relations and applications to the actual work of a **specific occupation**.

Education is vocational when it is of **more value** to one who will pursue or is pursuing a specific occupation than to anyone else.

Education is vocational when it is **so timed** that the learner needs it and will apply it to useful and productive work in a specific occupation.

Education is vocational when it provides the **necessary skills and knowledges** in their practical and proper relationships for a specific occupation.

Education is vocational when it utilizes a solid foundation of **communication, mathematical problem solving, and critical thinking skills** to prepare students for entry level employment or for upgrading or retraining in existing jobs or apprenticeship programs.

Education is vocational when it incorporates the development of **leadership skills** needed for entry-level employment as an integral part of the instructional program.

Education is vocational when the student has a **specific occupational objective** and the program and training are responsive to meeting these goals and objectives.

Source: J. Fred Ingram, 1956 AVA President.

Teacher education in relation to vocational development and capacity training model

The idea of teacher training took its root from the need to train people to lead the missionary crusade of propagating the gospel during the early Christian missionary era (Ajayi and Ayodele 2002). The Nigeria's Federal Government in 1959 set up the Sir Eric Ashby Commission to investigate and determine the extent of manpower needs of the country especially within the education sector, with the eyes on the future. The report showed that education was indeed the tool for achieving national economic expansion and the social emancipation of the individual (The Commission recommended the establishment of four Federal universities in the country, as well as the introduction of some education-vital courses in them. The report led to the award of education related degrees like Bachelor of Arts in Education [B.A(Ed)], Bachelor of Science in Education [B.Sc.(Ed)] or Bachelor of Education [B.ed]. Some institutions ran programmes leading to the award of Post-Graduate Diploma in Education (PGDE).

Some of the recommendations of the Commission include:

- The establishment of more universities

- The introduction of a bachelor's degree in education i.e. B.A.(Ed), B.Sc. (Ed), or B.Ed

- The training of more teachers for the nation's post-secondary schools.

As a result of the recommendations of the Commission, more Universities were established which evidently showed that the Ashby's commission played a part in the development of teacher education in Nigeria.

There is the need to improve quality control in all organizations on the part of the trainees and the trainers. This is particularly important in all educational institutions where professionals are trained with the expectation of their graduates rendering quality services to the nation. Capacity training is about improving knowledge base and closing knowledge gap of individuals or group of individuals in any organization.

Capacity development is the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time. www.cadri.net/en/areas-we-work/cap

Capacity training can be best achieved through quality outputs from tertiary education. Tertiary education has significant roles in promoting economic growth and poverty reduction within the African continent. There are signs put in place for innovative policies to strengthen tertiary education systems in several countries within the continent. All these are basically targeted at poverty reduction and improvement in the quality of lives.

The World Bank highlights several roles for higher education under its strategic objective of building skills for growth and competitiveness within its Africa Action Plan for 2006-2008. This plan include the provision of relevant skills to the labor market; a capacity to understand and use global knowledge in science and technology, particularly for agriculture; a capability to assess existing information and generate new understanding through research; and a much closer working relationship with the productive sectors of the economy. The Plan also reaffirms the fundamental importance of expanding primary education, and of linking secondary education to a range of employment options. In short, a more balanced and strategic approach to human capital development is sought in an effort to boost the prospects for economic growth in Africa (Bloom, Canning, and Chan, 2006).

It is believed that quality higher education can be a panacea in helping specifically to solve these multifaceted problems through the involvement of knowledge workers such as academics, researchers and practitioners who are expected to play a critical role as a strong public voice for the promotion of both scientific excellence and science-based development. They therefore shoulder the primary responsibility of demonstrating that a strong scientific base strengthens nations by enabling citizens to address critical economic, environmental, and social issues in systematic and effective ways, thereby improving the quality of life of its citizens – through appropriate knowledge transfer to the students.

The tertiary institutions particularly the Universities in Africa are expected to regularly train required human resources in all spheres of human endeavours required in the society.

