



## AN EMPIRICAL REVIEW OF THE IMPACT OF TECHNICAL AND VOCATIONAL EDUCATION IN NATION BUILDING

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**Abstract:** The study empirically reviewed the Impact of Technical and Vocational Education in Nation Building, with a view to analyzing the extent to which trained manpower, technical knowledge and vocational skills had impacted in Nigeria. The study employed descriptive research design. The respondents comprised of 2016/2017 final year students in School of Business Education, Enugu State College of Education (Technical). The primary data were collected with the aid of a structured 5-point likert scale questionnaires. Secondary data were generated from journals, and other scholarly publications. Three Hypotheses were formulated and tested in this study. The questionnaires were distributed to a sample size of 276 reduced from a population of 887 using Taro Yamane (1967) formula while Analysis of Variance (ANOVA) was employed to test the hypotheses. The findings showed that there is significant trained manpower and provision of Technical knowledge & vocational skills necessary for agricultural, industrial, commercial and economic development in Nigeria. The study concludes that Colleges of Education (Technical) training has and is still contributing to nation building. Constant inspections from relevant educational agencies, improved fundings, collaboration with professional institutions, rehabilitation and participation of other sectors for the promotion of technical and vocational researches that will turn Nigeria into a technological nation is recommended.

**Keywords:** Technical Education, Vocational Education, Nation Building

### Introduction

National development takes into cognizance the exploitation and utilization of both human and material resources to better the lives of the masses. This is achieved through the improvement of the social welfare of the people of that nation. According to the National Policy on education, (2014) edition, Technical and vocational education is used as a comprehensive term referring to those aspects of the educational process involving, 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. Technical and vocational education is further understood to be: 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 a preparation for responsible citizenship, an instrument for promoting environmentally sound sustainable development and a method of alleviating poverty (National Policy on education, 2014).

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Uzoagulu (2014), stated that the aims of technical and vocational education are: to provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels; to provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; to give training and impart the necessary skills leading to the production of craftsmen, technical and other skilled personnel who will be enterprising and self-reliant economically; to give an introduction to professional studies in engineering and other technologies; to provide people who can apply scientific knowledge to the improvement and solution of environmental problems to the use and convenience of man and to enable our young men and women to have an intelligent understanding of the increasing complexity of technology.

Generally, education is viewed as a process of bringing positive changes in the way people feel, think, speak and act (Chima and Ogakwu, 2012). They further stated that it is an inevitable and powerful tool or weapon that can be used to surmount ignorance, poverty and disease and to produce attitudes towards loving what they ought to love and hating what they ought to hate.

**The Statement of the Problem:** It is a statement of fact that the development of any society depends largely on the creative capability of citizens to be capable of effectively exploring and exploiting the country's natural resources and transforming them into finished products and services so as to enhance the standard of living of the country's citizens (Dibia, 2015). It is also obvious that the economic, scientific and technological development of any nation depends on the quantity and quality of skills offered by the educational system to the citizens of that nation (Dibia, 2015). However, a glance to the education system we have before, during and after independence will reveal that it was not something to write home about. Aguba (2006) observed rightly that the Nigerian university systems breeds' half-baked graduates who are found lacking in

terms of intellectual capacity, moral dispositions and skill development (Dibia, 2015).

The system does not meet the aspiration of Nigerians. It was not commensurate with the expectation of Nigeria citizens because of the unsatisfied system that will well suit into the yearnings of Nigerians.

**PURPOSE OF THE STUDY:** The main purpose of this study is to identify the impact of technical and vocational education in nation building. Specifically, the study tends to: Find out the extent to which trained manpower in applied science, technology and commerce has been provided; Find out the extent to which technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development has been provided, Determine whether there is adequate training and impart of the necessary skills to individuals who shall be self-reliant economically.

**RESEARCH QUESTIONS:** The study was designed to answer the following research questions: To what extent has there been the provision of trained manpower in applied science, technology and commerce? To what extent has there been the provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development? How adequate is the training and impart of the necessary skills to individuals who shall be self-reliant economically?

#### **STATEMENT OF HYPOTHESIS**

Ho: There is no significant trained manpower in applied science, technology and commerce. Ho: There is no significant provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.

Ho: There is no significant adequate training and impart of the necessary skills to individuals who shall be self-reliant economically.

#### **THEORETICAL FRAMEWORK**

##### **CONCEPT OF NATIONAL DEVELOPMENT**

A country's well being depends on its economic development (Nwogu, 2012). The main objective of



economic development is to raise the standard of living and the general wellbeing of the people in an economy where almost everybody can be self-reliant, Oguntuyi, (2013).

