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## **Effective Management of Wastages in Vocational Education for Sustainable Development in Nigeria**

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### **Abstract**

*This paper focused on the management of wastages in vocational Education for sustainable development in Nigeria. It considered the state of vocational Education not receiving enough attention and the consequences of serious wastages. Wastages take diverse forms including brain drain, inadequate usage of human and material resources, poor maintenance of equipment, poor attitude of Vocational teachers to work, frequent strike action by teachers, unskilled graduates of vocational education, and underutilization of Building and equipment. A number of strategies were proffered to curb wastages in vocational education. One of such strategies was Government employment of skilled and experienced vocational education teachers who should be well remunerated, encouraged and motivated to maintain and sustain them in the educational industry. These strategies will help to*

*improve vocational education, and ensure that professionally qualified vocational teachers remain in the system. The researchers also made recommendations among which is that ministry of Education should employ experts train vocational teachers and give them good welfare package to motivate them to effectively manage vocational education to curb wastages as to enhance economic and technological growth for sustainable development in Nigeria.*

### **Introduction**

The relevance of vocational Education in the socio, economic and political development of any nation is paramount for the growth of the nation. The economic and technological growth of any nation depends largely on its vocational education. For most developed nations their economic growth was linked to their level of vocational and technological education (Udofia, Udoutin & Thompson 2007).

Vocational Education in Nigeria is not different because it has a vital role to play in the developmental process for sustainable development. This is because Vocational Education determines the quality of industrial workforce which is the pre-requisite for economic growth and technological development the world over. As a bedrock to economic and technological transformation of any nation there is need for adequate attention to be given to vocational education to avoid wastages in all ramifications. This is because according to Offiong, Okon, Nsa, Williams and Ewona (2009), Technical and Vocational Education is the ultimate means of addressing the teething socio-econ-Pol-moral problems of Nigeria and the hope of placing Nigeria among the 20 top world economies by the year 2020. Daramola and Olaitan (2005) points out that for vocational and Technical Education to produce skills attitudes and good work habits in correct proportion to enhance national development, it must be functional, practical and skill oriented, acquired in workshops or Laboratories in vocational/technical colleges.

It is unfortunate that most of the skilled teachers and professionals who are supposed to manage and train the individuals to acquire the requisite skills for self reliance/sustenance have left the school system for greener pastures in politics, industries and other fields where they receive better wages and other incentives. In some cases the needed educational resources such as workshops, equipment, Buildings, machines and tools are grossly inadequate. These constitute serious wastages to capacity building of learners and the technical know-how of instructors.

Wastage according to Akpan (2001) hinders the achievement of educational goals of a nation. Specifically, wastages in vocational Education are the inefficient use of educational resources. Uche (2006) explained wastages in vocational education to mean a condition in which an investment does not yield its anticipated results or where it produces a result that is not concomitant to the effort put into it. The educational resources usually wasted are skilled manpower, school buildings and equipment, teachers' Labour and other material resources committed to educational programmes in a country.

Akpan (2001) and Inemikabo (2006) identified some elements of wastages in vocational education to include: proliferation of unskilled manpower in vocational education, Brain drain/manpower attrition in vocational education, inadequate Human and material Resources in vocational education, under utilization of Human and material resources, poor Attitude of Vocational education teachers to work, frequent strike action by teachers, unskilled graduates from vocational institutions, under utilization of human capital in vocational education, under utilization of building/equipment, Equipment and poor maintenance of structures/equipment. Vocational Education requires effective management of its material and human resources to avoid wastages. Management as stated by Nwaoku (2005) is the guidance, leadership and control of efforts of a group of people towards some common objectives. Also management is viewed by Obi (2005) as the basic integrating process by which organizations are created, maintained and used purposefully to achieve the set goals and objectives through human efforts. Management is further said to be the process by which the manager plans, organizes, directs and control the organizational activities through the coordination of the required human and material resources for the achievement of the organizational objectives.

