

# **PROBLEMS OF RESEARCH AND STRATEGIES FOR IMPROVING ITS ROLE FOR SUSTAINABLE DEVELOPMENT OF VOCATIONAL AND TECHNOLOGY TEACHER EDUCATION IN NIGERIA**

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## **Abstract**

*This study is to determine the strategies for improving the role of research in the development of vocational and technological teacher education in Nigeria. Two purposes and two research questions were formulated to guide the study. The survey research design was adopted for getting opinions from the targeted population. The populations of the study consist of principals, other school administrators and technology teachers, randomly sampled to a sample size of 537. This is made up of 25 Principals, 28 other educational administrators and 484 vocational and technology teachers. A 29 items structured questionnaire on 4 point scale was developed and used as instrument for data collection. The entire instruments administered were collected back. The method of data analysis adopted was mean and standard deviation and the decision rule was based on the average of the 4 point scale which is 2.50. The findings of the study identified strategies for improving the role of research in the development of vocational and technology teacher education which include; the provision of adequate funding for research and creating a conducive atmosphere to encourage relevant research for development of vocational and technology teacher education in Nigeria. One of the recommendations made was; to emphasize, support, and facilitate research for the development of vocational and technology teacher education by relevant authorities and stakeholders.*

**Keywords:** Research, Strategies, sustainable development,

Vocational and Technology Teacher Education is the total of those organized and purposeful experiences essential to the career development of an individual in a trade for industrial or technological occupations (Gana 2000). The programme empowers individual to learn, explore and prepare for performance in trades such as design, construction, production, processing, fabrication, assembly and provision of

services of varying specialties (Usoro 2000). The Teacher of vocational and Technology education according to Gana (2000) is that person who impart knowledge and skills in educational institutions where learners are trained in skills in various trades, crafts, industry, agriculture and comers.

The best way to improve the standard of living of the society is to boost productivity by empowering individuals with the right skills and attitude. When the productive life of the society is improved it will eventually lead to industrialization and production of materials, industrial goods and service that are able to meet the demand of the rising growth in population. The processes of improving the productive life of the society through vocational and technology teacher education can be tasking, costly and time consuming but the result will surely generate employment, improve the living standard of the people, there by reducing unemployment, insecurity, civil unrest, and inflation which is affecting Nigeria currently.

Nigeria currently needs scientific research based, skillfully directed and properly implemented vocational and technology teacher education. This will give clear and definite achievements in turning around for the better the economic lives of the people and strengthen the economy of the nation. According to Jeong (2006) education particularly vocational and technology teacher education is the factory for the production of the needed technologists, technicians, craftsmen, and skilled able men who require a little effort to turn the fortune of the nation for the better.

It was also clear in the remarks of Learner (2004) that the citizens are in a revolution of rising frustration “The factor responsible for Nigeria’s economic problems is traceable to the advent of western education in the country. The focus and content of education at that time was biased against the development of vocational and technical education, while literary education offered those who acquired it better prospects of white color jobs which were considered dignifying. The society in ignorance regarded vocational and technology education as somewhat inferior (Okoro2006). The problem this paper addresses therefore is the slow development of vocational and technology teacher education which is known to transform the society. Like any other sector vocational and technology teacher education can be improved through relevant researches which seem to be less supported. The paper reassures that vocational and technical education has enamors potentials to attain breakthrough in the economy that can rise the standard of living of the people of Nigeria

### **Statement of the Problem**

The development of vocational and technology teacher education in Nigeria depends on specific key factors to succeed these include planning, financial resources, human and material resources these has not been attended to adequately. The planning aspect of education has always been classic but the implementation of the policy plans has constantly posed problems to Nigeria’s education system. This shows that planning forecast has not properly captured the process of implementation. Research and its

application in the development of vocational and technology teacher education have not been in the forefront to play its role. The planning and implementation of vocational and technology teacher education is supposed to be strictly based on outcomes of a study to ensure success and sustainability. This study determines the problems of research and identified some strategies for improving its role for sustainable development of vocational and technical education.

### **Purpose of the Study**

The purpose of the study is to determine the problem of research and establish strategies for improving its role in the development of vocational and technology teacher education in Nigeria. Specifically the objective of the study includes:

1. to determine the problems of research in the development of vocational and technology teacher education in Nigeria.
2. to establish the strategies for improving the roles of research in the development of technology teacher education in Nigeria.

### **Significant of the Study**

The Findings of the study will benefit the stake holders and administrators of vocational and technology teacher education. This study will help them understanding the problems of research in the development of technology teacher education and apply the identified strategies to improve the role of research in the development of technology teacher education.

### **Research Questions**

The following research questions guided the study.

1. What are the problems of research in the development of Vocational and technology teacher education in Nigeria?
2. What are the strategies to be adopted to improve the role of research in the development of Vocational and technology teacher education in Nigeria?

