AFRICAN JOURNAL OF EDUCATIONAL ASSESSORS

ISSN e-2536-751x, ISSN p-2536-7501

Benchmark Journals

Teacher Quality: A Yardstick for Attaining Standard in Technology Education

Ejeckam, Jane Ngozi, Mgbojikwe, Godson U.

Department of Electrical/Electronics Technology Education

Federal College of Education (Technical**),** Umunze

Abstract

It is generally believed that the teacher is a nation builder. It is the teacher in the classroom who is shaping the destiny of a country as he/she has the capacity to influence his/her students. It is believed that only teachers can make tremendous positive changes among their students. In this paper, a systematic attempt has been made to focus on what quality education is, teacher education and professional development, technology education, teacher quality and standard attainment in technology education. The paper suggests among others, that the administrator of technology education should provide and implement effective professional development plan for technology teachers.

Keywords: teacher quality, standard, technology, education

Introduction

Technology education programmes are concerned with equipping one with skills, knowledge and attitude that will enable him/her to enter into and progress in their chosen areas course specialization. This will enable the attainment of objectives in cognitive, affective and psychomotor domains of education objectives. Teaching and learning in technology education requires a interaction between the teacher and the learner. It is therefore necessary that teachers should possess good knowledge of the course area and be able to teach it.

Concept of Quality and Quality Education

Quality is the standard of an entity when compared with things like it. It is an investment that leads towards continuous improvement. Diaz, (2014) defines quality as an outcome, a characteristic of a good or service provided to a customer, and the hallmark of an organization which has satisfied all of its

stakeholders. It is the degree to which a set of inherent characteristics fulfils requirement of a system. Mar, (2013) gives three basic elements in a quality system: Quality Management, Quality Control, and Quality Assurance.

1. Quality Management: Quality management is the means of implementing and carrying out quality policy. They perform goal planning and manage quality control and quality assurance activities;
2. Quality Control: The term quality control describes a variety of activities. It encompasses all techniques and activities of an organization that continuously
3. monitor and improve the conformance of products, processes or services to specifications;
4. Quality Assurance: The term quality assurance describes all the planned and systematic actions necessary to assure that a product or service will satisfy the specified requirements (Mar, 2013).

Quality in education is of crucial importance. Quality in education is a concept which is rapidly evolving over time; it also has different emphasis according to different national, education sectors, cultures, and different players in the education system- students, teachers, policy makers, the business community and unions. Sean, (2017) defines quality education as *education that focuses on the whole child - the social, emotional, mental, physical, and cognitive development of each student regardless of gender, race, ethnicity, socioeconomic status, or geographic location. It prepares the child for life, not just for testing. Sean further stated that quality education ensures that each child:*

1. enters school healthy and learns about and practices a healthy lifestyle;
2. learns in an environment that is physically and emotionally safe for students and adults;
3. is actively engaged in learning and is connected to the school and broader community;
4. has access to personalized learning and is supported by qualified, caring adults; and
5. is challenged academically and prepared for success in college or further study and for employment and participation in a global environment.

A quality education is supported by three key pillars: the establishment of safe and supportive quality learning environments; ensuring access to quality teachers; and providing use of quality learning tools and professional development (Sean, 2017).

Teacher Education and Professional Development

Teachers constitute the most vital factor in the education system. Okoli, (2004) states that effectiveness in any education system depends upon the teachers' number, quality and devotion to duty. A teacher is

a person who is able to structure an environment in other to bring about experiences which will enable the learner to attain some desirable changes for the good of both the learner and the society. To achieve this, teachers' training and professional development is of paramount importance. The FGN (2013) has it in its policy that teacher education shall continue to take cognizance of changes in methodology and in the curriculum. Teachers shall be regularly exposed to innovations in the profession. Among the goals of the teacher education, the NPE has it that teacher education shall provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations it shall also enhance teachers' commitment to the teaching profession; and produce highly motivated, conscientious and efficient classroom teachers for all levels of the education system.