#### **EMPIRICAL REVIEW**

Stitch (2009), in his words rightly stated that education is one of the stimulators of growth and development of the potentials of human beings, hence every society gives it a priority. Without missing words, a nation that neglects education is due for extinction from the world's map. It is not surprising that federal Republic of Nigeria (2009) emphasized the acquisition of appropriate skills, abilities and competencies to empower the individual to live in and contribute positively to the society.

Since vocational and technical education (VTE) programmes are centered on acquisition of skills for gainful employment, they can go a long way in helping the recipients contribute meaningfully to the society and curb the menace of unemployment in Nigeria if properly practiced. (Obidile, 2014). As Dike (2007) opined Vocational and Technical Education is expected to yield untold profits to the whole nation if given the required attention.

Kehinde, and Adewuyi, (2015) conducted a research on the vocational and technical education: a viable tool for transformation of the Nigerian economy and came to the conclusions that the transformation agenda of the Federal Government of Nigeria which includes National Economic Empowerment and Development Strategy (NEEDS), Millennium Development Goals (MDGs) vision 20.20.20 remains the 'hottest' government policies in the drive to revitalize the nation's economy but any attempt to ignore the development of vocational and technical education (VTE) may be the country's greatest disadvantages. Vocational and technical education (VTE) is also the most viable and reliable instrument for economy transformation. This is why vocational and technical education is placing emphasis on the development of occupational skills needed as preparation for work in order to earn a useful and lawful

living through gainful employment, Kehinde, and Adewuyi, (2015).

Opoko et al, (2018) conducted a research on the role of technical and vocational education and training (tvete) in nation building: a review of the Nigerian case, the study highlighted that Lack of Funding, Lack of Facilities, inaccessibility, Lack of Trained Personnel, Apathy of the Political Elites, are challenges faced by TVET in Nigeria. In order to improve TVET in Nigeria, Opoko et al, (2018) also opined the following as steps: tackle Negative Stereotyping, Improve the Status of TVET to make it more attractive, Sustainable Financing, Create Synergy between TVET Stakeholders, Provision of Adequate Training Facilities and Materials, Staff Training and Welfare Programmes.

Ovbiagele, (2015) opined that people who graduated from vocational education will be employers of labour. This is in consonance with what Nwanoruo and Oporum (2008), Mfon (2007) Omotosho (2000) and Okteruolagbegi (1995) early stated that the gateway to actual growth and development of any nation is through vocational and technical education.

Sokyes, and zakka (2009) in Ovbiagele, (2015), postulated that vocational and technical education is skilled- inclined and employment driven; in the area of information communication and technology, vocational education's ability to unemployment reduction cannot be emphasized. Vocational and technical education will assist in impacting our youths with great skills in such a manner that the huge vacuum in the labour market will be greatly reduced. Hence, vocational and technical education is an unemployment reduction catalyst. Currently, it is a known fact that the government cannot provide all her citizens with white collar jobs rather vocational and technical education graduates will become employers of labour. Foreign earnings can be achieved through the production and exportation of goods to foreign countries, which are produced by graduates of vocational and technical



education, when vocational education is accorded the needed attention, Ovbiagele, (2015).

Sokyes, and zakka (2009) in Ovbiagele, (2015), concluded that social vices such as robbery, stealing, prostitution, rapping, drug addiction etc, can be nipped in the bud if the youths are usefully engaged through vocational and technical education training.

Kehinde and Adewuyi (2015), stated that the importance of vocational and technical education in transforming Nigerian is always serving as a catalyst in individuals to work for the nation because it stimulates technological and industrial development through the production of competent and honest workers who are capable of utilizing the abundant natural and human resources available in a country for economy and industrial growth and development; Through vocational and technical education, local technology can be developed by indigenous technicians and technologists. Therefore, it will take the ingenuity of local artisans, craftsmen, technicians and technologists to design and fabricate tools, equipment and simple or complex machines to solve local problems. This eventually will save the nation billions of Naira or Dollars in foreign currency that would have been used in importing machines, most of which break down shortly on arrival in the country because they were not designed for our peculiar environment.

Gazi (2008), stated that as part of the roles of education in national development, Education leads to: Individual creativity, improved participation in the economic, social and cultural roles in Society; improved understanding of an individual and their respect for others, thus promoting social cohesion and material understanding; improvement in health and nutrition; improved chances of economic development; improved technological development; socio-cultural change; democracy and equality; and

ecological development/quality of life (increasing people's awareness of their environments).

#### RESEARCH DESIGNS AND METHODOLOGY

Data were obtained from both primary and secondary sources. These sources include published journals/periodicals, textbooks, newspapers, and magazines. The researcher distributed questionnaires to 276 respondents by reducing the population of 887 using Alien Taro Yamane (1967) Formula at 95% confidence level stated as follows

$$n = \frac{N}{1 + N(e)^2}$$

Where N= sample size.

