
Review Article

Fostering Students' Enrolment in Technical Education Programmes Through Career Guidance and Occupational Awareness

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Abstract: Technical, vocational education and training (TVET) plays a vital role all over the world in addressing youth unemployment, poverty and skills development. This type of education remains greatly detested by the majority of Nigerian parents and students as observed by in the low enrolment into technical colleges. It is line with this that this paper examines the concept of technical education, enrolment in technical education programmes, causes of low enrolment in technical education programmes in Nigeria. It also suggests ways of using career guidance and occupational awareness to encourage enrolment in technical education programmes.

Keywords: Technical Education, Enrolment, Career Guidance, Occupational Awareness

1. Introduction

The importance of technical education in the development of any nation cannot be over-emphasized. It is concerned with the acquisition of skills and knowledge for sustainable livelihood and employment. Its aim is to promote the production of skilled, technical and professional manpower to revitalize and sustain the economy and reduce unemployment. Technical education is recognized the world over as a veritable tool for empowering people. According to McGrath (2005), the major thrust of technical education worldwide is to address issues of youth unemployment, poverty and international competitiveness in skills development towards current and projected opportunities and challenges. Technical education provides the recipients with the basic knowledge and practical skills needed for entry into the world of work as employees or employers of labour.

Despite the importance of technical education to national development, its public status in Nigeria seems low. Technical education is so misunderstood, that it has become difficult to administer the programme to meet "societal ever changing needs" (Toby, 2000).

2. Concept of Technical Education

Technical education has been recognized the world over for preparing its recipients for skillful performance on practical tasks and empowerment. It involves the acquisition of practical skills and competencies that can help people to function productively in industrial and commercial occupations (Wapmuk, 2011). Technical education is the functional education that provides people with skills, knowledge and attitudes for effective employment in an occupation. According to UNESCO (2005), Technical, Vocational Education and Training (TVET) is a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related science, the acquisition of knowledge, practical skills and attitudes relating to occupations in various sectors of economic and social life. In addition, it is an integral part of general education; a means of preparing for occupational fields and for effective participation in the world of work; an aspect of lifelong learning and preparation for responsible citizenship; an instrument for promoting environmental sound and suitable

development; and a method of alleviating poverty. Technical education is that type of education designed technically and systematically to accommodate both the trainer and the trainee, to enable the trainee acquire the basic knowledge, skills, abilities, understanding and attitudes needed for one's efficient performance in his or her chosen occupational career for self-reliance and national development.

Technical education enables its recipients to become active people who contribute positively to the well-being and economic development of society. The implication of this is that technical education gives attention to the development of both material and human resources (Adelakun, Oviawe & Barfa, 2015). They added that for these good yields of Technical, Vocational Education and Training programmes, it is obvious that no nation will adequately develop its technological base if it neglects the development of its workforce. The objectives of technical education as stated by the Federal Republic of Nigeria (FRN) (2013) in her national policy on education are to:

- i. Provide trained manpower in applied science, technology and commerce particularly at sub-professional level;
- ii. Provide the technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;
- iii. Produce people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man;
- iv. Give an introduction to professional studies in engineering and other technologies;
- v. 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; and
- vi. Enable young men and women have an intelligent understanding of the increasing complexity of technology.

As laudable as these objectives are, technical education is bedeviled by several challenges which hinder the realization of its objectives. Among these challenges is low enrolment.

3. Enrolment in Technical Education Programmes

According to Dike (2009), technical education is a planned programme of learning experiences that begins with exploration of career options, supports basic academic and life skills, and enables achievement of high academic standards, leadership, preparation for industry-defined work, and advanced and continuing education. It is integral part of national development strategies in many societies because of the impact on human resource development, productivity and economic growth. Technical colleges in Nigeria are faced with series of challenges which hinders its programmes. According to Ibeneme (2007), Nigeria does not seem to accord technical education the attention it deserves despite its proven

