

ASSESSMENT OF MANAGERIAL COMPETENCY POSSESSED AND DEMONSTRATED BY TECHNICAL COLLEGE PRODUCTS EMPLOYED IN TERTIARY INSTITUTIONS IN ANAMBRA STATE, NIGERIA

BY

ENGR. EZEABIKWA MATTHEW EJINDUNAKA, FNATT, FCAI.

Phone; 08034306275 E-mail; bikwas1953@gmail.com

**SCHOOL OF INDUSTRIAL TECHNICAL EDUCATION,
FEDERAL COLLEGE OF EDUCATION (TECHNICAL)
UMUNZE, ANAMBRA STATE.**

Abstract

The study was carried out to ascertain the managerial competencies possessed and demonstrated by technical college Auto-Mechanics graduates employed in tertiary institutions in Anambra State, Nigeria. The study used one research question and one null hypothesis that guided the study. The study was carried out in all the accredited tertiary institutions in Anambra State. Survey research design was adopted because of its relevance in descriptive study, audience research and programme monitoring. The population of the study was made up of 110 heads of academic and non-academic departments that served as the supervisors of the products in the tertiary institutions. The population was considered manageable and there was no sample and sampling technique. Structured competency questionnaire validated by three experts from university of Nigeria was used for data collection. Data collected were analyzed using mean and standard deviation while the t-test statistics was used to test the hypothesis at 0.05 level of significance. The study revealed that products possessed and demonstrated the seven managerial competency traits studied. Following the result of the study it was recommended that government and stake holder in Vocational Technical Education should continue to provide relevant resources inputs to encourage and sustain technical education at the technical college level among others.

Background of the Study

Every educational programme has specific goals and objectives which if actualized will result to changes in behaviours of the beneficiaries of the programme. Technical college programmes are offered at the upper secondary education to provide the recipients with appropriate occupational skills, knowledge, and attitude to meet job requirements in deferent occupational areas (FRN, 2004). The programme train the bulk of craftsmen and women needed in industries, commerce and other social circumstances and thus meets the manpower requirements needed for national technological development, personal emancipation and self-reliance. If the technical college programmes are satisfactorily implemented, it will impart certain competencies in the beneficiaries of the training programme or the products. Products of the technical college programmes are the craftsmen and women. The terms craftsmen, technical college products and the beneficiaries of the programme will be used interchangeably in this study. The low level of technological, economic and social development of the nation cast doubts concerning the occupational competency, which includes managerial skills, (knowledge, and attitudes acquired by the students while undergoing training. Technical college products are the work force to ensure rapid technological, economic and social development of the states and the nation at large (Momoh.2010). It is necessary to assess and ascertain the extent the craftsmen, who are the products of the technical college programmes acquired the required managerial competencies

required for employment and growth in the world of work. Undergoing training as required in the goals and objectives of the national policy on education and the job specifications of the Federal Ministry of education.

The goals and objectives of the technical and vocational education are:

- a. to provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technicians levels;
- b. to provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;
- c. to give training and impart the necessary skills to individuals who shall be self-reliant economically (FRN, 2004).

The policy further stated that “Trainees completing technical college programmes shall have three options:-

1. Secure employment either at the end of the whole course or after Completing one or more modules of employable skills;
2. Set up their own business and become self-employed and be able to employ others;
3. Pursue further education in advance craft/technical programme in post-secondary (tertiary) technical institutions such as science and technical colleges, polytechnics or colleges of education (Technical), and the Universities”.

For these products to set up their own business and become self-employed and be able to employ others, they must have acquired enough managerial competencies undergoing the training. Managerial competency is the ability to control own resources and that of the organization.