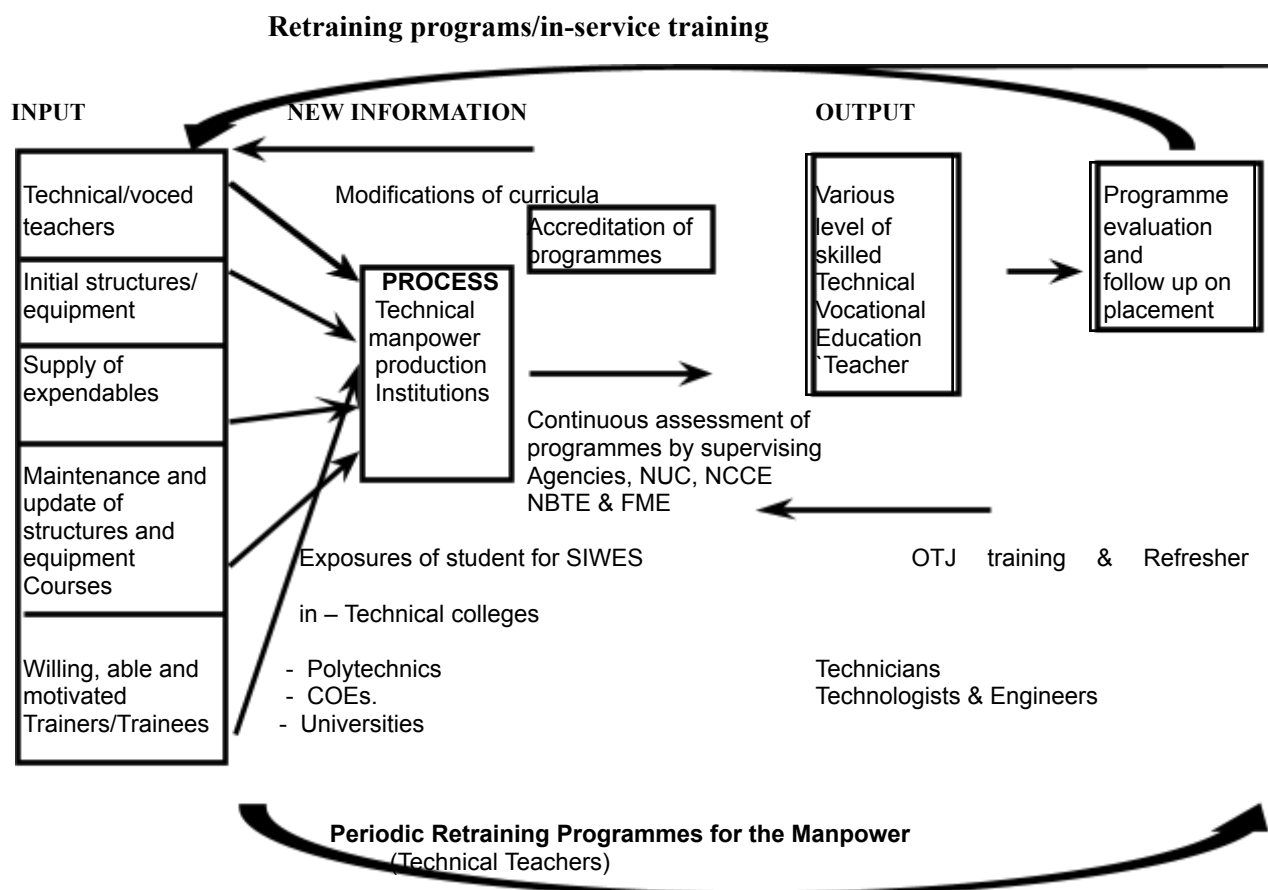


Fig.1. A Modified and adapted version of the schematic presentation of technical manpower production system through IPO.

Alademerin, E. A. (2002). Original Source; Olaitan, S. O. (1992) The Crisis of funding Vocational Technical Teacher Education in Nigeria. **Monograph. University of Nigeria, Nsukka.**

KEYS

NUC- National Universities Commission.

NBTE- National Board for Technical Education.

NCCE- National Commission for Colleges of Education

COE- College of Education

IPO- Input Process Output

FME- Federal Ministry of Education

OTJ- On the Job Training

SIWES- Students Industrial Work Experience scheme

. The Federal Government of Nigeria fully aware of the innumerable roles of vocational technical education in nation building has introduced 34 vocational subjects at the Senior Secondary school level in the country through the Nigerian Educational Research and Development Council (NERDC), a parastatal of Federal Ministry of Education. According to

NERDC publication titled “The new Senior Secondary School curriculum structure at a glance”, such include those tagged as trade subjects; fisheries, tourism, upholstery, animal husbandry, garment making, carpentry and joinery, book keeping, photography, marketing, salesmanship etc among others.

In buttressing this and in relevance to higher education, it was acknowledged that “In a knowledge economy, tertiary education can help economies keep up or catch up with more technologically advanced societies. Higher education graduates are likely to be more aware of and better able to use new technologies. They are also more likely to develop new tools and skills themselves. Their knowledge can also improve the skills and understanding of non-graduate coworkers, while the greater confidence and know-how inculcated by advanced schooling may generate entrepreneurship, with positive effects on job creation”. In knowledge economy, tertiary education can help economies gain ground on more technologically advanced societies, as graduates are likely to be more aware of and better able to use new technologies. (Bloom, Canning and Chan, 2006).