There is the need to effectively managed vocational education as to curb wastages. This calls for adoption of relevant strategies for eliminating the wastages in vocational education in Nigeria to enhance growth and sustainable development. Akpakpan (2004) asserted that vocational Education emphasizes on knowledge and skills that are necessary for active participation in the economy and society while enhancing the relevance of the country's educational programmes and helping to speed up the pace of development of any nation. Olaitan, Nwachukwu, Igbo, Onyemachi and Ekong (1999) defined vocational and technical education as education for work. The efficient management of vocational education in Nigeria will

eliminate wastages, strengthen the foundation for employment generation, ensure poverty reduction and wealth creation and place food on our tables. This paper seeks to identify and find ways of effectively managing wastages in vocational education to put Nigeria on the saddle of actualizing the dream of technological advancement and empowerment of her citizenry.

#### **A. Human/manpower wastages in vocational education**

##### **i. Proliferation of unskilled manpower**

The **proliferation** of unskilled manpower in our vocational and technical colleges may lead to the collapse of the set objectives and goals on vocational and technical education and industrialization of Nigeria. Oputa (2008) pointed out that functional facilities enable schools and society to achieve their educational goals. Where these are not provided the result is the production and proliferation of unskilled manpower class on a sustained bases and accelerated rate of wastages of the technical know – how of instructors in vocational education programmes.

##### **ii. Brain Drain/Manpower Attrition in Vocational Education**

Akpan (2001) and Okpara (2006) reported that the problem of wastages in vocational education has some effects on manpower needs of the nation. Manpower attrition or brain drain comes as a result of skilled and professional teachers of vocational education leaving the educational system to politics, industries and other areas where they have better salaries, motivation, encouragement and job satisfaction. This constitutes serious wastages in vocational education. Brain drain has to do with the continuous loss of highly skilled vocational and technical manpower through occupational slippage, political appointment and securing jobs outside the education sector due to poor remuneration, lack of motivation or incentives.

##### **iii. Inadequate human and material resources in vocational education**

Inadequate supply of both human and material resources to vocational education programmes seems to constitute wastage. The lack or scarcity of qualified teachers for vocational education programmes as a result of poor remuneration as compared to more attractive professions is a source of wastage in vocational education as it may lead to the collapse or rationalization or phasing out of programmes in vocational education (Akpan, 2001).

Inemikabo (2006) on the contrary reported that Nigeria has over 551 vocational educational institutions offering various vocational education

programmes with adequate number of qualified teachers. On the basis of this Ali and Amaemena (2006) apportioned blame on government for its inability to provide adequate instructional facilities and materials for effective management of vocational education as to minimize wastages.

**iv. Under utilization of human and material resources**

In Nigeria, human and material resources make some significant contribution to vocational education wastages. In almost all the secondary schools there are presence of containers of equipment and other facilities awaiting installation. These facilities are left under the rain and sun to waste away. In some cases these technical equipment are installed but allowed to carelessly rot away without being used or maintained. In addition, there are cases where they are installed, but the lack of electricity or being connected to power source rendered the equipment useless (Ordu & Usoro, 2010). These constitute monumental wastages in vocational Education.

**v. Poor attitude to work by vocational education teachers**

It is commonly observed that some vocational education teachers show poor attitude and lack of commitment to work on their assigned responsibilities thus frustrating the realization of the expected goals. Their lack of commitment results to wastages in vocational education. On the basis of this, Akpan (2001) remarked that lack of commitment on the part of some vocational education teachers adversely affect vocational education. This is because if the teachers do not cooperate in the implementation of the vocational education programmes the system will collapse.

**vi. Frequent strike action by teachers**

Strike action by teachers has serious effects on the school system and students are most affected. Apart from distortion in the school Calendar the learners cannot easily cover the syllabus because, when the strike is called off, the teaching-learning process is usually hurried. This constitutes wastage. Akpan (2001) noted that the re-occurrence of industrial strike action by teaching and non-teaching personnel in vocational schools interrupt planned school calendar and constitutes serious wastages. Laboratories and workshops, equipment and other facilities which should have been positively utilized are all kept unused as long as the strike lasts. Strike action is also responsible in part to delay in students' graduation and this constitutes wastage. Ordu and Usoro (2010) emphasized that at any event of strike or student's unrest the institutional facilities will remain closed and the facilities

remain wasted for lack of utilization. In addition manpower will also waste away at such periods since workers will remain ideal.

