

**Technical and Vocational Education and Training: Vehicle for Sustainable Development in Nigeria.**

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**Abstract:** Vocational education and training is very cardinal to any economic development of a country. Training in general has potential benefits which accrue to the individual, organization and the nation in general. To the individual training enhances their future earning potentials career progression and employability. To achieve the above, the paper argues that the individual or groups will need skills to perform competently. With skill the individual can determine their own destiny. Because of the importance of skills to the individual, it is important that every individual access training to contribute to development. Currently Nigeria, not everybody is able to access training with the rise in population growth and economy going down, governments are unable to offer social amenities. Even schools and colleges cannot match the rising population and as a result fewer and fewer people are accessing training. The paper therefore focused on the contribution of a revitalized technical and vocational education and training to improve the economic status of the country and welfare of the people, trigger entrepreneurship which would eventually lead to job creation. The paper concludes that to solve the problem of widespread poverty, unemployment and national food deficit, priority should be giving to revitalized-technical and vocational education.

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**1. Introduction**

Education of all levels can shape the world of tomorrow, equipping individuals and societies with the skills, perspectives, knowledge and values to live in a sustainable manner. Education for sustainable development (ESD) is a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the earth's natural resources. ESD applies transdisciplinary educational methods and approaches to develop an ethic for lifelong learning; fosters respect for human needs that are compatible with sustainable use of natural resources and the needs of the planet; and nurtures a sense of global solidarity (UNESCO, 2005)

Education for sustainable development is a dynamic concept that encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating and enjoying a sustainable future". The overall aim of ESD is to empower citizens to act for positive environmental and social change, implying a participatory and action-oriented approach.

ESD integrates concepts and analytical tools from a variety of disciplines to help people better understand the world in which they live. Pursuing sustainable development through education people who provide the goods and services required by society. Calhoun and Finch

requires educators and learners to reflect critically on their own communities, identify non-viable elements in their lives; and explore tension among conflicting values and goals. ESD brings a new motivation to learning as pupils become empowered to develop and evaluate alternative visions of a sustainable future and to work to collectively fulfill these visions.

**The Four Major Thrusts of Education for Sustainable Development**

- Promotion and improvement of basic education: Access to basic education remains a problem for many especially girl children and illiterate adults. Simply increasing basic literacy and numeracy, as currently taught, will not significantly advance sustainable societies. Instead, basic education must focus on imparting knowledge, skills, values, and perspectives that encourage and support citizens to lead sustainable lives.

**2. Why Refocus Vocational Education in the 21st Century Nigeria?**

According to Calhoun and Finch (1982), vocational education has always been refocused by the changing needs of people and society. The basic concern of vocational education is for the further explain that, vocational education should satisfy the needs of society to fill required positions

necessary for the efficient operation of the economic system as well as the needs of individuals to find personally satisfying positions in the occupational structure.

Nigeria as a nation presently has many social and economic problems to handle in the twenty-first (21st) century. Most Nigerians are just recovering from chronic case of negative attitude towards vocational, technical and technological education. Nigeria is similarly just awakening from her long sleep of negligence of these aspects of education in her educational system (Apagu and Andural, 2007). The nation and her citizens are in the twenty-first century questioning the quantity and quality of these aspects of education in the nations system of education and among Nigerians, especially among the youths.

Another problem necessitating refocusing of Nigeria's vocational education in this 21<sup>st</sup> century is youth unemployment which appears to be accelerating every year. According to Adefaye (2004, p.30), the neglect of vocational and technical education in the country has increased youth unemployment. Adefaye explains that, in 2003, primary school leavers accounted for 14% unemployment, secondary school leavers accounted for 53.6% while tertiary education graduates shared 12.4%. From this data on unemployment situation among school graduates, there is a clear indication that the primary and secondary school leavers have total unemployment of 67.76%. Presently, about seventy-five (75) percent of secondary school leavers in Nigeria do not go further in higher academic pursuit, It is therefore, disturbing to have a situation where many youths who are most physically able to render services towards national development are highly unemployed.