E =error margin which the researcher chose to be 5%.

n= sample size.

$$\text{Thus } n = \frac{887}{1 + 887(0.05)^2}$$

= 275.6 approximately = 276 questionnaires.

**RESEARCH DESIGN:** The researcher uses descriptive Research Design to explore data on the empirical review of the impact of technical and vocational education in nation building. The researcher uses Judgmental sampling technique to select students in School of Business Education and School of Science Education, who are final year students as respondents. The instrument used by the researcher for data collection was structured 5-point Likert Summated questionnaire. Out of the 276 copies of questionnaires distributed to the various departments, 38 were not returned while 238 were returned, representing a return rate of 86.2%.

**METHOD DATA ANALYSIS:** Data collected through questionnaires were analyzed using Analysis of variance (ANOVA).



**DATA PRESENTATION AND ANALYSIS**

To what extent has there been the provision of trained manpower in applied science, technology and commerce?

S/no	Question one	SA	A	UN	D	SD
1	Vocational and technical graduates from Enugu state college of education (technical) have better employment opportunities than graduates from academic university schools.	29	23	17	64	105
2	Vocational and technical colleges are preparing higher quality skilled and semi-skilled workers than university schools.	58	54	35	48	43
3	Vocational education and training contribute to economic development of Nigeria	132	85	20	01	0
4	Vocational and technical graduates from Enugu state college of education (technical) possess necessary social and interpersonal skills that help them to be self motivated.	123	69	18	20	08
5	There is provision of trained manpower in applied science, technology and commerce to a great extent.	67	86	30	43	12

Table 4.2.3: Analysis of Data into Mean and Standard Deviation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	5	33.6000	43.11960	19.28367	19.9401	87.1401	.00	105.00
2.00	5	35.2000	24.77297	11.07881	4.4403	65.9597	1.00	64.00
3.00	5	24.0000	8.03119	3.59166	14.0280	33.9720	17.00	35.00
4.00	5	63.4000	26.12087	11.68161	30.9667	95.8333	23.00	86.00
5.00	5	81.8000	44.13275	19.73677	27.0019	136.5981	29.00	132.00
Total	25	47.6000	36.68560	7.33712	32.4569	62.7431	.00	132.00

To what extent has there been the provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development?

S/no	Question Two	SA	A	UN	D	SD
1	The government is committed to restructure technical and vocational education and training to meet Nigeria’s needs on agriculture, industry, commercial and economic development.	85	74	29	25	25



2	The structure of vocational and technical education training in Enugu state college of education (technical) is becoming more flexible rather than obsolete in responding to the changing labour market.	08	10	32	66	122
3	The technical content of vocational curriculum in Enugu state college of education (technical) is based on agricultural, industrial, commercial and economic development needs.	41	35	30	80	52
4	The government allocates sufficient funding to Enugu state college of education (technical) to upgrade and expand technical and vocational education and training programs to provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.	08	06	45	64	115
5	The government provides adequate facilities, equipment and resources to vocational education and training programs to provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.	05	09	29	90	105

Table 4.2.5: Analysis of Data into Mean and Standard Deviation

**Descriptives**

VAR00002

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1.00	5		
2.00	5	65.0000	24.75884	11.07249	34.2578	95.7422	25.00	90.00
3.00	5	33.0000	6.81909	3.04959	24.5330	41.4670	29.00	45.00
4.00	5	26.8000	28.83921	12.89729	-9.0086	62.6086	6.00	74.00
5.00	5	29.4000	34.41366	15.39026	-13.3302	72.1302	5.00	85.00
Total	25	47.6000	35.94208	7.18842	32.7638	62.4362	5.00	122.00

How adequate is the training and impart of the necessary skills to individuals who shall be self- reliant economically?

S/no	Question Three	SA	A	UN	D	SD
1	Technical and vocational education offers the beneficiary the ability to be self-reliant, to be job creators and employer’s of labour.	70	63	39	38	28
2	Technical and vocational education helps a nation develop technologically and industrially by producing people competent and	69	50	38	40	41



	capable of developing and utilizing technologies for industrial and economic development.					
3	Many who are fortunate to graduate in a regular school system and excel in various fields of leaning fall back to the skills acquired in technical and vocational institutions in time of employment crisis.	05	05	35	99	94
4	The knowledge of technical and vocational education helps in the conversion of local raw materials, this reduces the importation of foreign goods which lessen our import dependency and encourage exportation of our local products.	109	79	31	10	09
5	Technical and vocational education helps to promote the Nigeria culture and cause us to value what we have. Nigerian culture and cause us to value what we have.	79	52	32	37	38

Analysis of Data into Mean and Standard Deviation

### Descriptives

VAR00002

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1.00	5		
2.00	5	44.8000	32.70627	14.62669	4.1898	85.4102	10.00	99.00
3.00	5	35.0000	3.53553	1.58114	30.6101	39.3899	31.00	39.00
4.00	5	49.8000	27.56266	12.32639	15.5764	84.0236	5.00	79.00
5.00	5	66.4000	37.95787	16.97528	19.2691	113.5309	5.00	109.00
Total	25	47.6000	28.80827	5.76165	35.7085	59.4915	5.00	109.00

### TEST OF HYPOTHESES

#### HYPOTHESES ONE

Ho: There is no significant trained manpower in applied science, technology and commerce.

