TECHNOLOGY EDUCATION AND NATIONAL DEVELOPMENT: ANY HOPE FOR THE HEARING IMPAIRED?

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Abstract

The recognition of the relevance of science and technology has prompted the Federal government of Nigeria to encourage the development of technology education among her citizens. However, observations reveal that people with impairments in general and the hearing impaired in particular have not been given adequate attention in this regard, thus negating the national objective of equal educational opportunities for all. This paper attempts to analyse the problems and prospects of the hearing impaired in the acquisition of appropriate technology education. It is submitted that if the obstacles are removed, the chances of attaining self-sufficiency for this category of impaired people will be enhanced and this will stimulate corresponding national development within the Nigerian context.

Introduction

Quite often, the level of technology has become the parameter for determining the socio-economic and industrial development of any nation as a means of tackling the problem of poverty, destitution, malnutrition, ill-health, laziness and general low living standard of citizens, irrespective of their physical fitness. There is no gain saying the fact that no society can survive effectively without one form of technology or the other.

National development has to do with the ability to bring about meaningful changes in economic, social, political and cultural transformation of both the nation and the able as well as the disabled. Technology which is the bedrock of an enviable national development is perceived as an aspect of education which leads to the acquisition of practical and applied skills as wcl! as basic scientific knowledge. (N.P E., 1998). Raymond (2000) presented technology as the creative processes by which human beings fashion tools and machines to increase their control and understanding of the material environment. Technology education is therefore, that aspect of education that is practically oriented as opposed to the theoretical or 'bookish' form of education. The emphasis of technology education is therefore more of manual dexterity rather than purely mental ability.

The definitions of hearing impaired by Heward and Orlansky (1984); Lynch and Lewis (1988); Kirk and Gallagher (1989); Ladipo (2000) reveal striking similarities namely, it is a situation in which an individual is not able to use his/her hearing to understand speech though other sounds may be perceived. A hierarchy of hearing impairment exists and the basic categories are deafness and hardness of hearing. The individuals concerned are said to be totally deaf or totally hearing impaired and hard of hearing (partially hearing impaired) respectively. The totally hearing impaired (deaf) are those in whom the sense of hearing is non-functional for the ordinary purposes of life inspitc of medical treatment and the use of hearing aids. The hard of hearing are those in whom the sense of hearing is defective but functional so that the development of spoken language is not precluded.

The effects of hearing impairment and the experiences of individuals with hearing loss are enormous. The hearing impaired are cut off from the world of sound and their social skills are thus inadequate due to their inability to communicate "normally" with hearing community. As Akinpelu (1999) opined, hearing loss is an obstacle to oral communication which is basic to maintaining relationships with others. In other words, the hearing impaired are liable to experience disruptions in the way they function and in the way others react to them. The problem arising from this lack of

communication with others is that the normal and satisfactory relationships with others are impaired; just as it affects the individual's self-esteem, self-concept and academic performance.

Kirk and Gallagher (1989) cited a number of researches that point to the fact that the hearing impaired usually have problems in academic achievement, social and personal adjustment as direct results of their hearing loss. In recognizing the role the hearing impaired can play in the growth and development of the nation, the Federal Government of Nigeria through the National Policy on Education (1998) and Nigerians with disability decree (1993) insisted on the provision of special care

and education for them. Studies carried out by Akinpelu (1999) and Ogbenna (2000) showed that the hearing impaired are being denied the basic needs like acceptance and empathy thereby impeding their chances of becoming technologically inclined or motivated.

Since the challenges with time, the new dispensation in Nigeria requires active participation of all her citizens technologically, irrespective of their impairment. This paper therefore postulates the role of technology education for the hearing impaired to enable them become self supporting since this is a basic facilitator for the technological advancement of a developing nation like Nigeria.

The Conceptual Framework of National Development and Technology Education

National development is described by Ahiwong (1996) as the overall improvement over time-in the well-being of a nation. This would imply dynamic changes and improvements in both the structure of national demand and for goods and services as well as the structure of the productive capabilities in the economy. In other words, National Development would find expression in improvement in a wide spectrum of sectors and subsectors such as education, agriculture, housing, transportation, health and communication. The concept of National development is therefore a concept of change. This change should not only be forward-looking but also self-fulfilling. This change is expected to make technology education more relevant and functional so as to facilitate the advancement of "able" and the "disabled" individuals.