Public education does not have the right to throw its rejects into the ranks of the unemployed in the community". Rhodes' statement implies that, public education system should find a way of making all citizens capable of contributing to the economy of the nation. If public education that is meant for everybody cannot prepare citizens for work, who else can do it? It is worth mentioning here that the problem of Nigerian youths' unemployment can be reduced to a very large scale through relevant vocational education programmes. Unfortunately, it appears the Nigerian system of education is more interested in sieving the academically talented youths from the non-academically-talented, and then allowing the non-academically talented human resources to waste away (Apagu and Andural, 2007).

According to Tommy (as reported in Adefaye, 2005):Despite the country's abundant resources, Nigeria had continued to manifest abysmal industrial performance record over the years because of the country's inability to synergies its resources to spawn an organic productive sector capable of engendering sustainable development and alleviate wide spread poverty.

The nation's predicament is heavily dependent on her ability to come up with a competent and dedicated workforce. The lack of dedicated and competent workforce is Nigeria's headache and the most militating force against the nation's technological, industrial and any type of national development. Vocational and technical education at this point stand very tall in helping the nation get out of the problem of lack of appropriate manpower and therefore, needs just refocusing to produce the desired result.

Nigeria's current efforts at educational reforms and restructuring are aimed at focusing issues: redesigning curriculum, increasing funding, refocusing monitoring process, accountability and transparency. Nigeria's present predicament was similarly experienced long ago by USA and the country's Advisory Council on Vocational Education. Vocational education which faces a unique challenge in the years ahead-a challenge rooted in the social and economic welfare of people. In the contemporary social scene with its large city problems, the ghettos, school dropouts, and variety of disadvantaged groups, the need for vocational education stands out clearly.

Calhoun and Finch (1982), in same vein emphasize that: Vocational education through the years has been responsive to the needs of society. When geographic and occupational mobility of workers, accelerated and improved technology required a higher degree of trained skills, society turned to the schools to supply its need for trained workers.

Calhoun and Finch further explain that because society currently insists that everyone leaving the public school system should have some type of occupational skill appropriate to earn a living, new importance has been attached to vocational education. Nigeria therefore, stands to gain from the longstanding experience of USA. There is therefore, no doubt that the Nigerian vocational education needs to be refocused for effectiveness and sustainable national development.

### 3. Reorienting existing education at all levels to address sustainable development

Rethinking and revising education from nursery school through university to include more principles, skills, perspectives, and values related to sustainability in each of the three - social, environmental, and economic-is important to our current and future societies.

#### *Developing Public Understanding and Awareness of Sustainability*

Making progress towards more sustainable societies requires a population that is aware of the goals of sustainable societies and has the knowledge and skills to contribute toward those objectives. Informed voting citizenry and knowledgeable consumers can help communities and governments enact sustainability measures and move toward more sustainable societies.

#### *Training*

All sectors of the workforce can contribute to local, regional, and national, sustainability. The development of specialized training programmes to ensure that all sectors of the workforce have the knowledge and skills necessary to perform their work in a sustainable manner has been identified as a critical component of ESD.

### 4. The Concept of Vocation Education

Vocational education is education and training for work. It is an education where skills are taught for the purpose of gaining employment through exposure to practical experience for self-actualization. Vocational education is education designed to prepare skill workers for industries, agriculture, commerce etc. Vocational education can be regarded as experience gained directly or indirectly that enables one to participate in a socially useful occupation either in or out of school, at various levels and to be sufficiently equipped to become an intelligent creator of goods and services. The continued deterioration of the national economy is a clear signal to every Nigerian try hard for a reliable and independent means of survival. This can only be realized through improved vocational training programmes with emphasis on functional agricultural education.