contributions in other nations. Corroborating this view, Aina (2006) asserted that since the introduction of technical education in Nigeria educational system some years ago, enrolment in its programmes has remained low. This development has posed inherent danger to technological and national development. The transition rate at the end of junior secondary school as prescribed by Federal Republic of Nigeria (2013) in her national policy on education states that the: (i) senior secondary school 60%; (ii) technical colleges 20%; (iii) vocational training centres 10%; and apprenticeship scheme 10% (National Board for Technical Education (NBTE), 2011). However, at the current annual turnout rate of the junior secondary schools in Nigeria of about 4million, expected enrolments in technical colleges will be 800,000 (20%). Consequently, the total enrolment of students in Nigerian technical colleges in 2009/2010 academic session was 74,299 as against 6,625,943 for the secondary schools in Nigeria. This when compares unfavourably with the expected 800,000 which reveals clearly that technical colleges are only able to enroll barely about 9.3% of their target. To this end, Yakubu (2006) reported that the total enrolment figures into Technical, Vocational Education and Training programmes in Nigeria as at 2006 was less than three percent (3%). He added that this figure, in comparison with countries seeking to have rapid socio-economic development is negligible as those countries target about 50% enrolment. Ozioma (2011) asserted that Nigerian schools pay little or no attention to technical education. Teachers and students seem not to understand what it is all about and consequently acquire disapproval and a dislike for technical education programmes. To this end, the state of enrolment of technical colleges in Nigeria needs attention. Despite successive governments' efforts in promoting technical education, the enrolment in technical colleges is still very poor as compared to enrolment into general education programmes.

Table 1. Enrolments in Nigerian Technical Colleges and Secondary Schools.

Academic Year	Technical Colleges	Secondary Schools
1990/91	46,083	1,653,891
1991/92	40,876	1,814,000
1992/93	72,136	1,865,189
1993/94	46,385	4,032,083
1994/95	43,893	4,451,329
1995/96	40,964	4,448,991
1996/97	43,353	4,201,331
1997/98	45,394	4,384,428
1998/99	89,536	2,941,781
1999/00	41,425	3,123,277
2000/01	41,835	3,600,204
2001/02	41,635	4,032,083
2002/03	41,426	2,901,993
2003/04	41,179	2,923,791
2004/05	81,656	6,279,462
2005/06	65,215	6,397,343
2006/07	68,147	6,536,038
2007/08	70,543	6,068,160
2008/09	74,188	6,625,943
2009/10	74,299	6,625,943

Source: National Board for Technical Education (2011)

The trend in table 1 is very disturbing. On the average, students' enrolment in technical colleges is only about one per cent (1%) of enrolments in general secondary schools. The implication of this trend is that there is dearth in the production of technicians and craftsmen in the country. This has adverse implication on Nigeria's manpower and her quest for national development and advancement. It is against this background that paper is canvassing the need to foster enrolment into technical education programmes in Nigeria.

Table 2. Enrolments in Polytechnics and Universities.

Academic Year	Polytechnics	Universities
1993/94	124,600	229,410
1994/95	151,247	291,861
1995/96	150,391	335,790
1996/97	178,456	345,699
1997/98	192,999	376,494
2003/04	226,682	727,408
2004/05	311,844	780,001
2005/06	214,391	-
2006/07	286,592	-
2007/08	169,373	-
2008/09	163,701	1,014,337

Source: National Board for Technical Education & National Bureau of Statistics – Social Statistics in Nigeria (2009) cited in Momoh (2012)

The trend in Table 2 reveals that at the university level, enrolment ranged from 229,410 to 1,014,337 while the polytechnic enrolment ranged from 124,600 to 311,844. This implies that polytechnic enrolment is less than 50 per cent of university enrolment. The implication of this trend is that there is a high dearth level on the enrolment of students in technical education programmes in Nigeria.

Table 3. Comparison of Enrolment Ratios between Technical and General Education in selected Countries.

S/No	Country	Vocational: General Secondary Education
1	Egypt	29:71
2	Nigeria	01:99

Table 4. Higher Education Institutions Students' Preferences.