Odu (2010), observes the inadequacy of qualified technical teachers who can actually impart practical skills on the students. The trainee-teachers are trained in a poorly equipped workshop. It is these trainee-teachers that graduate to become teachers and instructors in the programme. The laudable policy of the N.P.E has not been implemented to the letter. The changes in the workplace require continual professional development as a means of skill upgrading for teachers to assume the roles of coach and facilitator and situate learning in real-world contexts. The administrators of technology education need to rethink the professional development of technology teachers especially now that emerging technologies are giving new definitions to teaching and learning. Joyce and Shower (2002) point out that teacher must be able to use new technologies that are continually changing roles and responsibilities. Teachers need an effective professional development plan that can help them keep current and embrace new ways of improving their practice. Eze and Okorafor (2012), opine that constant training and retraining is highly recommended for the instructors; this will keep them abreast of the changing dynamics in theoretical knowledge, technical and pedagogical skills and new technologies in the workplace.

Teacher education should therefore begin to develop both in the trainee-teachers and practicing teachers, critical discourses that challenge the status quo. To teach is a life-long process of learning. Human knowledge is expanding, facts are changing and there is always a risk that the teachers will be struck in old tracks, repeating the same kind of instruction year after year, classroom teachers must be given the support needed to seek for new methods, to test new methods and to identify new approaches and improving quality.

Technology Education:

Technology has been the dominant factor for accelerating human progress and development. Usman and Madu (2009), define technology education as the aspect of education that can lead to acquisition of

practical and applied skills as well as basic scientific knowledge. Technology education develops in an individual the ability to develop the society economically, socially, politically and technically. The Federal Republic of Nigeria (FGN) in the National Policy on Education, NPE (2013) states the goals of technology education to include among others:

1. give training that imparts the necessary skills for the production of technicians, technologists and other skilled personnel who shall be enterprising and self-reliant.
2. providing technical knowledge and skills necessary for agricultural, industrial, commercial and economic development of Nigeria, and
3. training people who can apply scientific knowledge to solve environmental problems for the convenience of man.

Technology education can be measured to be standard when these goals have been achieved. Technology education serves as a way of reducing dependency on expatriates and foreign products. It assures the country of quality specialized professional using individual technical knowledge (Akintude, 2001). There are many benefits of technology education. The issue is that Nigeria has not been able to develop its own technology. The country is suffering from shortage of persons with correct type of education, technical skills, technological awareness, technical-oriented values necessary to transform her abundant natural resources into products and services needed to raise quality of life (Nwabuike &Moemeka, 2009).

Technology education in Nigeria is suffering from teacher adopted methodology and strategies. There is no longer much emphasis on the learner's practical skill acquisition. Teachers in most cases use lecture method only, in a programme where they are supposed to apply lecture and demonstration. Odu (2010) maintains that, to achieve the educational goals of technical education (technology education) as elucidated in the NPE, appropriated teaching methods should be employed. It is only when we start achieving these goals that technology education can be said to be of standard.

Quality Teachers and Standard Attainment in Technology Education

According to Uwaifo (2005), education unlocks the door of modernization but it is the teacher who holds the key to the door. Teachers are the hub or pivot on which any successful educational programme revolves and if teachers perform their task dutifully, there will certainly be a myriad of new technologies in the future of technology education.

Teacher's quality can be defined in the following five dimensions:

1. knowledge of substantive areas and content.

2. pedagogical skill, including the acquisition and the ability to use a repertoire of teaching strategies.
3. reflection and ability to be self-critical, the hallmark of teacher professionalism.
4. empathy and commitment to the acknowledge of the dignity of other.
5. managerial competence, as teachers assume a range of managerial responsibilities within and outside the classroom (OECD, 1994). The integration of competencies across these dimensions of teacher quality is thought to mark the outstanding teacher.

The question then is, what role does the quality technology teacher play to help improve or achieve standard in technology education? The following are the considered roles;

1. Quality Awareness and Self-Evaluation

There is need for teachers to reflect on their teaching methods and look for alternative ways of teaching that will improve the quality of technology education. One major way of doing this is to systematically evaluate one's own teaching and its results. Macbeath, (2003) gives the following five basic aspects of teacher's self-evaluation:

1. Academic achievements
2. Students destination
3. Time as resource for learning
4. Quality of learning and teaching, and
5. Support for learning difficulties

2. Curriculum Planning/Design:

Technology teachers should be incorporated in the curriculum design. Some of the planners according to Edozie (2000) are non-subject specialists who overload the curriculum, remove essential contents, and may not adequately sequence and integrate the new content.