Ulinfun (1988) stated that whatever the trade areas of specialization of the technical college products may be, they should be able to:-

1. Develop and manufacture simple (easy to use) technologies which majority of Nigerians can afford.
2. Produce spare parts for industries, offices, equipment and effect repairs on basic house hold utilities, on mechanical and electrical components and equipment as the case may be. The study noted with interest that despite over 37 trade areas of specialization, the goals and objectives are the same. This means that the products (craftsmen and technicians) perform similar operations but in different occupational areas of specialization. The Scheme of Service of the Federal Ministry of Education for the Federal Colleges of Education and the Federal Polytechnics (1989) specified the job roles of the craftsmen to include:
 - Perform lead hand duties that requires fabrication, processing, installation, maintenance or repairs of buildings, furniture, electrical –mechanical system, vehicles, mobile and stationery machines, and materials and equipment on a specific task and procedure basis.
 - Checking and allocating materials for work to assistant craftsmen and preparing simple job reports.
 - Performing routine individual trades jobs.
 - Performing any other job as may be assigned.

The expected outcome of the training programme and the expected job roles specifications of the Federal Ministry of Education for the craftsmen implicate the need for enhanced managerial competency to be effective and productive in their duties.

Assessment of managerial competencies possessed and demonstrated by technical college products is a process of getting an opinion for judgment, or ascertaining the worth or value of the managerial skills acquired by the products while they were undergoing training. In asserting that assessment is a pre-requisite to evaluation, Orji (2005) stated that assessment involves the process

of investigating the status of an individual or group, usually with reference to expected outcomes. Expected outcomes in this study are the goals and objectives of the technical college programme as stated in the National policy on Education and consequently the job role specifications of the Federal Ministry of Education conditions of service for the tertiary institutions. Ascertaining the level or adequacy of the managerial competencies is very necessary to determine the extent of the achievement of the goals and objectives of the technical and vocational education programmes at the technical colleges which will serve as an up-to-date feedback to the stakeholders.

Technical and Vocational Education (TVE) is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (FRN, 2004; UNESCO, 2010). Okoro (1999) refers to technical/vocational education as a form of education which aims at preparing learners for employment in various recognized occupations. Technical college programmes produce the workforce with the appropriate understanding, knowledge, skills and attitudes for self-reliance and technological development (Momoh, 2010; Ezeabikwa, 2011). Technical college products (craftsmen and technicians), equipped with the appropriate occupational competency have the answers to the national technological, economic and social underdevelopment; unemployment and poverty alleviation (Orji, 2005).

FRN (2009) expresses the fear that the performance of the technical college products in the world of work might not measure up with the requirements of the Millennium Development Goals and Vision 20:2020 dreams, which would want Nigeria to be ranked with the first 20 developed nations of the world, thus the need to assess the managerial competency acquired and demonstrated by those products employed with the tertiary institutions in Anambra State, Nigeria thus this study.

Managerial competency refers to the skills or ability required by workers for optimal performance in the given occupation, technical or trade field. The goal of managerial competency is to optimize performance by having the skills to control own or organizational resources to avoid waste.

Competency is the characteristics of an individual that lead to the demonstration of skills and abilities which result in effective performance within an occupation or organizational area. Spencer Jr., McClelland, & Spencer, (1964) refer to competencies as skills or knowledge that lead to superior performance. From the contents of the goals and objectives of the technical college programmes and the Federal Ministry of Education job role, the products should of necessity, possess and demonstrate adequate entrepreneurial/managerial competency to establish own business and be able to employ others and manage own and organizational resources. Possession of a trait and demonstration of a trait are related but definitely not the same. This is because one might have a skill but might not have the ability to demonstrate it. Possession of a competency comes first and it is followed by the ability to demonstrate it. One cannot definitely demonstrate a competency one does not possess.

Assessment of possession and demonstration of managerial competencies by the craftsmen will best be done by heads of academic and non-academic departments of tertiary institutions who are the immediate supervisors of the products under their employment. In tertiary institutions, heads of academic and non-academic departments are the supervisors of the technical support staff and other staff under them on daily basis; they complete their Annual Performance Evaluation (APE) Forms, and are in the best position to ascertain the level of adequacy of the competencies demonstrated by the products on their day-to-day performances of their duties (Okoro, 2005). Also

by the positions they occupy in the society, feedbacks from supervisors in tertiary institutions on the performances of the craftsmen and women will be valued and respected by all concerned.