### 5. Vocational Education and the rural poor

Technical and vocational education and training plays an essential role in improving the wellbeing of rural families and communities. It increases productivity, empowers individual to become self-reliant and stimulates

entrepreneurship. Businesses are more willing to invest in a community with strong human resources. Skills development can therefore contribute to strengthening the social links of a community by promoting local employment, creativity and sustainable means of subsistence. Since there is a strong link between poverty and rurality, in Nigeria over 70% of poor people in rural areas where enrolment rates in all types of education are low, reducing poverty therefore will entail increasing rural educational opportunities as part of an overall development strategy. Here WET becomes a handy tool, as it can be both formal and informal. Such skill development of the rural poor must take into account:

- skills to diversity the rural economy rather than reliance on agriculture alone;
- equipping the people to add value to agriculture based product;
- training in basic literacy, numeracy and life skills should be In an integral part of the whole program;
- the promotion of the growth and profitability f local traditional crafts and industries.

However statistics as cited by Biakpara (2004) reveals that agriculture contributes about 41% to GDP and remains the lead sector for providing income and employment for the rural poor people. According to him, it employs 90% of the rural poor, nearly 70% of the total labour force and provides 90% of non-oil export revenue. Therefore a functional agricultural education through a well designed vocational programme remain one of the major key to alleviating poverty among the rural poor for sustainable development.

### 6. Technical and Vocational Education for Sustainable Development

Edition in whatever form is aimed at modeling a child or the individual into a better person relevant to his immediate environment. Sustainable development cannot be achieved without education. Development is a process where an economy undergoes social and economic transformation leading to a rise in the standard of living, access to basic amenities for all through knowledge.

It is in recognition of the above concept of development that technical and vocational education and training for poverty alleviation should be given utmost priority by government, having in mind the future consequence and task ahead for sustainable development. The future prospect and success of the WET would depend on the continuation and expansion of the existing cooperation both with national and international, as

well as by starting non formal training programmes for the unemployed and the community at large as part of the government poverty alleviation efforts toward sustaining welfare of the people and development (Hamza, 2005).

#### *Women Empowerment and Agricultural Education*

Though WET can be a decisive instrument in increasing opportunities for women to participate in the workforce and to improve their living conditions and social status through agricultural education, gender disparities still persist in many countries including Nigeria. Efforts should therefore be geared towards ensuring equal access to and participation in WET programmes for girls and women especially those who are marginalized. Women are responsible for half of the world food production and between 60% and 80% of the food in most developing countries. Not only are women the mainstay of the agricultural food sector, labour force, and food systems, they are also largely responsible for post harvest activities. However women fundamental contribution is continually under-appreciated and under-supported, and is often adversely affected by prevailing economic policies and other development conditions. This situation must be given serious attention by government, since sustainable rural development through agriculture cannot be achieved without the full participation of women. Agricultural education is therefore a sure means through which gender equality and women empowerment can be achieved, as a greater number of the rural poor are made up of women and children (Hamza, 2004; Hamza, 2005)

#### *Integrating skill development in Education for all (EFA)*

Ensuring that all learning needs of young people and adults are met through equitable access to appropriate learning and life skills programmes is one of the six educational goals for all (EFA) established at the world education forum in Dakar 2000. So the provision of the vocational skills training on agricultural education should therefore constitute an important component in national strategies if the EFA goal is to be achieved. But developing countries including Nigeria tend to concentrate on universal primary education and literacy, but do not pay sufficient attention to skill training for youths and adults, even though there are numerous initiatives focusing on providing education and training people from marginalized group. This in most case are often small in scale and are not always recognized as part of a comprehensive national education strategy. There

is the need for government to urgently consider redesigning the curricula with emphasis on skill acquisition, especially agricultural education, if the government target of reducing or eradicating poverty by the year 2020 is to be achieved.

In 2003, existing skills training programmes for the disadvantage groups were reviewed, and policies and institutional environment were analyzed in four countries in Africa and Asia (Mali, Senegal, Laos and Nepal). The experience of these selected countries was shared with other developing countries at an inter-regional seminar held at the international institute for education planning (Paris 22-23, January 2004). Suggestion to a more comprehensive approach to EFA was discussed and all stakeholders to EFA are to implement some of the policies and strategies for efficient result and feedback.

Incorporating WET in the EFA programme is a necessity in all developing countries because it advocates for flexible access to learning and training throughout life while down playing the short coming of the beneficiary in other to accommodate a larger group for sustainable development and improve / enhance productivity (Hamza, 2005).