Technology education as a basis for National development can therefore not be underestimated. Only a sound technological base and the type that involves all individuals can ensure effective development, thus, the National Policy on Education (1998) has listed very laudable aims of technical (Technology) education as follows:

(a) To provide trained manpower in applied science, technology, and commerce particularly at sub-professional grades;
(b) To provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;
(c) To provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man;
(d) To give an introduction to professional studies in engineering and other technologies;
(e) To give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant;
(f) To enable our young men and women to have an intelligent understanding of the increasing complexity of technology.

The laudable aims listed above prompted the establishment of the craft schools, trade centres, trade schools and technical colleges at the post primary level to train students in the basic skills such as woodwork, metal work, motor mechanics, electronics, etc. For higher and middle level technical manpower, some engineering courses, arts, science and technology were established with branches at Yaba-Lagos; Ibadan, Enugu, Zaria and other states.

Another measure taken by the government to promote technology competence was the establishment of the Industrial Training Fund in 1973 whose main objective is to get private sector involved in training craftsmen and technicians and to adequately utilize this sector in organizing work experience programmes for students of technology in higher institution of learning.

In the area of technology based institutions, there has been astronomical increase. As at 1990, there were ten (10) Federal Polytechnics and nineteen (19) state owned Polytechnics with student population of 60,000 (Fafunwa, 1991). Nigeria can also boast of about 130 technical colleges and 31 Polytechnics and enrolment of about 70,000 respectively offering over 30 different courses in technology and science (Abdullahi 1995). Moreover, the 3rd National Development Plan 1975-80 pegs enrolment in science and technology courses and arts based courses in the ratio of 60:40. Also some state governments grant automatic scholarships to all students studying technology related courses irrespective of their disability, with a view to encouraging students to study science and technology based courses. All these measures taken by the government coupled with the massive investment in technological education was to promote technological development.

The Rationale for the Provision of Technology Education for the Learning Impaired

In view of the technology potentials of the hearing impaired and their anticipated contribution to national development, the provision of appropriate technology education for this category of people cannot be glossed over. It is therefore imperative for Nigeria to give every encouragement and support to its citizens irrespective of their ability and disability so that they can explore their talents towards achieving excellence in technology education. There are provision for the promotion of technology education from pre-primary to university level, and one of the cardinal aims and objectives of education as spelt out in the National Policy on Education (1998) is "the acquisition of appropriate skills and the development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of his society." In contemporary dispensation, technology has been regarded as the most important vehicle of development in which both the able and the disabled are expected to cheerfully come together and play their roles for the upliftment of this great nation.

It should be emphasized that technology training for the hearing impaired was developed by earlier generations during which they were taught to learn traditional weaving, farming, carving, pottery, building, communication long before the introduction of western education. This implies that our forefathers laid the foundation of technology training which was built upon by the Federal government.

Since the introduction of formal education for the hearing impaired at Wesley school for the (deaf) hearing impaired, Ibadan in 1957, a lot of efforts have been by the government and private organizations to open up more schools for this category of people with impairments. It is gratifying to note that currently, there is no state in the Federation without at least a school for the hearing impaired.

The main purposes of establishing these schools were to educate the hearing impaired and to give training in such skills as farming, communication, tie and dye, leather works, cane work and weaving as a means of assisting them become self-sufficient individuals in the society.

Since technology education enhances the individual's abilities and capabilities for higher and improved productivity which leads to national development, the need for proper integration of the hearing impaired in our schools where they could be taught appropriate aspects of technology cannot be glossed over.

Taking into cognisance the hearing impaired low level of academic performance, the instructors need to be conversant with the various methods of instruction and use them appropriately. The basic[1] method of instruction that could be used in educating the impaired as recommended by Igbokwe (1988) is total communication which involves the combined but varied use of finger spelling, sign language, hearing and auditory training, speech training, lip and speech reading, use of gestures as well as the use of pad and pencil methods. All these need to start from pre-primary to tertiary levels.