Year	University	Mono/Poly/COE	Total	University%	Mono/Poly/COE%
2007	911,679	167,836	1,079,515	84.5	15.5
2008	1,192,050	310,022	1,502,072	79.4	20.6
2009	1,184,651	342,908	1,527,559	77.6	22.4
2010	1,330,531	45,140	1,375,671	96.7	3.3

Source: Shu'ara (2010) in Momoh (2012)

The trend in Table 4 shows that most students prefer university education. This accounts for the large number of unemployed youths annually who should be productively engaged if saleable skills were acquired.

4. Causes of Low Enrolment into Technical Education Programmes in Nigeria

The causes of low enrolment in technical education

S/No	Country	Vocational: General Secondary Education
3	Sudan	07:93
4	China	15:85
5	Indonesia	13.87
6	Japan	15:85
7	Republic of Korea	20:80
8	Turkey	28:72
9	France	28:72
10	Germany	28:72
11	Italy	40:60
12	Spain	25:75
13	United Kingdom	37:63

Source: Journal of Engineering Technology and Industrial Applications, Kaduna Polytechnic, 1 (4), (2001) cited in Momoh (2012)

Table 3 indicates that Nigeria has the lowest ratio of one technical college student in every 100 students enrolled at the secondary school level while Italy, United Kingdom and Egypt have 40%, 37% and 29% respectively. According to African Economic Outlook (2010), while enrolment in technical education programmes is quite high in North Africa (averaging 22.95% of total secondary school enrolment between 2001 and 2005), the vocational education sector generally occupies a much smaller – if not marginal – position in school systems in countries in sub-Saharan Africa (5.2% between 2001 to 2005 with a falling trend since 2003) compared to the developed countries in the same period (18.6%) and other developing regions, such as Latin America (11.6%) and South East Asia (9.5%). In the United Kingdom, 66% of those in secondary and higher education are in technical education. In France, it is 65% and Germany 72%. Singapore and South Korea moved to 92 and over 50%, respectively. In Bahrain, more than 55% of secondary school students are enrolled in technical colleges. The Middle East has a target of 50% (Abdul-Wahab, 2010). He added that the reason is: "No skilled manpower, no economy. No economy can function without technical education and that means no way out of poverty."

programmes in Nigeria include the following:

Low self esteem, negative peer pressure and apathy towards technical education are foes in real life that make students drop out of school, go to jail, become teen parents and even end up as arm robbers, kidnappers (Oviawe, 2015).

Poor societal perception. Most people are yet to understand the meaning, scope and content of technical education. They perceive it as education for the handicapped, never-do-well, or education for those who cannot cope with the sciences and social sciences.

Elitism. According to Oviawe & Anavberokhai (2008),

elitism is the belief of a group in the society that because of superior privileges, power and talent they tend to hold on to this belief through a system of education that will sustain this group's interest. Since the elites control the means of decision-making, technical education is not accorded priority. Many of the occupations in technical education at the technical college level are perceived as ignoble and unbecoming, an average Nigerian parent will not want their children/wards to earn a living as a full time plumber, brick/blocklayer, carpenter, auto mechanic, electrician, home economist, or farmer. This is because they perceive that these occupations are for the poor and underprivileged. Most parents want their children/wards to be medical doctors, accountants, lawyers, administrators and good politicians (Igbinedion & Ojeaga, 2012). Explaining the reason for the low enrollment of students into technical colleges, the Executive Secretary of the Nigerian Education Research and Development Council, NERDC, Professor Godswill Obioma, said they were given 'a stigma of inferiority, resulting in the ever-increasing registration of students into secondary schools.

Poor societal attitude. The attitude of people towards technical education contributes to the challenges in its teaching. According to Idialu (2007), in schools, the teacher could be teaching people who are not interested in the subjects that are being taught. Section 6 sub-section 47 of the 2013 national policy on education recognizes the general public attitudes which regard Technical, Vocational Education and Training (TVET) as somewhat inferior to other types of education.