Federal Ministry of Education Road Map for Education Sector, (2009) speak of the training institutions inability to produce quality workforce for technological and economic development of the nation. Challenges of low enrolment, poor programme implementation, inadequate number of technical and vocational colleges, dearth of qualified and competent technical teachers, chronic under funding, poor infrastructural and facilities provisions were also identified by scholars like Olaitan, (1991); Eze, (1991); Oranu, (1991); Okafor, (1992); Okorie and Ezeji, (1988). Osinem, (2009) blamed the training institutions for poor implementation of the programmes and stressed the need for product quality assurance and to match the individual needs of the students with the demands of the labour market. Gana (2006) stressed the need for establishment of cottage industries in cluster areas to provide adequate industrial training for the trainees and to adequately sponsor the programmes. UNESCO (2010) blamed the national technological and economic weakness of the nation on inadequate curriculum and poor public perception of the technical college programmes, poor funding and infrastructural decay and recommended 26% annual budgetary allocation to education.

With all these doubts about the product quality, assessment of competencies possessed and demonstrated by the group employed in tertiary institution in Anambra State is imperative to give the required feedback to the Government and other stake holders in technical education on the state of the art of technical education programmes. The feedback resulting from the study will help the Government and the stakeholders to take appropriate remedial actions to bridge the gap between the competencies possessed and demonstrated by the graduates of the programme and the demands of the labour market to ensure rapid technological, economic and social development of the nation and economic emancipation of the people.

Purpose of the Study

The study ascertained the adequacy of the managerial competencies possessed and demonstrated by the Auto-mechanics technical college products employed in tertiary institutions in Anambra State.

Significance of the Study

The findings will be beneficial to the government in that the feedback will help in decision making in relation to the level of funding necessary for programme improvement and sustenance.

Feedback on programme outcome will be beneficial to the programme planners (NBTE) in that up-to-date information will be available to enable appropriate programme innovations to be applied.

The training institutions will benefit from the feedback which might come in form of suggestions on how the instructional activities could be improved to impart the required competencies in the products.

The teachers will benefit from the findings in that the information on the programme outcome will help them determine the teaching methods to adopt or drop to impart the required competencies in the students.

The students will find the information from the findings helpful in form of better counseling and knowledge of the strategies they will adopt to acquire the competencies necessary for a member of a productive work force of the 21st century.

Research Questions

The study used one research question to help to find solutions to the research problems.

How adequate are the managerial competencies possessed and demonstrated by the technical college products employed in the tertiary institutions in Anambra State?

Research Hypothesis

The following null hypotheses guided the study and was tested at 0.05 level of significance.

There is no significant difference between the mean responses of the academic and non-academic supervisors on the adequacy of the managerial competencies demonstrated by the technical college products employed in tertiary institutions in Anambra State.

Scope of the Study

The study was focused on the assessment of competencies demonstrated by technical college products employed in tertiary institutions in Anambra State as rated by the academic and non-academic supervisors. The content area of the study focused on the managerial competency. The study did not attempt to assess or determine the supervisors' competency rating of the products employed in other establishments.

Design of the Study

The researcher used survey research design. The appropriateness of this method is based on the fact that survey research design is a descriptive study which has the nature of collecting data and describing same in a systematic manner; finding out the conditions and relationships that exist; opinions that are held and features and facts about a given population (Akuezuito and Agu, 2003). Survey research design is a very good technique of audience research and programme monitoring (Calhoun, 1976; Hillestead, 1977). The study embarked on ascertaining the opinions of the heads of academic and non-academic departments on the managerial competencies possessed and demonstrated by the technical college products under their employment.