### **Hypothesis**

This hypothesis was formulated to guide the study and tested at 0.05 level of significance.

There is no significant deference in the mean responses of Principals and other school administrators on the problems of research in the development of Vocational and Technology Education in Nigeria.

### **Methodology**

A survey was adopted as the designs for the study. The area of the study is North Eastern Nigeria. Populations of the study were principals, other school education administrators (Vice Principals, Head of departments and senior masters) and teachers.

A sample size of 537 were randomly sampled which made up of 25 principals, 28 other school administrators and 484 technology teachers was used for the study. A 27 items structured questionnaire was developed by the researcher which was utilized for collecting data from the respondents. Each question had a four point scale of Strongly Agree (SA4), Agree (A3), Disagree (D2) and Strongly Disagree (SD 1)

The validation of the instrument was done by three experts, two in technology teacher education department and one in measurement and evaluation, department of science education, Modibbo Adama University of Technology Yola. The number of instrument administered to the respondents was 537 copies with the help of two research assistants. The method of data analysis adopted was mean and standard deviation. The decision rules for the analysis was that, any mean score above 2.50 was regarded as agree while the mean score less 2.50 was disagree.

While t-test statistic was used to test null hypothesis at .05 level of significance. The acceptance level was when the t-calculated is less than the t-table value for given degree of freedom.

**Research Question 1:** what are the problems of research in the development of vocational and technology teacher education.

**Table 1: Mean Rating of the Respondents on the Problems of Research in the Development of Vocational and Technology Teacher Education**

S.no	Problems of research	Principals		Other Sc.Admi.		Technology Teachers		Remarks
		X	SD	X	SD	X	SD	
1	Inadequate Funding	3.64	0.42	3.05	0.75	3.02	0.87	Agree
2	Inadequate research facilities	3.63	0.46	3.40	0.54	3.06	0.75	Agree
3	Lack of demand for research work	3.65	0.40	3.00	0.88	3.06	0.68	Agree
4	Absence of mentoring for beginners	3.75	0.42	3.45	0.71	3.09	0.83	Agree
5	Lack of discipline and patience	3.61	0.56	3.42	0.52	3.01	0.87	Agree
6	Incompetence	3.79	0.40	3.56	0.81	3.05	0.73	Agree
7	Lack of diligence	3.59	0.40	3.06	0.45	3.22	0.70	Agree
8	Lack of utilization of research findings	3.59	0.49	3.36	0.48	3.07	0.83	Agree
9	Inadequate conducive atmosphere	3.61	0.56	3.43	0.66	3.10	0.82	Agree
10	Inadequate encouragement and support	3.64	0.42	3.52	0.72	3.12	0.87	Agree
11	Fear of plagiarism	3.75	0.43	3.34	0.78	3.08	0.75	Agree
12	Lack of orientation	3.75	0.43	3.50	0.73	3.11	0.73	Agree
13	Lack of continuity in	3.64	0.42	3.52	0.82	3.13	0.82	Agree

	policy plan								
14	Lack of unity of purpose	3.75	0.42	3.64	0.54	3.09	0.85	Agree	
15	Inadequate incentives	3.79	0.40	3.42	0.56	3.15	0.76	Agree	
	Grand Mean	3.49		3.36		3.09			

Key; other school administrators include Vice principals, head of departments and senior masters. X= mean, SD=standard deviation.

Table 1, reveals that all the items presented has mean responses above 2.50 which indicate that they are problems affecting the role of research in the development of vocational and technology teacher education in Nigeria. The standard deviation also ranges between 0.40-1.42 and are positive indicating that the opinion of the respondents are not far from the mean and close to one another in opinion. The mean ratings between 3.61-3.79 which is above 2.50 decision rule indicate that; Inadequate funding, inadequate research facilities, lack of diligence, inadequate conducive atmosphere, lack of utilization of research findings among other problems are the problems of research in the development of vocational and technology teacher education.

**Research Question 2:** what are the strategies for improving the role of research in the development of vocation and technology teacher education in Nigeria.

**Table 2: Mean Rating of the Respondents on Strategies for Improving the Role of Research in Vocational and Technology Teacher Education**

S. No	Strategies	Principals		Other Sc.Adm		Tech.Teachers		Remarks
		X	SD	X	SD	X	SD	
1	Improved funding of research	3.75	0.45	3.56	0.67	3.44	0.56	Agree
2	Involved NGOs in Funding research	3.64	0.47	3.56	0.51	3.26	0.45	Agree
3	Industries should purchase research findings	3.64	0.46	3.14	0.54	3.55	0.43	Agree
4	Improve availability and utilization of research facilities	3.79	0.40	3.08	0.45	3.75	0.54	Agree
5	Wealthy Individuals can fund research	3.75	0.32	3.28	0.45	3.45	0.50	Agree
6	Students should be sensitized on the importance of research	3.61	0.42	3.40	0.47	3.58	0.43	Agree
7	Advertise research findings for patronage	3.79	0.40	3.67	0.46	3.43	0.34	Agree
8	Improve writing style for reporting research findings	3.64	0.47	3.23	0.54	3.25	0.42	Agree
9	Improve on methods of acquiring skills for research	3.59	0.49	3.67	0.46	3.54	0.47	Agree
10	Improve knowledge of research							