Poor entry level. Students who enroll into technical education programmes are considered to have low aptitude (Oviawe & Anavberokhai, 2008). Technical colleges find it difficult to attract good students because there is a strong misconception that they are reserved for the never-do-wells and other negative by-products. Those admitted because they cannot find other things to do barely pass through the programme because of poor aptitude and attitude.

Poor recognition. There is low recognition associated with manual labour in Nigeria. Nigeria, unlike are counterparts in developed countries, the skilled craftsman does not enjoy the same recognition (Oviawe & Anavberokhai, 2008). According to Dike (2009), Nigerian leaders cannot give technical education the attention it deserves without changing their thinking models' that drive their decision. Changing their mind-set is a vital step towards reorganization the sector since without changing their thoughts, values and beliefs, it is impossible to change their negative impression about technical education.

Lack of exposure of students to the world of work through work-visit. Public secondary schools and technical colleges in Nigeria do not accord work-visit the attention and consideration they require at the junior secondary education level. This neglect seems to mar the realization of the objectives of prevocational education towards enhancing students' interest in technical education thereby increasing enrolment in technical colleges (Oviawe, 2015).

Insufficient time on the timetable for meaningful practical activities hence most teachers resort to the theoretical method of teaching technical and vocational subjects (Okorie, 2001). The instructional method used in teaching vocational and technical subjects is full of 'showing', 'telling' and 'observing' with a few cases of 'doing and practice' thus contradicting the recommended 'learning by doing' and guided discovery' instructional strategies (Oviawe, Ezeji & Uwameiye, 2015). This mismatch is also against the principle of vocational education which stipulates that the training environment should be a replica of the work environment. These have resulted in reduction of students' interest.

Teachers' commitment and attitudinal disposition could bring about students withdrawal of interest in technical education. Government policies concerning teachers' remuneration and good welfare conditions can go a long way to give them job satisfaction. The disparity in the remuneration and condition of services of teachers in relation to other public servants in other sectors of the economy obtained in Nigeria does not motivate them to work with dedication. Where these conditions are not favourable, a number of negative attitudes to work will be exhibited. Some teachers may go into private business activities as a coping strategy to 'meet up' with their peers in the society as students are unduly neglected. Where this surfaces, students would see withdrawal as the only option for escape. It should be recalled that practical activities in technical education is to compliment what is taught in class for better understanding and skill acquisition, as it becomes unhealthy for students to cope if it is taught as story-telling. For enhanced enrolment into technical colleges, the youth population to whom the future of Nigerian technological development and sustainability is trusted needs to be taught adequately by competent and committed teachers. In-depth analysis of students' low enrolment in technical colleges as shown in Table 1 reveals a very gloomy picture of what the future holds for Nigeria hence, the need to foster enrolment into technical education programmes through career education and awareness.

Other Researchers factors responsible for low enrolment of students in technical education programmes to include: lack of career awareness, discrimination against its graduates, government lukewarm attitude towards Technical Education, lack of candidate's interest, inadequacies of facilities/infrastructural materials, and lack of career counselors (Ozioma, 2011; Ediagbonya, Agbaje, & Suberu, 2012).

Something needs to be done to improve enrolment of students in Technical Education because Federal Republic of Nigeria (2013) confirmed that Technical, Vocational Education and Training is a very important aspect of education that equip recipients with practical and applied skills for entry level jobs or become employers of labour in this era of economic crises with attendant issues that is manifesting more on unemployment. This can be achieved through career guidance and occupational information.

5. Career Guidance as a Strategy for Fostering Enrolment in Technical Education Programmes

Career, vocation and occupation were used interchangeably and synonymously by Parson (1909) to mean a variety of occupational roles which a person will undertake throughout life. Career, according to Ezeani (2013), refers to the major life domains which engage the individual in multiple roles, such as worker, family member, community participant and leisure-time participant. It involves both paid and unpaid self employment; the different occupation which an individual may have to undertake over the years and period of unemployment. Career is the sequence of major positions occupied by an individual throughout his/her pre-occupational, occupational and post-occupational life (Super, 1976).