Area of the Study

The study was conducted in all the tertiary institutions in Anambra State namely; Nnamdi Azikiwe University (NAU), Awka, Anambra State University of Science and Technology (ASUTECH), Uli; Madonna University, Okija; Federal Polytechnic, Oko; Federal College of Education (Technical), (FCET), Umunze; and Nwafor Orizu College of Education, Nsugbe.

Population of the Study

The population of the study is 110 made up of 80 heads of academic departments and 30 heads of non-academic departments who are immediate supervisors of the craftsmen in Auto-mechanics who serve as technical support staff in the departments. The records of the departments were obtained from Industrial Training Fund (ITF) area office Awka.

Sample and Sampling Technique

The population of 110 was considered manageable and the need for sample and sampling technique was obviated.

Instrument for Data Collection

Data used for the study was collected by means of structured questionnaire developed by the researcher titled *Competency Questionnaire*.

Section A of the questionnaire sought and obtained a confirmation from the departments that each has a craftsman employed as a technical support staff as mandatorily required by the supervising authorities: Nigeria University Commission (NUC), National Board for Technical Education (NBTE), and National Commission for Colleges of Education (NCCE). All the craftsmen studied have the prescribed qualifications. None has the Nigerian National Diploma (NND) and they have the Federal Craft Certificate (FCC) in addition. This indicated they are

products of technical colleges. Section B was developed to reflect the competencies which if possessed and demonstrated by the craftsmen as rated by the supervisors will mean that the goals and objectives of the technical college programme is being actualized in the graduates. Section B contained 7 items meant to elicit the adequacy of managerial competencies possessed and demonstrated as rated by the supervisors.

The items were given to the respondent to indicate their opinions on a three point scale of Very Satisfactorily Demonstrated (VSD), Satisfactorily Demonstrated (SD), and Unsatisfactorily Demonstrated (UD). The scale ranged from 1-3 with 3 as the highest value and 1 as the lowest value. The respondents were requested to check (✓) in the appropriate column for their ratings in each item.

Validation of the Instrument

The instrument was validated by three experts of the department of Vocational Teacher Education of University of Nigeria Nsukka. Suggestions and corrections made by the experts were included to produce the final copy of the instrument.

Reliability of the Instrument

The responses from 10 respondents from Enugu State College of Science and Technology were subjected to Cronbach Alpha Co-efficient of internal reliability (CA) which is best because of the number of data and nature of the variables.

The reliability coefficient of 0.81 calculated after the analysis of the pilot test gave the researcher the confidence that the method of data analysis used for the study were suitable.

Method of Data Collection

The researcher engaged the services of 5 research assistants who distributed the questionnaire directly to the offices of the heads of departments who were the supervisors that worked on daily basis with the products (craftsmen).

The research assistants were selected based on their knowledge of the areas of the tertiary institutions. This strategy ensured that the 110 questionnaire distributed were completed and returned. Some of the respondents completed and returned the questionnaire on the spot.

Method of Data Analysis

All the respondents ticked (✓) yes in section A(1) which indicated that all the departments studied have craftsmen in their employment. Over 80% of the respondents indicated that the craftsmen had either the National Technical Certificate (NTC) or the National Business Certificate (NBC). The other additional certificate as specified by the respondents is the Federal Craft Certificate (FCC) awarded to all grandaunts at the end of the programme. There was no indication of any one having the Advanced National Technical Certificate (ANTC), the Advanced National Business Certificate (ANBC) or the Nigerian National Diploma (NND). This showed that none of the products went back to the technical college for advanced course after graduation.

Data collected from sections B using the instrument, were analysed using mean (\bar{X}) and standard deviation (SD) computed for each item.