H1: There is significant trained manpower in applied science, technology and commerce.

### ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11630.000	4	2907.500	2.813	.053
Within Groups	20670.000	20	1033.500		



Total	32300.000	24			
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ANOVA Table: Using the ANOVA table, which tests the acceptability of the model from a statistical perspective, the decision rule is as follows:

F calculated > Sig value      Reject the null hypothesis

F calculated < Sig value      Accept the null hypothesis

**Decision:** Since the F cal (2.813) is greater than the Sig. value (.053) at 5% level of significance and 4 degree of freedom, we reject the null hypothesis and accept the alternate hypothesis that there is significant trained manpower in applied science, technology and commerce.

**HYPOTHESES TWO**

Ho: There is no significant provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.

H1: There is significant provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.

**ANOVA**

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12951.200	4	3237.800	3.587	.023
Within Groups	18052.800	20	902.640		
Total	31004.000	24			

ANOVA Table: Using the ANOVA table, which tests the acceptability of the model from a statistical perspective, the decision rule is as follows:

F calculated > Sig value      Reject the null hypothesis

F calculated < Sig value      Accept the null hypothesis

**Decision:** Since the F cal (3.587) is greater than the Sig. value (.023) at 5% level of significance and 4 degree of freedom, we reject the null hypothesis and accept the alternate hypothesis that there is significant provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development.

**HYPOTHESES THREE**

Ho: There is no significant adequate training and impart of the necessary skills to individuals who shall be self- reliant economically.

H1: There is significant adequate training and impart of the necessary skills to individuals who shall be self- reliant economically.

**ANOVA**

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2781.200	4	695.300	.811	.533
Within Groups	17136.800	20	856.840		
Total	19918.000	24			



*ANOVA Table:* Using the ANOVA table, which tests the acceptability of the model from a statistical perspective, the decision rule is as follows:

F calculated > Sig value      Reject the null hypothesis

F calculated < Sig value      Accept the null hypothesis

**Decision:** Since the F cal (.811) is greater than the Sig. value (.533) at 5% level of significance and 4 degree of freedom, we reject the null hypothesis and accept the alternate hypothesis that there is significant adequate training and impart of the necessary skills to individuals who shall be self- reliant economically.

### SUMMARY OF FINDINGS

The study found that there is significant trained manpower in Enugu state college of Education (Technical) in applied science, technology and commerce. This in turn has made graduates of technical and vocational institutions to be self employed and employers of labour; the study found that there is significant provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development in Enugu state college of Education (Technical). This skills has availed graduates of technical and vocational institutions the opportunity of producing some commodities which was hitherto been imported; there is significant adequate training and impart of the necessary skills to individuals who shall be self- reliant economically in Enugu state college of Education (Technical).

### CONCLUSIONS

The study concludes that colleges of education training of students in technical and vocational education technical and vocational education is capable of helping a nation develop technologically and industrially by producing people competent and capable of developing and utilizing technologies for industrial and economic development.

The study also concludes that substantial needed financial investment programs or schemes for technical and vocational education and training has not been fully embraced. This unarguably has been the reason why Nigeria has remained a consuming nation or than a producing nation.

### RECOMMENDATIONS

The following were suggestions for improvement on the impact of technical and vocational education in nation building: There should be constant inspections from the ministry of education or other relevant agencies of government on colleges of education nationally in order to advise government on better ways of funding, monitoring, supervising, controlling and implementing the affairs of vocational and technical education as it relates to our immediate situation in Nigeria.

The private industries, non-governmental agencies and various manufacturing firms should provide laboratories equipment, workshops facilities and machines as their social responsibility contributions and by way of collaboration with technical and vocational institutions for effective implementation and training of students of technical and vocational education programmes.

Government should pay attention to research findings and promote products locally made by technical and vocational institutions. This action if done will be a morale booster to do more.

Vocational and technical education curriculum must be designed with current trends. Programmes that will make the students to be entrepreneurs should get a great attention.

Accreditation should be carried out on regular basis in colleges of educations for on the spot assessment and other verifications in order to check the dwindling situation in our technical colleges.



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