The concept Vocational guidance is generally being replaced with the term career guidance. According to the National Vocational Association of the United States of America cited in Enyekit, Amaehule, Charles & Enyekit (2011), vocational guidance is a process of assisting the individual to choose an occupation, prepare for it, enters upon it and progress in it. Vocational guidance is focused upon the choice of occupation and is distinguished from educational guidance which focuses on choice of courses of study. Career guidance brings both vocational guidance and educational guidance together and stresses the interaction between learning and work (Bezanson & Turcotte, 2004). It is a powerful and effective method of helping to bridge the gap between education and the world of work. The Organization for Economic Cooperation and Development (OECD) (2004) defined career guidance as services and activities intended to assist individuals of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. This definition involves making information about the world of work and about educational and employment opportunities more accessible by organizing it, systematizing it and having it available when and where people need it (Ajufo, 2013). It includes assisting people to reflect on their aspirations, interests, competencies, personal attributes, qualification and abilities to match these with available training and employment opportunities. Career guidance is a means of assisting youth to make appropriate and judicious educational choices that will enable them to develop their potential and to have access to employment opportunities that are compatible with their interests and abilities. Ajufo added that it can assist to instill confidence and positive attitudes, to derive fulfillment from their chosen areas of learning and work and most importantly, to inculcate an eagerness for lifelong learning.

Career guidance, according to Jarvis (2011) in Akpan & Essien (2013), assists the young ones in selecting their career in line with their choice and interest thereby making them healthy, self-reliant and resilient individuals. It enables individuals to assess the following areas while choosing a career: aptitude, skills, personality, the level of responsibility

that suits him/her, interests, needs, and priorities (Francis, 2011). According to Parson (1909), the three factors which should govern career guidance are: (i) a clear understanding of oneself: its attitudes, abilities, interests, ambitions, resources, limitations and causes; (ii) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities and the prospects in different lines of work; and (iii) true reasoning of the relations of the two groups of factors. This implies that for appropriate career development, people are to make a choice by true understanding of factor (i) and (ii). According to Ogueze (2008), proper choice of career leads to success and happiness and indeed is a prerequisite for self-actualization. The objectives of career guidance include to:

- (i) Increase students' understanding of their abilities, interests, values, and other personality traits distinct from those of others and to use the understanding to identify occupational areas which may be more appropriate for them;
- (ii) Aid students to develop an acceptable self-image and realistic attitude to school achievement as necessary prelude to vocations;
- (iii) Help students to understand the prevailing circumstances in the world of work and the worthwhileness of legitimate occupations as well as inculcating in them the dignity of labour;
- (iv) Help students identify different occupational areas that are available both in the immediate and more distant future, the nature and purpose of each and the direction to which each leads;
- (v) Assist students develop and execute career plans which will help them in achieving their career goals – by taking appropriate courses at the secondary level or other relevant steps/training after the secondary level that would qualify them for particular occupations (Iwuama, 1991).

6. The Need for Occupational Guidance and Awareness in Schools Towards Enhancing Enrolment in Technical Education Programmes

Technical education lays a solid foundation for the training of future engineers, technologist, business men and women, technicians, craftsmen, and entrepreneurs. There is need for technical education to change otherwise, Nigeria as a nation stand the risk of producing graduates and school-leavers who will continue to roam the streets seeking for white-collar-jobs instead of those who ought to be self-employed and become employers of labour. The decline in enrolment, low quality of students at entry and higher level and high unemployment among school leavers at present depicts the place of technical education programmes in Nigeria. The dramatic increase in unemployment rate in Nigeria calls for the need for students to acquire knowledge, and saleable skills for private sector or self-employment which can be achieved through early

exposure to occupational guidance.

