A Professional Competency for Technical and Vocational Education Teachers in Technical Colleges in Niger State, Nigeria

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Abstract

A significant amount of concern has been expressed about all the way in which Technical Vocational Education Training (TVET) is taught in Nigeria and particularly in technical colleges in Niger State. This concern stems partly from the fact that the nation cannot grow its human and material resources effectively without sufficient and well-trained manpower at all Technical educational levels. This study therefore investigates the professional skills training needs of Technical Vocational Teachers in Technical Colleges in Niger State. The sample method used for the survey. The study population comprised of all technical college teachers in Niger state; the sample included all the sixty (60) Technical Teachers that made up the population. For data collection, professional training competencies Needs of Technical Vocational Teachers Questionnaire were used. The test-retest method was also used to determine the coefficient of reliability of which 0.72 was obtained. The data collected were analyzes using the statistical method Mean and Standard deviation. The findings from this study showed that the teachers of technical colleges in Niger state of Nigeria are not exposed to workshops, seminars, conferences and other means of acquiring basic technical knowledge, skills and attitudes and that innumerable teachers of technical colleges are not competent. It was therefore recommended that all technical teacher training institutions function in performance as a matter of necessity and produce an appropriate curriculum which will take on the necessary skills for our new technical teachers in training and those already in the field through in-service training.

Keywords: Professional Competency, TVET Teachers, Technical Colleges in Niger State, Nigeria.

1.0 Introduction

A profession according to Schleicher, (2016) is a type of job which require specialized training or education. The National Teachers Institute NTI (2000)Defines a career as any job which requires the prolonged and specialized knowledge, skill and attitudes required for a particular service in society of all those who work together most require the above elements of competency.

Sern, Adamu, & Salleh (2019) Competency claimed that this is an essential element in the evaluation of the standard of technical and vocational education and training (TVET) teachers. Competency TVET teachers ' are related to skills, knowledge, attitudes, values, and appreciations which are considered to also be critical elements for career development (Andersson & Köpsén, 2015; Arifin & Rasdi, 2017). TVET Teachers need to be competent in content delivery, skills training and classroom management. Likewise, they should also be able to handle teaching aids, evaluate and evaluate students, possess effective teaching methods, understand students ' learning style, address students ' needs in the classroom and, more importantly, be a role model for the students (Okoye & Ofonmbuk, 2015; Oluwasola, 2014; Oni, 2007).

The Federal Republic of Nigeria FRN (2013) describes technical and vocational education (TVE): As a broad term referring to those elements of both the educational process involving, in addition to general education, the study of technology and applied sciences and the development of practical skills, behaviours, understandings and information relevant to occupations in specific economic and social sectors. FRN (2013) further defined this instruction to mean;

a. An essential part of public education
b. To train for the professional field and to engage successfully in the world of work.
c. The lifelong learning dimension and the readiness for responsible citizenship.
d. An instrument for fostering sustainable and environmentally sound growth and
e. A patented alleviation processes.

Though, it can be deduced from the above that a nation's wealth is proportional to the level of all its scientific and technical development. The industrial and technological level as shown by night Unameye and Oviawe (2006), depends in turn on the quality of teachers, too. This view is consistent with Lassa's (1991) observation that the teacher lays the foundation for a nation's technological advancement, and that progress depends on the teachers ' quality and efficiency. He further concluded that the importance appreciation provided by the instructor depends on whether technology could solve problems or create problems for individuals.

Technical Vocational Teachers are a special group of qualified teachers who have been supported in various ways by the Technical Teachers Training Program (TTTP) to learn organizational expertise in both these chosen fields in technical education. These teachers are professionally trained to teach the prevocational introductory technology at junior secondary schools in the various vocational technical education institutions including technical colleges. Nwachukwu, Igbo, Onyemachi and Ekong (1999), proclaimed that in classroom and laboratory directions, individual vocational technical teachers are specifically trained for competency. Therefore, teachers must in turn maintain trust in the technical content as well as methods for enhancing awareness on the performance of vocational technical education.

