
Problems of Teaching Resources in Technical Education at Colleges of Education (Technical) in Nigeria

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Abstract

This study was designed to investigate the problem of teaching resources in technical education at colleges of education (technical) in Nigeria using Federal Colleges of Education (Technical) Umunze, Potiskum and Asaba as a case study. Six hundred technical education students were randomly selected from the three colleges of education. Questionnaire was used as the sole instrument for gathering data. This study showed that government is not funding colleges of education (technical) as expected and that most colleges of education (technical) need the assistance of the government to purchase modern teaching resources. The study also revealed that there are no adequate professional solutions to the identifiable problems, some recommendations which can be used to solve the problems were made among which are: - Providing the necessary finance to fund our educational system. There should be Proper re-orientation of people. The equipment in our institutions should be cared for and maintained. There should be proper placement of the programmes in schools.

Technical education allows one to acquire necessary skills and make one to be self-reliant, and be useful to oneself and the society. It is a type of training that helps to attain all aims of education at any level of learning. It provides skills, knowledge, and attitudes necessary for effective employment in specific occupations and graduates are able to get ready for work (Federal Republic of Nigeria, 2004).

Technical education is of course, a long existing course, even as old as the history of man, but did not grow or gain ground, because people feel or think it is for those that are intellectually deficient. The above assertion of people has gone a long way in affecting the training and development of technical education in all levels of education. The effect of this consequentially jeopardized the success of the new policy on education, which is the embodiment of technical education programmes (Gidado, 2006). The curriculum review is normally carried out by the Ministry of education which established a schedule for an on going curriculum review.

Year after year, a number of subject areas enter the review process, to ensure that they are kept current, relevant and appropriate [Taiwo, 2008]. The curriculum as a whole focuses on continuous quality education. Reviews are conducted with great care and the curriculum as a whole focuses on continuous quality education students master the knowledge, application and attitudes that will reinforce work place competencies. This concept is illustrated in the National standards. The curriculum of technical education was developed and planned to the best interest of the nation, which will eventually produce some elements of necessary manpower for great needs of the nation [Wheeler, 2008].

Thus, the curriculum was drafted with the study of the comparative technical education seminar. The National policy on education came into being and all educational programs in Nigeria rest on this policy, which was arranged in sections (Anene, 2010).

It suffices to note that before Nigeria government can accomplish its objectives as stated in the new national policy on education, it has to ensure that all schools are properly and adequately provided with good and qualified teachers, good building, workshops and equipments, teaching materials and able leadership to ensure and promote sound and effective teaching.

Statement of the Problem

Technical education is yet to be accorded adequate recognition. The lack of teaching resources in some courses in technical education makes students to show little or no interest in the study of technical education. Non availability of necessary facilities and equipments to be use in colleges and universities is a major developmental problem of technical Education. For example, most of the equipments available are archaic, outdated and non-functional.

There are non-availability of text books and well equipped libraries in our academic environments. It is sad to know that no library in any of our higher institutions is equipped with current textbooks and other library materials. There are lack of services of qualified lecturers, due to poor remuneration and other conditions of services which are very low. This is very sad, because the teacher is said to be the pivot

of educational process. Therefore, the problem of this study is to investigate the problem of teaching resources in our colleges of education (technical) in Nigeria.

Objectives of the Study

The reason for this study is based on investigating the following facts:

- (i) Find out the reason why few institutions of learning run technical Education Program.
- (ii) To examine the extent of inadequacy of qualified teachers on teachers to teach technical Education courses.
- (iii) To examine the reasons why libraries are not well equipped with current textbooks and equipments for teaching technical Education courses.
- (iv) To assess how well technical Education Program and courses as been implemented in colleges of education (technical) in Nigeria.

Research Questions

For the purpose of this work, the following research questions were formulated:

- (i) Why are there few colleges of education that offer courses on technical education?
- (ii) Why are there not adequate qualified teachers to teach technical education?
- (iii) What are the reasons for not having well equipped libraries with current textbooks and adequate equipment for teaching technical education?
- (iv) How well has technical education programmes been implemented?

Methodology

This study was designed as a survey descriptive research. It was patterned to investigate the problem of teaching resources on the teaching of technical education programs in Colleges of Education (Technical) in Nigeria (A case study of federal colleges of education (technical) Umuze, Potiskum and Asaba).

Population

The population of this study comprised of seven hundred and six students of technical education from the Federal Colleges of Education (Tech.) Umuze, Potiskum and Asaba .

A random number table was used in selecting the sample for this study. The respondents to the questionnaire were 600 students of technical education. That is, 250 students from Federal College of Education (technical) Potiskum, 200 students from federal college of education (technical) Asaba and 150 students from federal college of education (technical) Umuze.

The questionnaire was the only instrument used in collecting data for this study. The validity of this research was established through the face method. To this end the instrument was passed through five experts each from Automobile, Building, Electrical / Electronics, Wood work and Metal work Technology Education who

asserted that it measured what it supposes to measure. Therefore, the instrument was considered.