Occupational information is a systematically organized data used by guidance personnel for the purpose of helping persons make a career choice. It includes information on the nature of work, duties performed, responsibilities and compensations involved in various vocations, information about employment outlook, promotion opportunities and entrance requirement (Ezeji, 2001). It involves sufficient information on both the pleasant and unpleasant aspects of an occupation which information on employment prospects, the extent to which workers are in demand in an occupation, whether there is expected increase or decrease in employment in the occupation, responsibilities involved, whether the occupation is a predominantly male or female one, legal requirements about age limit, temperamental requirements, opportunities for advancement, and how and where the job can be obtained. Similarly, Parson (1948) in Ezeji (2001) asserted that occupational information includes all levels of information regarding any position, job, or occupation providing only that the information is potentially useful to a person who is choosing an occupation. Occupational information is important and useful in various ways to technical education students, graduates and people in the following ways:

- (i) Provides students with the knowledge of the advantages and limitations of each occupation. Students realize that an occupation may offer a very good pay but will not be able to give the worker the social advantage needed, thus leading to dissatisfaction and frustration.
- (ii) Helps each student to acquire knowledge of the characteristics and functions, duties and rewards of the groups of occupations within which his/her choice will probably lie and thus make intelligent choice.
- (iii) Helps the individual to find out about the general and specific abilities and skills as well as qualifications required for a particular occupation of his/her choice.
- (iv) Enables the school staff/counselors to interpret and use information concerning the characteristics, needs and opportunities available to the students.
- (v) Helps each student to understand himself/herself better, so that he/she can develop an understanding of his/her opportunities and acquire the ability to handle problems of human relationship.
- (vi) Helps the individual to secure knowledge of facilities used in the chosen field and this reduces the challenges encountered by workers in their chosen occupation.
- (vii) Helps the individual to develop the habit of analyzing information before making decisions.

7. Ways of using Occupational Awareness in Fostering Enrolment in Technical Education Programmes

The following are ways of using occupational awareness in fostering enrolment in technical education programmes:

Educational and training information through occupational

Conferences/workshops. This relates to training workshops, seminars, conferences and career-talks organized to create awareness and help re-orient youths of the job opportunities and occupational benefits in technical education. Through organization of such programmes, students will have the opportunity to ask questions about a vocation. At such meetings, the professionals from all fields of technical education could highlight on their occupations with regards to what they do, the advantages and disadvantages, methods of entry, salaries, promotions (Iwuama, 1991). An occupational conference on Technical education could be organized for the whole school, a class, or for a group of schools and could be for a single day or several days or weeks. It could be organized for junior and senior secondary students to create career awareness.

Follow-up studies. This relates to the contacts, which the school makes with all her school leavers for a period of years for the purpose of rendering further aid and assistance. Information obtained here, helps in improving the guidance programme and provides a basis for the evaluation and possible revision or enlargement of the educational programme in the light of the school leavers' experience in the follow-up studies, the investigators provide data on actual employment and other post-school activities of the graduates.

Field trips/work visits/excursions bring students face-to-face with the real-work situation in the world of work should be organized to enhance students' interest and foster enrolment in technical education programmes. Here, students are made to visit professionals in the various fields of technical education programmes to learn about their jobs (how they work, what they do and qualifications for entry into the field). Field trips or work visits are a way to reinforce and expand on concepts taught in class (Kelly, 2011).

Journals, newspapers and magazines. Reference books, journals, magazines, and institutional brochure on technical education occupations should be provided in the school libraries for students to access and have current updates. Also, newspaper cuttings on careers, occupational pamphlets, files with career information, should be displayed conspicuously for students and all to benefit from.

8. Conclusion

This paper has viewed career guidance and occupational awareness with regard to addressing the issues of low enrollment in technical education programmes in Nigeria. It x-rayed issues of low enrolment in technical education programmes in Nigeria and factors responsible for this menace. The need for career guidance and occupational awareness in schools was addressed and strategies for fostering students' enrolment in technical education programmes through career guidance and occupational awareness discussed. It is suggested in this paper that:

1. Occupational awareness should be created to students through orientations, career talk/week, seminars, role playing and media at the basic education and senior secondary school levels.
2. Parents and all stakeholders should permit their children

and wards to take decisions on their own based on their interest and aptitude what course or programme to study.

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