	tools	3.83	0.46	3.27	0.43	3.65	0.46	Agree
<b>11</b>	Attach financial value to some categories of research	3.64	0.42	3.15	0.47	3.54	0.45	Agree
<b>12</b>	Improve the ability for independent studies	3.65	0.48	3.48	0.50	3.65	0.46	Agree
	Grand Mean	3.70		3.37		3.50		

Key; other school administrators are Vice principals, head of departments and senior masters.

The mean responses on table 2 ranges between 3.59-3.79. This indicates that the respondents agree that the 12 items presented are strategies for improving the role of research in the development of vocational and technology teacher education. The standard deviation ranges between 0.40-0.56 this shows that there is a little deviation from the mean which indicate that the opinions of the respondents are not far from one another. This helps strengthen the values of research. The 12 items on table 2 were strategies for improving the role of research in the development of vocational and technology teacher education. This became clear from the mean responses ranged between 3. 59-3.79 above the 2.50 decision rule.

### Hypothesis

There is no significant difference in the mean responses of principals and other school administrators on the problems of research in the development of vocational and technology education in Nigeria

**Table 3: t-test analysis of the Responses of Principals and Other School Administrators on the Problems of Research in the Development of Vocational and Technology Education in Nigeria**

Group	N	Mean	SD	df	t-cal	t-crit	Decision
Principals	25	3.49	0.44	49	0.58	1.03	Rejected
Other sc.admins	26	3.36	0.43				

Table 3, shows the calculated t- value of 0.58 and t-critical value of 1.03 at 49 degree of freedom (df). Since the t-calculated is less than t-critical it shows that there is no significant difference in the opinions of the principals and other school administrators on the problems of research in the development of vocational and technology education in Nigeria.

### Findings of the Study

1.It was found that the items on table 1 has a mean ratings between 3.61-3.79 which indicate that they are problems affecting the roles of research in the development of vocational and technical teacher education.

2. It was also found that the 12 items on table 2 were strategies for improving the role of research in the development of vocational and technology teacher education. This became clear from the mean responses ranged between 3.59-3.79 above the 2.50 decision rule.

3 The hypothesis tested at 0.05 level of significance on table 3 shows that the t-cal is less than t-crit indicating that there is no significant difference in the opinions of the principals and other school administrators on the problems of research for the development of technology and vocational education in Nigeria.

### **Discussion of Findings**

The problems of research and strategies for improving the role of research in the development of vocational and technology teacher education is the focus of the study. The role of research in the development of vocational and technology teacher education cannot be overemphasized, as the current study shows that there are problems bedeviling the role of research in Nigeria. The problems as revealed by the analysis include: inadequate funding, inadequate facilities, lack of use of research findings, absence of mentoring, lack of diligence and hard work. In a similar observation Olaitan, Ali and Sawande(2002) reported that there are series of problems bedeviling the process of research and development in Nigeria despite the efforts of the scholars and research bodies toward finding solution to the problems.

One of the problems that require serious consideration according to Elijah (2002) is the inability to use the findings of research for the development of technology teacher education and the need of the society. Utilization of research findings will help in showcasing the importance of research and encourage researchers to do better. The absence of research in education according to Jeong (2006) is in a dead lock that leads to the escalating problems of life such as stagnation, poor economic development, unemployment and lack of speedy development of the country. Shita (2001) listed the following as problems of research development; lack of basic research facilities like electricity, security and high cost of living. These and many more problems made many vocational and technology teachers unable to engage in meaningful research activities. In reference to research question 2 the items on table 2 can be used as strategies for improving the role of research in the development of vocational and technology teacher education in Nigeria. This can be done through improved funding of research, utilization of research findings. Improved knowledge of how to report research findings, by attaching value to research, and by the participation of industries and NGOs in sponsoring research work.

### **Conclusion**

Research has a very important role in every human endeavor; this study determined the problems of research and strategies on how to improve the role of research in the development of vocational and technology teacher education. The

problems of research as determined by the study can be overcome by the strategies identified. The implication of the findings will help to improve the role of vocational and technology teacher education. The administration of vocational and technology teacher education through effective research will equip the entire programme with requisite knowledge, skills and attitudinal changes necessary for industrial, agricultural, commercial, and economic development.

### **Recommendation**

The role of research in the development of vocational and technology teacher education should be emphasized supported and facilitated by relevant authorities and stakeholders in education. The conducive atmosphere should be created for research and its utilization should be paramount priority in the development of vocational and technology teacher education for quality practice.

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