#### *The value of technical and Vocational Training*

Skills are essential to the development of any economy. It is through skills that products in the form of goods and services are produced to the requirements of customers. With the skills an individual will be employable and participate in the production of goods and services. The reward to this participation is income that will be earned. Now when one is skilled, the rewards in terms of whatever income will be greater than one who is not skilled. With skills, the individual is able to perform a basic confidently and is able to sell himself or herself with less difficulty. With these capacities developed, one is able to earn a livelihood- regardless of whatever form it may come (Kombe, 2003)

#### *Tevet contribution to sustainable development*

Brundtland report of 1987 defines sustainable development as development that meets the needs of the present without compromising the ability of the future to generations to meet their own needs.

The Contribution of TEVET to sustainable development and improved livelihoods are:

- Tevet prepares people for the world of work.
- Through TEVET people acquire skills, knowledge, attitudes and values.

- Skills, knowledge, attitudes and values help people participate in production of goods and services.
- Through TEVET people can acquire skills, knowledge values and attitudes that can help them use natural resources optimally.

For example, in Zambia these are people who cut trees in forests and make charcoal for sell. Since this is their livelihood, these people do not anything wrong in the cutting of trees indiscriminately. Instead of stopping them from carrying out the activity from which they are earning a livelihood, the people are given business management courses to enhance their business. This kind of programme therefore require a component of environmental issues. Therefore there will be need to redesign curriculum to take care of sustainable development issues. For example a business management course for this group of people would require to include say a business management course for charcoal burners. The implementation of the sustainable development mission statement also represent a major challenge for vocational education and training stakeholders. In scarcely any other field of education does the acquisition of competences for sustainable employability skills exert such a major effect on the future viability of economic, technical, social and ecological developments than is the case in companies involved in trade and industry. For this reason, the task vocational education and training is to provide people at all levels from skilled worker to management with the ability to assume responsibility and conduct economic activity in a resource-efficient and sustainable manner whilst also shaping globalization in a just and socially acceptable way. Both the inherent insecurities and contradictions involved and the increasing attendant complexity and networking require an expert approach to be adopted (Dettrich, *et al.*, 2009).

### **7. Strategies for Refocusing Vocational Education in Nigeria in the 21st Century**

#### *Ensuring Equality of Access to Vocational Education by all Nigerians*

The National Board for Technical Education [NBTE] and the National Business and Technical Examination Board [NABTEB] have already started the process of refocusing vocational education in terms of providing equality of access to all Nigerians. NBTE has done a good job of coming up with a modular curriculum for this aspect of education in Nigeria. The modular curriculum is to make vocational education affordable by all Nigerians irrespective of

academic standing. The academically strong persons can go ahead and take all the prescribed modules in an occupational area of interest, sit for the NTC or NBC examinations and head for technical education or higher training at a tertiary education institution, then become professionals later in life. This cadre of personnel will grow up to occupy leadership positions in their chosen occupations.

The academically weak persons are in no way kept out of the programmes. They are free to take as many modules of the curriculum and practice to the level that their abilities may lead them without necessarily taking the NTC or NBC examinations or heading to the challenge of tertiary education. This situation will thereby, ensure an array of categories of workforce for national development. What is left undone here is public enlightenment by NBTE and NABTEB. These bodies need full government support to that effect.

#### *Coping with Possible Enrolment Explosion in Vocational Education Programmes in Nigeria*

The question that may readily come to mind in a situation whereby all Nigerians are to have equality of access to vocational education in the country may be “how can the few vocational education institutions in the country cope with the enrolment explosion?” One way of coping with the possible enrolment explosion will therefore, be to allocate more money to the area and have more vocational education institutions established, even though these schools are capital intensive. What is worth doing is worth doing well.

The second way to cope with possible enrolment explosion is to improve the introductory technology education facilities available in the secondary schools to enable the vocational education programmes take-off at the senior secondary schools with the determination to improve the facilities gradually with time. The third way out is to admit students in streams (A, B, C,) and run shifting system at the presently available science and technical colleges in the country, especially in the urban areas where electrical power sources may be readily available to improve lighting at night as well as power machineries and other appliances/equipment. In this way, it is advisable that non-boarding system be employed with morning and afternoon sessions.