FRN (2013) observed that no education can rise above its teacher's quality. This means that the effectiveness of any educational program (including TVE) is largely dependent on the availability of a sufficient number of professionally qualified, dedicated, efficient, conscientious and highly motivated teachers in the classroom. Commenting on the quality Olaitan (1996) claimed that there is no substitute for Nigeria's pursuit of excellence in technical and vocational education.

Despite the claims made by various authorities on TVE, the most disturbing thing about TVE in Niger state and Nigeria as a whole since the introduction of the 6-3-3-4 education system in the early 80's is evolving on the failure to realize the lofty ideas of people regarding TVE. The poor quality of graduates compelled by high unemployment among them is a clear indication that they do not have adequate knowledge and skills to allow them to take up the job or develop themselves. This main issue has seriously led people to question the productivity and professional quality, as well as the educational skills of the participating technical teachers in their development.

Subsequently this call for an adequate curriculum for the training of professionals in different professions to meet current labour requirements also demands that we constantly try new and better ways to measure the effectiveness of the teaching learning process and recognize important tasks for designing the required curriculum for the training of professionals in their different professions. It is one of the best ways to meet the current requirements of the labour market and to ensure that teaching and learning processes are successful.

According to Lee, Maclean, & Joy (2018) articulated that the technical education program is considered relevant if it is tailored to the particular technical and vocational teacher's needs and expectations. For technical education teachers and technology practitioners, the National Commission of Colleges of Education, Minimum Standard (1990) is capable of teaching technical courses in technical colleges, even in junior high school (JSS), as it brings technology teachers and values into society. The NCCE standard (1990) offers vocational training and retraining of technical education teachers in order to love general knowledge of the industrial areas and specialize in one field as well as one type of technical drawing towards the end of his study. Considering that the technical education teacher is expected to teach a more comprehensive vocational or technical courses including post-training technical drawing, his skills and effectiveness are inherently questionable (Awolumate 2005) that the curriculum of technical teacher education is effective and this hinders the effectiveness of teacher education.

Significant efforts should be intensified in Nigeria, as in other parts of the world, to establish and improve systematic teaching of technical education into others in order to meet the prediction level of high demand for both traders and higher level of technological man power. It is the teachers who prepare for conditions around the world. Such academic skills include the skills needed in the contemporary workforce as well as the knowledge and skills valued by state-examined academic education. In addition, as new techniques and skills are growing in business and industry, technical

education clearly owes its students to remain alert and attentive to all significant changes and innovations, both in their particular and related fields of employment. This means that the technical curriculum for teacher education has to be based on the students ' current reported needs. Therefore, the obstacles are research initiatives to assess to what degree a program currently exists that enables and assists school staff to actually cause successful learning to happen to students. It is on this basis that this paper is poised to examine the professional skills of vocational technical teachers, a factor analysis of technical college teachers ' training needs.

2.0 Statement of the Problem

It is a common saying and trusts throughout the world that technical vocational education and training (TVET) will provide its students with the necessary skills to be self-relevant and meet current labour requirements, While Nigeria's golden goals attached to technical Vocational education at the beginning of the 6-3-3-4 education system in the early 80's ago, as stated in the National Education Policy (2013), led the entire population of that nation to assume that the end of the economic hardship issue was in sight. Contrary to this belief, among graduates of various technical colleges in Niger State, very high levels of unemployment and incompetence grew stronger. Therefore, failure to realize the lofty goals of technical / vocational education has in fact put into serious doubt the consistency, productivity and, in general, the professional skills of vocational technical teachers. The paper therefore addressed the professional competencies of vocational technical teachers: a factor analysis of technical college instructors ' training requirements needs.

2.1. Purpose of the Study

This paper investigated technical and vocational education teachers ' professional competencies: a factor analysis of the training needs of Technical College Teachers in Technical Colleges in the Niger State of Nigeria. In specific term the study:

1. Find out the professional skills training needs of qualified teachers at technical colleges in Niger State.
2. Find strategies and techniques that can be adopted to support the professional skills training required by technical college teachers that will enhance or influence students' performance.