Recent evidence suggests higher education is a determinant as well as a result of income, and can produce public and private benefits (Bloom, Hartley, and Rosovsky 2006).

Higher education may create greater tax revenue, increase savings and investment, and lead to a more entrepreneurial and civic society. It can also improve a nation’s health, contribute to reduced population growth, improve technology, and strengthen governance. With regard to the benefits of higher education for a country's economy, many observers attribute India's leap onto the world economic stage as stemming from its decades-long successful efforts to provide high-quality, technically oriented tertiary education to a significant number of its citizens. (Bloom, Canning and Chan, 2006).

In 2003, at the Africa Regional Training Conference on Tertiary Education, Kofi Annan argued: The University must become a primary tool for Africa’s development in the new century. Universities can help develop African expertise; they can enhance the analysis of African problems; strengthen domestic institutions; serve as a model environment for the practice of good governance, conflict resolution and respect for human rights, and enable African academics to play an active part in the global community of scholars.

The global demand of highly-skilled labour requires appropriate education and training to turn out the required manpower particularly in the developing world. Lack of functional and saleable skills constrains economic growth, jobs, development and income among the productive youths.

In summary, the above clearly explains that by producing well-trained teachers, this can enhance the quality of primary and secondary education systems and give secondary graduates greater opportunities for economic advancement. In other words, a functional education can help keep up or catch up with more technologically advanced societies. Higher education graduates are likely to be more aware of and better able to use new technologies. They are also more likely to develop new tools and skills themselves. Their knowledge can also improve the skills and understanding of non-graduate co-workers, while the greater confidence and know-how inculcated by advanced schooling may generate entrepreneurship, with positive effects on job creation..

Effective management techniques of vocational and technical education and Implications in the society

The World Bank had cited severally that high training costs, poor quality of training, the mismatch between training and labour market needs and the high rate of unemployment among TVET graduates as justification to recommend a policy shift away from school based technical and vocational education and training. “Vocational and technical education and training”: A World Bank policy paper. Washington, DC indicated that:

“Every person shall have the opportunity to have his or her experiences and skills gained through work, through society or through formal and non-formal training assessed, recognised and certified. Programmes to compensate for skill deficits by individuals through increased access to education and training should be made available as part of the recognition of prior learning programmes. Assessment should identify skill gaps, be transparent, and provide a guide to the learner and training provider. The framework should also include a credible system of certification of skills that are portable and recognised across enterprises, sectors, industries and educational institutions, whether public or private” - Extract from the 2000 ILO International Labour Conference on Human Resources Development and Training (African Union, 2007).

We have to put into consideration the psyche of the recipients of the vocational education. Despite the prevailing unemployment of tertiary education graduates, many of them still feel they are being subjected vocational training is not dignifying enough. Rather they prefer white collar employment opportunities which are not available. There should be reorientation towards being self employed than being unemployed.

A strategy that can help in this dimension is policy change. Presently most of the degree programs are four years duration. An extension of the duration to six years and modification of the curriculum to enable the students to have bachelors degree in field of their choice and a diploma in a vocation for example a B. Sc Physics diploma Air conditioning will be more attractive to the students. The additional two years will take care of the vocational studies as well as the internship. The universities need to have well equipped vocational workshops for the programme if the operations are to be successful. To this end, the Tertiary Education Trust Fund (TETFUND) can be made to devote an appreciable percentage of its annual intervention to developing vocational workshops in tertiary institutions (Ojo and Sheyin, 2011). In addition too, a significant part of this percentage can be set aside for the training of personnel and facilitators for the various trades.

The model where 34 vocational subjects are introduced at the Senior Secondary School level by the Nigerian government should be supported with the training of required manpower for the teaching of the various subjects in all states of the Federation. In line with the traditional theorems of vocational education, the primary objective of all technical and vocational education and training programmes is the acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area. This can only be achieved when then minimum manpower is provided. Efforts should be put in place to train the required manpower in all the broad fields. More efforts should be put in place for participatory pedagogical approaches to make teaching and learning interesting by

integrating more practical in the contents. This is a laudable idea that other African countries should emulate.

The premium on the use of Information and communication technology services to assist in retraining and refresher courses for serving professionals particularly those in diverse areas of vocational education should be sustained. Governments should encourage the use of ICT in rural areas to help prove to the young people that vocational education has a future in the modern world and attracting them to work in the sector. The idea that vocational education is the bedrock for technology and engineering disciplines should be made known to the youths from the schooling years. The long lasting effects of the ideas will encourage the youths and give long lasting positive impressions to them to create a more sustainable society in future.

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