PRESENTATION AND ANALYSIS OF DATA

The data for answering research question 1 are presented in Table 1

Table 1

Mean Responses of the Respondents on the How adequate are the Managerial Competencies Possessed and Demonstrated by the Technical College Products Employed in the Tertiary Institutions in Anambra State
N = 110

S/N	Item Statements	Mean	S.D	Remarks
1	Control resources (own or establishment)	2.03	0.55	Possessed and Demonstrated
2	Delegate responsibilities when necessary	2.04	0.45	Possessed and Demonstrated
3	Supervise subordinates	2.06	0.49	Possessed and Demonstrated
4	Organize daily work routine	2.04	0.48	Possessed and Demonstrated
5	Handle crisis situations	1.95	0.47	Not Possessed and Demonstrated
6	Foresee and anticipate problems and solutions	2.04	0.48	Possessed and Demonstrated
7	Use mathematical figures	2.06	0.49	Possessed and Demonstrated

Data in Table 1 above show that six out of seven items have their mean values ranged from 2.03 to 2.06. This showed that the mean value of each item was above the cut-off point of 2.00, indicating that the technical college products possessed and demonstrated six managerial competencies out of the seven identified in tertiary institutions in Anambra State. The Table also showed that the standard deviations (SD) of the items are within the range of 0.45 to 0.55 and are positive. This indicated that the respondents were not very far from the Mean or from one another in their responses.

Testing of Hypotheses

Hypothesis 1

There is no significant difference between the mean responses of the academic and non-academic supervisors on the adequacy of the managerial competencies demonstrated by the technical college products employed in tertiary institutions in Anambra State

Table 2

The t-test Analysis of the Mean Responses of Academic and Non-Academic Supervisors on Managerial Competencies Demonstrated by the Technical College Products Employed in Tertiary Institutions in Anambra State

S/N	Managerial Competencies	X ₁	S ² ₁	X ₂	S ² ₂	t- cal	Remarks
1	Control resources (own or establishment's)	2.00	0.55	2.09	0.54	0.83	NS
2	Delegate responsibilities when necessary	2.03	0.43	2.03	0.48	0.06	NS
3	Supervise subordinates	2.03	0.51	2.12	0.43	0.87	NS
4	Organize daily work routine	2.00	0.45	2.16	0.52	1.61	NS
5	Handle crisis situations	1.93	0.48	2.00	0.44	0.63	NS
6	Foresee and anticipate problems and solutions	2.01	0.37	2.12	0.56	1.26	NS
7	Use mathematical figures	2.11	0.53	1.93	0.35	1.72	NS

Data presented in the table above revealed that each of the seven competency items had their calculated t- values ranged from 0.06 to 1.72 which were less than t-table value of 1.98 at 0.05 level of significance and at 108 degree of freedom (df). This indicated that there was no significant difference between the mean responses of academic and non-academic supervisors on the adequacy of the managerial competencies demonstrated by the technical college graduates employed in tertiary institutions in Anambra State. Therefore, the null hypothesis of no significant difference between the mean responses of academic and non-academic supervisors on the adequacy of the managerial competencies demonstrated by the technical college graduates employed in tertiary institutions in Anambra State was upheld.

Finding of the Study

The following findings emerged from the study based on the research questions and hypotheses:

A. These are the Managerial Competencies Possessed and Demonstrated by the Technical College Products Employed in the Tertiary Institutions in Anambra State

1. Control resources (own or establishment)
2. Delegate responsibilities when necessary
3. Supervise subordinates
4. Use mathematical figures
5. Foresee and anticipate problems and solutions
6. Organize daily work routine

Discussion of Findings

The findings of this study revealed that six managerial competencies were possessed and demonstrated by the technical college graduates employed in tertiary institutions in Anambra State. These competencies include control resources (own or establishment), delegate responsibilities when necessary, supervise subordinates, use mathematical figures and foresee and anticipate problems and solutions. These findings are in line with the report of the US Department of Labour (2010) that managerial competencies such as ability to control resources and to use mathematical figures are essential for effective performance of technical college graduates in their workplace, and to enhance productivity.