#### **vii. Unskilled Graduates from Vocational Institutions**

It is commonly observed that most graduates from vocational institutions come out of school without acquiring any skill for self reliance. They are found roaming streets in search of jobs instead of being self employed. This is a serious wastage on both the institution that failed to instill employable skills on the student and the graduates who could not acquire life long skill for a living after many years of studies. Akpan (2001) asserted that graduates from vocational education programme within available resources, but with non-marketable skills hardly perform when faced with tasks. These category of people constitute wastage and impede economic and technological growth.

#### **viii. Underutilization of human capital in vocational education**

This refers to a situation where professionals with the requisite skill in certain technological orientation or in technology related fields are not allowed to function in their area of specialization but are rather given administrative functions. For instance it is sheer waste of technical skill where an engineer is appointed to head the ministry of Health as a commissioner rather than ministry of works and Housing. In the same vein a specialist in mathematics should be given mathematics to teach while a specialist in mechanical engineering should be given same to teach, to ensure effectiveness and total instructional delivery to avoid wastage of manpower.

Akpan (2001) emphasized the underutilization of human learning in vocational education as a source of wastage, since the available skilled manpower is not given the opportunity to apply the skills fully in the area of specialty for economic and technological development of the nation.

### **B. Materials and equipment wastage in vocational education**

Instructional materials, equipment, machines and tools are very necessary for effective instructional delivery in vocational education. These materials and equipment in most cases may or may not be available for use. In some cases even when the materials are available, it may not be adequate. Each of the mentioned cases has one effect or the other on the teaching and learning process and constitute an element of wastage, since the expected learning outcome, objectives and goals may not be achieved in vocational education. Such element of wastage is seen in the following areas:

**i. Underutilization of building and equipment**

There are a number of building and equipment that are scattered in most institutions without being properly utilized. Such remain wasted. Akpan (2001) noted that building and equipment that are underutilized constitute wastage, since such building and equipment could have been used for the training of skilled manpower. Also when school workshops and laboratories are kept closed after the working hours of the day, on week ends, during holidays and students vacations, the continuous closures of the workshops/laboratories which remain unutilized during the period is a serious economic setback and constitutes economic waste.

**ii. Equipment and maintenance**

The importance of equipment and maintenance of facilities is in vocational education cannot be over emphasized. In Nigeria, Government spend huge sums of money worth millions of Naira to procure Introductory Technology equipment and supply to schools to lay a solid technological foundation in secondary schools, but these equipment are not properly maintained. Akpan (2001) pointed out that one of the problems faced by the introductory technology equipment supplied to secondary schools is lack of accommodation. In most schools the equipment are left outside to rot away under the hazards of rain and sun and weather conditions and some are vandalized.

In some situations, the equipment are not installed and some principals complain of lack of electricity, water, workshops and some lack of technical personnel to operate the equipment. Even in some schools where the equipment are installed there is maintenance problem. There is need to maintain the equipment to extend the shelf life of the equipment to continue to function.

There is need to introduce or adopt maintenance culture in schools. This, if practiced in schools will facilitate the respect for honest labour and strengthen the ideas of dignity of labour. Olaitan *et al* (1999) explained that maintenance culture involves the acceptance by any society or community to practice maintenance as an integral aspect of the system expecting that:

1. there is no end to which a piece of equipment or machine can be put to use if maintained.
2. the equipment or machine should be aided to exhaust its natural life span.

3. it is an economic sabotage to allow an equipment to break-down before it is attended to or taken care of
4. every warning signal in any equipment or machine must be attended to promptly.
5. every individual should be personally responsible for any equipment left in his care.