Since Igbokwe (1987) asserted that the hearing impaired are weak academically, their technology education should be intensified and handled effectively by competent and experienced instructors. The need to involve the hearing impaired in functional technology education that is relevant to the needs of the country for national development is of great importance at a time like this when unemployment is a global phenomenon.

Obstacles to Technology Education of the Hearing Impaired

The objective of the National Policy on Education (1998) for equal educational opportunities for all citizens has been undermined by the inability of the hearing impaired to gain access to relevant technology education, due to the disparity between policy and implementation. The government's white paper on special education for the disabled specifically emphasized that the disabled shall be guaranteed equal treatment in terms of rights, privileges and opportunities before the law as well as equal and adequate education (Nigerians with disability decree, 1993). Observations however reveal the non-challant attitude of the government in its claims of assisting the disabled in general and the hearing impaired in particular to live an independent and self-supporting life. There is an apparent neglect of the hearing impaired since much does not seem to have been achieved for their technology

and educational growth. There appears to be a misplaced priority in the provision of basic infrastructure and equipment for the hearing impaired against the backdrop of high level corruption that has characterized the society.

Another outstanding obstacle facing the hearing impaired in Nigeria is the development of negative attitudes towards them, Adima et al (1988) stated that the traditional general belief that the hearing impaired are evils who are incapable of making meaningful contribution technologically and educationally to the society led to the rejection of this category of individuals.

Observations in few rehabilitation centres in Tarauni Local Government and Ungogo Local Government in Kano revealed that funds are grossly inadequate to provide the necessary equipment and facilities for the disabled in general and the hearing impaired in particular. Moreover, there is still acute shortage of special teachers who are proficient in total communication which are the accepted recommended methods of teaching. Likewise, lack of statistical data of the hearing impaired made it impossible to know precisely the accurate number of hearing impaired people to be provided for.

Studies carried out by Mba (1995) and Ogbenna (2000) revealed general reluctance of employers towards the hearing impaired despite the directive from the Federal Government that all parastalals must reserve 10% of their work force for the disabled. There appears to be an overwhelming evidence of negative attitudes towards the hearing impaired. As Ohanado (2001) lamented, despite the significant population of the Nigerian disabled estimated at about 12 million, they (disabled) have been marginalized and relegated to the background socially, politically and emotionally. This development is a reflection of the society's misconceived notion that the disabled are incapable of making meaningful contributions to society as well as helpless people who are incapable of self-support. Moreover, they are treated as despicable "pensioners" because of their dependence on government's meagre support. All these inadequacies are bound to undermine the prospect of attaining technological skills by the hearing impaired in the society.

Recommendations

(i) Provision must be made, through appropriate curriculum and special instructors for the exposure of the hearing impaired to relevant technology education,

(ii) Governments must intensify efforts for the establishment of more functional schools and rehabilitation centres for the hearing impaired,

(iii) Appropriate enlightenment campaigns must be put in place to sensitize Nigerians on the need to alter negative attitudes towards the hearing impaired positively with a view to integrating this category of handicapped into the mainstream of the society.

(iv)With the current acceptance of mainstreaming for the education of disabled children generally, teachers should be trained on how to make the hearing impaired functional within the normal school system,

(v) Professional counsellors should be involved in the education of the hearing impaired with .a view to assisting them take realistic decisions on educational, vocational and personal-social issues; and thereafter become adequately integrated into the nation's technology education.

Conclusion

The growth of a nation can be determined by its level of economic and technological development through the efforts of both able and the disabled, The Nigerian society must live up to its obligation by ensuring full implementation of the 1993 Nigerians with Disability Decree. Thus, technology education of the hearing impaired is crucial to the overall development of the country. The neglect of the hearing impaired and the general apathy by individuals and governments are dehumanizing and counter productive. It is when these less fortunate individuals are carried along technologically and empathy is shown that the country can forge forward. After all, the hearing impaired are human beings who have certain obligations to perform for the improvement of this country.

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