2.2. Research Questions

The following research questions were raised for the study:

1. What are the skills and training programs or the professional skills requirements of the Niger State Technical College Teachers to improve their educational competence?

2. What are the Approaches and Techniques to be adopted for Teachers in Technical College Competency training needs that will improve or impact students' performance?

2.3. Significance of the Study

The benefits to be derived from the study are many. The results would mainly be a desire to help teachers improve their areas of vocational education, also, performance will also be accomplished by graduates from technical colleges who will effectively fill the high level of entrepreneurs and the higher level of technological manpower, thus drastically reducing the nation's current level of poverty and unemployment.

2.4. Delimitation of the Study

This research is delimited to the Teachers of the Niger State Technical Colleges. The research does not include Technical Teachers in public secondary schools and those in the Niger state College of Education.

3.0 Methodology

A survey research method has been used for the study as it includes soliciting information from a sample of qualified teachers on the professional skills of Technical Teachers; a factor analysis of the training needs of Technical College Teachers in Niger State.

3.1 Population

The population of the study comprises of all Technical Teachers in the four-state government Technical Colleges in Niger State.

3.2 Sample and Sampling Techniques

There are only 60 competent and qualified Technical Teachers in all the Colleges of study. Due to the small size of the population the entire population was used for the study.

3.3 Research Instrument

The study instrument was a structured questionnaire titled, "Professional skills training needs of technical teachers; a factor analysis of the training needs of technical college instructors' questionnaire (professional training competencies Needs of Technical Vocational Teachers Questionnaire) comprised of 15 items generated by the researcher derived from the literature review and knowledge seeking to know the professional skills.

3.4 Validity of the Instrument

The validity of "professional training competencies Needs of Technical Vocational Teachers Questionnaire" was certified by two experts from the department of Industrial and Technology Education, Federal University of Technology, Minna.

3.5 Reliability of the Instrument

A test-retest technique was employed to assess the reliability of this instrument, using 20 Technical College Teachers drawn from outside the study area. Between the first and second test, i.e., the test and the re-test, a gap of two weeks was set. Upon the calculation of the result, a reliability co-efficient of 0.72 was obtained.

3.6 Administration of the Instrument

A research assistant was appointed and competent to assist in the administration and selection of the questionnaires while administering the instrument. A return rate of 100 percent was reached for the instrument.

3.7 Data Analysis Techniques

The mean and standard deviation were the key statistical instruments used for the research data analysis. Mean that dropped below 2.50 was considered necessary, and mean of 2.50 and above was considered unnecessary. That resulted in two decision groups. "Need, and not needed. On the strategies among technical teachers for retaining professional competency, mean that 2.50 fell was considered important. Here two groups of decisions have resulted, "significant" and "not relevant." Professional Competency Assessment Needs of Technical College Teachers in Niger state.

Mean and Standard deviation of the skills and training programs or the professional skills requirements of the Niger State Technical College Teachers to improve their educational competence?

Table 1. N=60

S/N	Item	X	SD	Decision
1	To collect the requisite learning material, to practice and to test it before the actual instruction	2.27	0.73	Needed
2	To help students observe, identify and document critical points of instruction, in particular the realistic procedures	2.17	0.81	Needed
3	For guidance purposes, breakdown of an occupation or work into its component pans	2.15	0.65	Needed
4	Drawing on personal vocational knowledge to enrich education	2.15	0.61	Needed
5	Developing and using instructional content and teaching tools to promote learning	2.33	0.60	Needed
6	To convey facts, ideas, values and skills in your field of specialization	2.25	0.62	Needed
7	To keep all dangerous and inflammable workshop content out of the student's control and boldly labelled risk or poison	2.18	0.72	Needed
8	Sequencing and structuring learning experiences to produce learning in the shortest possible time and activities in the most suitable order for effective learning	2.13	0.82	Needed
9	Determine the source of practical work or simulation content on which guidance and practice will be based	1.97	0.73	Needed

Analysis of improving strategies and Techniques for sustaining Professional Competency among Technical College Teachers in Niger State.