The reliability of this instrument was based on test-retest methods with thirty students randomly selected from the three colleges who were not used for the study. The pilot test was carried out and the scores were analysed using Crombach-Alpha and 0.75 reliability coefficient was obtained. The questionnaires were administered to the three institutions. The procedure for collecting the data was the same throughout. The respondents were given the questionnaires to fill after introduction.

The main statistical technique used in analyzing the data collected in this study was the mean (weighted average method).

A four point likert scale rating was used:

- SA - Strongly Agreed
- A - Agreed
- D - Disagreed
- SD - Strongly Disagreed

The formula being given as

$$\text{Mean } (\bar{X}) = \frac{\sum fx}{N}$$

Where \bar{X} = Mean of the score.

F = Frequency of the responses

\sum = Summation of numbers

N = Number of items/responses.

The decision rule holds that any mean that is 2.50 and above is regarded as accepted or agreed while any mean below 2.50 is regarded as disagreed or rejected.

Whereas:

SA = 4 points

A = 3 points

D = 2 points

SD = 1 points

$$\text{Mean } (X) = (4 \times SA) + (3 \times A) + (2 \times D) + (1 \times SD)$$

$$\frac{10}{4} = 2.50$$

4

$$\text{That is } 4 + 3 + 2 + 1 = \frac{10}{4} = 2.50$$

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Data Analysis and Presentation

This part deals with the analysis and interpretation of data collected through questionnaires administered. Out of the six hundred questionnaires distributed to the students fifty were not returned and five hundred and fifty were answered and returned.

Research Question I: Why do we have few colleges of education that offer courses in technical education?

Table 1: Analysis of the numbers of colleges that offer technical education courses.

<i>Items of Instruction</i>	<i>Degree of Total No responses</i>					<i>Grand Total</i>	<i>Mean</i>	<i>Remarks</i>
	<i>SA</i>	<i>A</i>	<i>D</i>	<i>SD</i>	<i>FX</i>			
1. Lack of awareness, ignorance of parents, the students and society on the gain of technical education affects the programme	264	132	88	66	1694	550	3.08	Agreed
2. Most of our tertiary institutions offer courses in technical education	29	196	107	218	1136	550	2.07	Disagreed
3. Our colleges have no standard office for vocational guidance counselor who is supposed to counsel students on their career choice.	238	235	33	44	1767	550	3.212	Agreed
4. Non-uniformity in operation in some Colleges of education affects technical education	249	261	22	18	1841	550	3.35	Agreed
5. Lack of textbook especially indigenous ones hinder technical education programs	297	242	11	-	1936	550	3.52	Agreed

The above table I is used to analyse the number of colleges of education that offer technical education courses. Item 2, was disagreed by the respondents with the statement that most of our colleges of education offer courses in technical education in Nigeria while the respondents agreed with rest four statements. That is lack of awareness, ignorance of parents, the students and society on the gain of technical education affects the programme; Most of our tertiary institutions offer courses in technical education; Our colleges have no standard office for vocational guidance counselor who is supposed to counsel students on their career choice; Non-uniformity in operation in some Colleges of education affects technical education and Lack of textbook especially indigenous ones hinder technical education programs.

Research Question II: Why are there not adequate qualified teachers to teach technical education?

Table 2: Analysis of the Qualification of Teachers to Teach Technical Education in Our Colleges of Education.

Items of instruction	Degree of responses					Total No	Grand Mean total	Remarks
	SA	A	D	SDD DD	FX			
6. Our institutions lack adequate professional lecturers who can handle various courses on Technical education	245	253	33	19	1824	550	3.32	Agreed
7. The non-availability of well-trained lecturer may result in production of half-baked graduates of technical education	220	236	68	26	1750	550	3.18	Agreed
8. Technical education teachers in your school are adequate and enough	26	330	46	148	1334	550	2.425	Disagreed
9. Poor incentives to teachers results in low output and indifference attitude	220	236	68	26	1750	550	3.184	Agreed
10. Graduates of our colleges usually get employment without stress	44	22	308	176	1034	550	1.88	Disagreed

In the above table, items 8 and 10 show that we do not have enough or adequate teacher in technical education department and graduates of our colleges usually get employment with stress, since the mean are below 2.50 while the rest were agreed that is Our institutions lack adequate professional lecturers who can handle various courses on Technical education; The non-availability of well-trained lecturer may result in production of half-baked graduates of technical education; Poor incentives to teachers results in low output and indifference attitude.

Research Question III: What are the reasons for not having well equipped libraries with current textbooks and adequate equipments for teaching and learning technical education?