### **Novel strategies for effective management of wastages in vocational education**

The following are some effective means of Managing wastages in Vocational Education:

- 1) There should be employment of skilled and experienced teachers as well as increase training for vocational teachers. As a novel measure teachers should be encouraged, motivated and well remunerated to maintain and sustain them in the education industry. This could be through the creation of a special salary table for teachers and payment of customized allowances to teachers such as rural and reverine posting allowances. This strategy will help to improve vocational education, as the professionally qualified vocational teachers will be willing to remain in the system.
- 2) Instructional facilities, workshops/laboratories, computers, equipment, tools and other facilities should be provided for the effective management of vocational education to avoid wastages. Government should extend the benevolence of provision of instructional materials beyond urban to rural schools. In addition, power generating sets should be provided in schools.
- 3) In line with Nariochukwu (2007) manpower training must be properly planned in form of collaboration between the ministry of Education and the industry to ensure that the students upon graduation acquire employable skills to help them become self reliant in order to eliminate wastages. Graduates from vocational institutions, who obtained employable skills upon graduation from school would easily gain employment or would as well be able to create jobs and become employers of labour. This will enhance the economic and technological growth of Nigeria

- 4) In order to curb wastages in vocational education, people should be placed on the right job with respect to their field of specialization because the placement of highly skilled manpower where they are not fitted constitute wastage of manpower and seriously affect the economic and technological growth of the nation. It is therefore needful to involve professional/experienced vocational education experts in planning and management of vocational education resources for effective management of its programmes to eliminate wastages as much as possible.
- 5) There is need for the ministry of Education to intensify inspection and effective monitoring of the schools to check some of excesses or lapses and unwanted attitude among teachers as well as records/inventory of materials and equipment to avoid misuse of resources. This frequent inspection of schools would help to identify the areas of need, and where necessary make or recommend for the supply of the needed facilities. To encourage the ministry of education to undertake regular field visits, a special field visit allowance should be paid to supervisors and inspectors.
- 6) There is the need to established equipment maintenance unit in the ministry of education in which experienced vocational education teachers will be involved to facilitate equipment maintenance in schools to sustain the life span of machines and equipment. The ministry of education should see to the welfare of the members of the equipment maintenance for motivation and sustenance.

This paper x-rayed wastages in vocational education and ways of curbing same for sustainable development in Nigeria. Wastages have increased in alarming proportion in our institutions and manifest in diverse forms such as Brain-drain, inadequate usage of human and material resources, underutilization of human and material resources, poor attitude to work by vocational teachers, frequent strike action by teachers, unskilled graduates of vocational education, underutilization of human capital in vocational education, underutilization of Building and equipment, equipment as well as poor maintenance.

The paper further proffered palliatives to effectively manage wastages in vocational education. These include effective management of the available resources toward achieving the set objectives and goals.

### **Summary and conclusion**

Government through the ministry of Education has crucial role to play in effective management of vocational education as to proffer effective management of wastages provision and training of qualified vocational teachers as well as effectively managing the vocational institutions to avoid of wastages.

Wastages were seen as serious challenges facing vocational education which could be properly managed through strategic planning, prudent management and application of relevant control measures. Hence vocational education will provide the enabling environment to place food on our tables as well as ensure economic transformation and technological development in Nigeria.

### **Recommendations**

On the basis of the foregoing the following recommendations are hereby made:

1. Federal and State Government through the Ministry of Education should employ experts, train vocational teachers and give them good welfare package to motivate and encourage them to effectively manage vocational education to curb wastages so as to enhance economic and technological growth for sustainable development in Nigeria. To this end, a special teachers salary structure should be developed for teachers while customized allowances like rural and riverine posting allowance should be paid to the teachers.
2. Materials and equipment should be adequately provided in schools to enhance effective management devoid of wastages in vocational education. State and Federal Governments through The Ministry of Education should provide instructional facilities including power generating sets to both urban and rural schools.
3. There should be frequent inspection and record/inventory taking to avoid mismanagement of the resources as well as identifying areas of need and possibly making supplies to ensure effective instructional delivery for the achievement of stated objectives and goals. Here, State and Federal Government should pay a special field visit allowance to Inspectors and Supervisors in the Ministry of Education.
4. Arrangement should be put in place for the regular maintenance of equipment and machines to increase their life span through the

introduction of equipment maintenance unit in the state and Federal Ministries of Education.

5. Entrepreneurial Education should be encouraged and maintained in institutions for the acquisition of employable skills for self-reliance to ensure employment generation, poverty reduction and wealth creation.

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