3. **Curriculum Implementation:**

Technology teachers should be able to utilize the available resources to achieve effective teaching and learning. It is difficult for teachers to do a good work when they do not utilize the necessary resources during curriculum implementation thereby hindering skill acquisition.

4. **Team Teaching:**

To achieve standard in technology education, teachers should work together to enhance learning. Teachers must work together to articulate what students should know in regard to instructional competencies. It is hoped that technology education will adequately equip students to be more effective in this age of science and technology. What is needed today and tomorrow are workers with good technical skill background, rugged enough to transform Nigeria into a positive technological breakthrough with the ability to meet its immediate demand (Uwaifo, 2009). The technology teacher single-handedly cannot attain/achieve this.

5. **Guidance and Counselling:**

The technology teacher should be able to effectively supervise outside class activities. Guidance and counselling enhances the development of the learners' potential. Through guidance, a learner can develop totally his/her intellectual, emotional, social, and vocational life. Guidance and counseling will develop in a learner the ability to think for himself/herself and respect the dignity of labour.

Conclusion:

Teachers constitute the most vital factor in the education system. Attaining standard in technology education in Nigeria depends upon teachers training, qualification, number and devotion to duty. If teachers perform their task dutifully, there will certainly be myriad of new technologies in the future of technology education.

Suggestions

The following suggestions were made towards standard attainment in Nigeria's technology education:

1. Technology teachers should be given the support needed to seek for new methods, to test new methods, thereby developing and improving quality.

2. The government through the ministry of education should provide training and re-training for teachers and instructor to keep them abreast of the changing dynamics in new technologies in the workplace.
3. The government through the Ministry of Education should see that the laudable polices on teachers training in the national policy are implemented to letters, and
4. The administrators of technology education should provide and implement effective professional development plan for technology teachers.
5. Government and educational authorities must ensure that teachers receive the moral and material recognition appropriate to their level of qualification and responsibilities.

References

Akintude, S. A. (2001)**.** Positioning vocational and technical education in alleviating poverty. In Oladineji T.A.G, Ibeneme, O.T., Ogemenyi, O.M., Ukara, A.M. (Eds) Technology education and sustainable poverty alleviation in Nigeria. *Nigeria Association of teachers of Technology (NATT).*

Diaz, E. (2014). Definition of quality. Retrieved from www.gbnews.ch/what-is-your-definition-of-quality/

Edozie, G. C. (2000)**.** Effects of gender and area of specialization on secondary school teacher attitude to population education.*Journal of Education, 3(2), 150-163.*

Eze, T.I. & Okorafor, O. A. (2012). Trends in Technical and Vocational Education and Training for improving the Nigerian workforce. *Ebonyi Vocational and Technical Education Journal, 1(1) 107-117.*

FRN (2013). *National Policy on Education. 6th Edition*. Lagos: NERDC Press.

Joyce, B. & Showers, B. (2002). *Student achievement through staff development.* Alexandria, Virginia: Association for supervision and curriculum development.

Mar, A. (2013). Basic quality concepts. Retrieved from www.business.simplicable.com

Macbeath, J. (2014). Teacher self-evaluation. *International Handbook of Educational Research, 11(1), 767 – 780.*

Nwabuike, M.C.& Moemeka, P.A.(2009). Current reforms in technology education: What hope for Nigeria*. International Journal of Technical and Vocational Education*, 1(1) 221-227.

OCED (1994). *Quality in teaching*. Paris: OCED

Odu, K. O. (2010). Capacity building imperatives for developing science, technical and vocational education for future world of work*. African Research Review 4(1), 506-518.*

Okoli, D. I. (2004). Vocational technical education for National development. *Journal of the Institute of Ecumenical Education, Thinker's Corner, Enugu, 5(2), 52-56*.

Sean, S. (2017). Quality education. Retrieved from http://www.google.com

Usman, M. & Madu, V.U. (2009). Science and technology education. A panacea for sustainable national development in Nigeria. *International Journal of Technical and Vocational Education, 1 (1) 112-118.*

Uwaifo, V. O. (2005). Vocational general education, Conflict or convergence.

Nigeria Journal of Education Research 4(1), Institute of Education, Ambros Ali University, Ekpoma.

Uwaifo, V. O. (2009). Industrializing the Nigeria society through creative skill acquisitionVocational and Technical Education Programme*. International NGO. Journal*, 4(4), 142-145