Table 3: Analysis of Teaching Materials, Equipment and Textbook Currently Used in Teaching Technical Education

	<i>Items of Instruction</i>	<i>Degree of responses</i>				<i>Total No</i>	<i>Grand total</i>	<i>Mean</i>	<i>Remarks</i>
		<i>SA</i>	<i>A</i>	<i>D</i>	<i>SD</i>	<i>FX</i>	<i>N</i>	<i>X</i>	
11.	Federal government is not financing colleges of education regularly	260	224	44	22	1822	550	3.31	Agreed
12.	Our colleges of education need adequate fund to purchase modern day electronics gadgets and computers for effective teaching and learning system.	299	299	22	-	1927	550	3.50	Agreed
13.	The available equipments/facilities in your school are regularly maintained	297	220	24	9	1905	550	3.46	Agreed
14.	Insufficient funding is a barrier to technical education program.	297	222	24	7	1909	550	3.47	Agreed
15.	Institutions with adequate instructional materials such as universal milling machines and computer tend to produce high level manpower with adequate skills to become self reliant	352	198	-	-	2002	550	3.64	Agreed

The table above shows that all the statement on the table are agreed, they show the reason why we do not have well equipped libraries and current textbook for teaching, Federal government is not financing colleges of education regularly; Our colleges of education need adequate fund to purchase modern day electronics gadgets and computers for effective teaching and learning; Insufficient funding is a barrier to technical education program; The available equipments/facilities in your school are regularly maintained and Institutions with adequate instructional materials such as universal milling machines and computer tend to produce high level manpower with adequate skills to become self reliant.

Research question IV: How well has technical education program been implemented?

Table 4: Analysed how well technical education program has been implemented.

	<i>Items of Instruction</i>	<i>Degree of responses</i>				<i>Total No FX</i>	<i>Grand total N</i>	<i>Mean X</i>	<i>Remarks</i>
		<i>SA</i>	<i>A</i>	<i>D</i>	<i>SD</i>				
16.	Research project on technical education should be undertaken without further delay?	352	110	66	22	1892	550	3.44	Agreed
17.	Technical education can promote manpower development in Nigeria?	330	88	66	66	1782	550	3.24	Agreed
18.	All is well generally with technical education in your school?	44	66	308	132	1122	550	2.04	Disagreed
19.	You have difficulties with technical education courses e.g. fluid mechanics?	330	154	44	22	1892	550	3.44	Agreed
20.	There should be proper placement of technical education in both the junior and senior secondary school's curricula.	352	176	11	11	1969	550	3.58	Agreed

The above table IV is used to analyze how well technical education has been implemented. Item 3 on the table have a very low mean of 2.04 which is below 2.50 and was disagreed.

This shows that all is not well with technical education generally hence research project on technical education should be undertaken without further delay, Technical education can promote manpower development in Nigerian, You have difficulties with technical education courses e.g. fluid mechanics. There should be proper placement of technical education in both the junior and senior secondary school's curricula.

Discussion of Findings

From the data analyzed, it was discovered that the colleges of education sampled were not having adequate teaching resources in technical education courses. It was seen that there was no adequate supply of equipments and other facilities. The workshop where students practicalized are only occupied with Old and out-dated machines which are not regularly serviced. There are no current textbooks on technical education and other materials in the library.

These findings show that these colleges of education need suitable and adequate materials which will facilitate the maintenance of satisfactory standard. It shows that technical education has not been fully implemented. On the other hand, the government should try to play their own part by providing funds regularly for the programs to be fully implemented, and provisions of all the useful materials (teaching resources) would be made available.

From the findings, it was discovered that our colleges of education lack adequate professional lecturers who can handle various courses in technical education, this is where we have the highest mean mark of the items of instruction. Government should try to encourage the lecturers available by giving them incentives and good pay package to make them adequate and effective. They should also allow those who need more training to go on Study leave to get more knowledge and training in their area of specialization. They should also try to employ qualified graduates in technical education courses who have the skills, knowledge and ability to train and educate students in colleges of education. These lecturers will devote more time in order to help the students achieve their dream.

The Lecturers have to be mentally, attitudinally and professionally prepared to operate the system. These will make the lecturers of technical education more serious in implementing the programs successfully.

Conclusion

The success of a nation's economy depends on the quality of its workers. Therefore, programme of technical education should be designed to meet the educational needs of the youths, looking at the National policy on education, it was noticed that this aspect of education was omitted.

In considering colleges of education in terms of its objectives as stated in the Nation policy on education and its relationship to technical education, it was highly stress the relevance of technical education. As long as the economic system remains, and technical education continues to inculcate values which form a component aspect of our national objectives as a nation, bright future awaits technical education as a branch of knowledge to be reckoned with. However, in as much as technical education in Nigeria is tailored towards career opportunities with technological innovations these in effect will produce the desired and relevant manpower needed for the up-liftment of our great nation.

Recommendations

- (1) On the basis of the findings and conclusions from this study, the following recommendations are made.

- (2) Technical education programs should emphasize the right attitudes and habits that would encourage the graduates to develop pains-taking behaviour and to perceive technical opportunity in the environment.
- (3) Government should set aside a fixed percentage of the total education budget for technical education.
- (4) The government should provide adequate instructional materials for effective teaching/learning system.
- (5) Non-professional lecturers should be granted study leave to enable them undergo a pedagogical training in technical education.
- (6) Guidance and counseling services in secondary schools should be more effective to enable students understand the implication of technical education offered at college level.
- (7) More teachers should be attracted to the teaching profession by not making it an all “comers job” which people jump into as a transit to other professions. In addition, teachers must be remunerated in commensurate with what their counterparts in other professions receive.

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