#### *Relevant Curricula in Vocational Education*

Another way of refocusing vocational education for sustainable national development is to reengineer the curricular offering in vocational education institutions in the country. According to

World Bank and the Nigerian Institute of Social and Economic Research [NISER] (as cited in Ajala, 2002), one of the major causes of declining quality of university education in Nigeria is irrelevant curriculum and poor preparation and presentation of lesson notes by teachers. This point also applies to vocational and technical education. Nigerian educational system has for too long looked at curriculum development as a global project and consequently, almost ignoring her needs. Nigerians can do better at curriculum development if they consider it as a curriculum to first prepare Nigerians to live a happy and satisfying life in Nigeria using Nigerian indigenous technologies and materials; secondly, to prepare Nigerians to live in other parts of the world if they so wish. This situation will make Nigerian vocational education more relevant to the needs of the majority of Nigerians who may be even in the rural areas. There is nothing wrong with learning basket weaving along side the use and maintenance of computers, television, automobiles and so on, provided there is demand for the weaving and use of baskets in Nigeria. Vocational education is expected to prepare people to come up with products or render services in areas of local needs, not only in modern imported technologies.

Relevant curriculum may attract even adult Nigerians who live in rural areas, have less formal education, are unemployed and can benefit from such curricula/training to get enrolled in these programmes. This situation will allow the use of local ideas, tools/equipment and materials which will definitely minimize the nation's dependence on imported modern technologies and products. The situation will challenge the intellect of Nigerians and cause them to reason out ways of improvement on the indigenous materials and technologies and eventually evolve industrialization and sustainable development. This is truly a sign of sustainable development because the local raw materials/tools and equipment can always be made available or sustained. This situation will provide more employment outside farming for our rural populace. The nation's over dependence on imported vocational education curricula has resulted to the present high rate of unemployment even among the vocational education programme graduates. This is so because what is needed by society is not taught/learned. The time for the re-engineering of the nation's vocational education curriculum is now for tomorrow will definitely be late.

*Reviving Handicrafts Subject at the Primary School Level*

There is need to revive the handicrafts subject in the primary school curriculum and monitor its teaching/learning. Many Nigerian primary school teachers at present do collect money from the pupils in place of physical handicrafts produced by the pupils. The teachers do so because they (teachers) lack the skills and knowledge regarding the handicrafts and consequently, cannot teach the subjects. They therefore, tend to hide their ignorance and find it very difficult to challenge students. The question is, "should students be given more marks for the demonstration of their ability to perform some skills or for paying more money, which might have not even been earned by them?" The Nigerian primary education system needs to include the study of handicrafts in its curriculum because these aspects of education mark the introduction of the teaching of Nigerian indigenous technologies in the formal school system.

The primary school teachers lack the knowledge and skills in the handicrafts subject because the curriculum used in preparing them lacks these aspects of education. Therefore, just as a bank cannot give out money which is more than what is available in the strong room, the teacher finds it difficult to teach what he did not learn/cover during the teacher education process. There is therefore, need to include this aspect of education in the primary teacher education curriculum to equip the teacher adequately and enable him face the challenge on the field effectively. There is also the need to include effective vocational guidance and counseling using vocational aptitude lessons in the handicrafts lessons. This situation will help inculcate positive attitude towards vocational/technical and Nigerian indigenous technological education among the Nigerian youths during the early part of their formal education.

The inculcation of appropriate attitude towards vocational/technical and Nigerian indigenous technological education in the youths is very important. A battle in which people are being forced to accept training against their wish cannot be won. The Nigerian youths therefore have to be nurtured early in life towards the creation of good society and capacity to compete globally and successfully.

## 8. Conclusion

The ideal of sustainable development and poverty alleviation, although broad and tinged with ambiguity in its understanding and application, it is still palatable to everybody as it forms the bedrock of government socioeconomic policies and

programmes. For government to solve the problem of widespread poverty, national food deficits, and unemployment, technical and vocational education and training be giving top priority.

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