Mean and Standard deviation of the Approaches and Techniques to be adopted for Teachers in Technical College Competency training needs that will improve or impact students' performance?

Table 2. N =60

10	Attend workshop / seminar with science-based teachers, where driven exploration is mostly used as an induction tool which can be applied equally in TVET	3.77	0.52	Important
11	Acquires full knowledge of technology as a high academic quality that leads to high performance and advancement in higher education	3.77	0.52	Important
12	School to serve as the basic goal of technical and vocational education and give it more support than preparation for the workforce	3.62	0.68	Important
13	Exchanges visiting perspectives on engineering innovations arid point of view of fellow technical teachers and others in the research and teaching profession.	3.53	0.75	Important
14	Continuous learning of new skills / information necessary to keep up with technology and development of the teaching profession	3.68	0.53	Important
15	Schools to co-opt with local experts for continuous assistance in practical work in different fields of specialization.	3.38	0.68	Important

4.0 Results

Table 1 indicates that items 1-9 are firmly in line with means from 2.15 to 2.35 and standard deviation (S. D) below 1. Table 2 shows again that element 10-15 is firmly in line with means from 3.38 to 3.77 with standard deviation (SD) of less than 1.

4.1 Discussion

Table 1, shows that many of the TVET teachers are not eligible at technical colleges. It can be deduced from the table that this negligence can be due to the failure and insufficient treatment of the implementers of technical colleges' curricula for the TVET. Their over relies heavily on homemade teaching materials at the cost of the real equipment and materials needed for instruction as practiced in advanced countries. To begin with, TVET teachers in technical colleges are mostly overlooked in the scheme of things required for competency enhancement, particularly those who are yet to enter administrative frameworks.

Lack of skills needed for successful instruction as outlined in items 1-9 are technical skills for collecting appropriate learning materials, practicing and reviewing prior to actual teaching, assisting students in the basic process skills of identifying, classifying and recording critical points of instruction, in specific practical procedures, breaking down research into their component parts, instruction. Design and use educational materials and teaching equipment to promote learning, keep dangerous and inflammable laboratory materials out of reach of students, establish a relationship between information, concepts and skills in a specialized field; schedule and organize learning experiences to provide learning in the shortest possible time and activities in

the most appropriate order for impact. Without missing word, the absence of these professional skills would impede horizontal and vertical articulation within the education system and between the school and the work world. This will therefore provide room for criticism and prejudice.

Table 2, It has also been shown that technical college teachers in Nigeria are not exposed to laboratory workshops, conferences, means of acquiring basic technical knowledge and skills and exchange visits. This was reinforced by items 10-15, in which respondents strongly agreed that introducing them to methods and techniques that can maintain their competences is a matter of primary importance. Table 2 also showed that technical college teachers were not encouraged or aided in the handling of specific guidance by international or local experts and this contradicts UNESCO (2004) that trained professionals employed outside of education should be allowed to teach in schools. Universities or other educational institutions in other to more closely connect the world of work to the classroom.

5 Conclusion

With discussion above, it is essentially obvious that there is no way that the Teachers at the Technical College will address the technology of the day. This chaotic condition can be due to the deterioration of most of the equipment used for long-term teaching without being repaired or replaced; gross shortage of expendable materials; refuse them (Technical college teachers) involvement in decision-making related to technological development and their welfare; inadequate training provided to these teachers by various technical teacher training courses; inadequate funding of various technical education programs at all levels, including the stage and no sociological phenomena for our technological development, constitute a serious basis for our technological progress.

Recommendations

The following recommendations are therefore made;

1. As a matter of necessity, all professional teacher training institutions will work in concert to develop an appropriate curriculum that will promote the necessary skills through in-service training for our young teachers in training and those already in field.

2. This research examines only the professional competence of technical teachers; the study should be performed on occupation or specialization in order to determine the competency needs of the different occupations.
3. Nigeria should focus its resources for development purposes on extracting from its intellects the necessary strategies that can be implemented to give a better outlook to technology education.
4. Government will focus on ways to support the local expert to assist and participate in the implementation of practical aspects of the technical college curricula in various areas of technological specialization.

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