There was no significant difference between the mean responses of the academic and non-academic supervisors on the adequacy of the managerial competencies demonstrated by the technical college graduates employed in tertiary institutions in Anambra State. The implication of this finding is that the graduates actually demonstrated the required managerial competencies.

Conclusion

The study was set up to determine the managerial competencies possessed and demonstrated by the technical college products because no such study has been done. The feedback resulting from this study is very significant to stake holders in technical education.

Recommendations

It is recommended that relevant recourse impacts be continually provided and improved upon to sustain the programmes at the technical colleges.

REFERENCES

- Akuezilo, E.O. and Agu, N. (2003). *Research and Statistics in Education and Social Sciences*. Ezi-Abba Awka. Nuel Conti Publishers and Academic Press Ltd.
- Calhoun, C.C. (1976). An Overview of Research Design. In NBEPI. *A Guide Research in Business Education*. Reston Virginia 3-9

- Eze, D. (1991). Maximizing Functionality in Vocational Education: A Case for Reality Therapy. A Paper Presented at the 6th Annual Conference of Nigerian Vocational Association Held at Federal College of Education (Technical), Umunze.
- Ezeabikwa, M.E. (2011). Challenges of Vocational/Technical Education (VTE) in the New Dispensation. *Journal of Pristine* 3 (1), .101-107.
- FRN, (2004). National Policy on Education. 4th Edition. Lagos NERDC Press.
- FRN, (2009). Roadmap for Nigerian Education Sector. Lagos NERDC Press.
- Gana, F.Z. (1988). Evaluation and Assessment in Vocational and Technical Education: The Case of Nigeria. A Keynote Address Delivered at the Second Annual National Conference of the Nigeria Association of Teachers of Technology (NATT), Kaduna, August, 7
- Hillestead, M. (1977). Research Process and Product. Delta P. EPS Lon Service Bulletin No1. <http://www.dolets.gov/research/dib doc.cfm?docn=741> Retrieved 2nd August, 2011.
- Momoh, S.O., (2010). Enhancing Teachers Competence in Research and Development in VTE. A paper delivered at a workshop organized by the Nigerian Association of Teachers of Technology (NATT), Umunze, September 15-18
- Okafor A.N. (1992). Acquisition of Word Effectiveness Processing Skills for Self-Reliance. *Business Education Journal* 2 (2) 12-21
- Okorie, I.V. and Ezeji, S.C.O.A (1988). *Element of Guidance, Vocational and Career Education*. Onitsha, Summer Educational Publishers (Nig) LTD.
- Okoro, O.M. (1999). *Principles and Methods in Vocational and Technical Education*. Nsukka, University Trust Publishers.
- Olaitan S.O. (1991). Mechanism for Improving Manpower Production in Vocational Technical Education in Nigeria. A paper presented at the annual conference of Nigerian vocational association, held at Federal College of Education (Technical) Umunze.
- Oranu, R.N. (1991). The Appraisal of Youth Unemployment in a Depressed Economy: Emerging Policies and Programmes. *Nigerian Vocational Journal* 3. 55-62
- Orji, G.C. (2005). An Assessment of Technical College Products by Employer of Technical Labour in Enugu State. An Unpublished M.Sc. Thesis submitted to the department of Vocational Technical Education. University of Nigeria, Nsukka.
- Osinem, E.C. (2009). Quality Teacher Preparation: Pluralized Indicator of Quality TVET Programme and Technology Value Addition in Africa. A paper presented at the international seminar organized by National Institute of Science and Technical Education (NITSE), Ministry of Education Pakistan and UNESCO held at Islamabad, Pakistan December 8-10.

Spencer Jr. L.M., McClelland, D.C. & Spencer, S.M. (1994). Competency Assessment Methods: History and State of the Art. *Personnel Psychology*, 53, 703-740.

U.S. Department of labour Study (2010). "Retaining 50 Million American: The Electronically Mediated Solution".