

# Consolidating The Gain Of Technology Education For National Development In Nigeria

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# Effective Management of Technical Colleges for Sustainable Development

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## Abstract:

It is observed that there are deficiencies in the management of our technical colleges. This paper stresses on effective management of our technical colleges for sustainable national development. Three research questions were formulated to guide the study. A 22-item questionnaire was developed and used to collect data from the respondents consisting of 18 administrator and 120 teachers in all the technical colleges in the State. The data was analysed using frequency count and mean. The study revealed that both administrators and teachers shared similar views towards the majority of the items. It was therefore recommended that government should ensure that there is regular persistent monitoring of technical college administrators in order to ensure the effective management of both human and material resources and any technical college administrator found misappropriating fund, disciplinary measure should be taken against him in order to serve as a deterrent to others.

## Introduction

Management is the process of setting goals or objectives, and achieving them by employing men and material resources in a compatible environment. According to Mintzberg (1997) every activity involving human effort possessed to some degree these four facets: (i) a goal (ii) the means by which the goals can be attained (iii) the use of human effort and (iv) the creation of an environment that will induce men to participate. According to Mintzberg (1997) that emphasis that each of these facets receives varies widely in comparison depending on the managerial task. Therefore, management is the process of setting and achieving objectives by influencing human behaviour towards the realisation of the goals or set objectives. Management includes four primary functions and one overall integrative function: the process of planning, organizing, directing and controlling the activities of the system. The integrative function being that of the coordination (Pitso and Abrahamson 1977). From the foregoing management is the process of making a decision on how resources can be procured, managed, used and maintained for the attainment of a given objective or goals. It also involves the coordination and control of human, infrastructure, materials, equipment, facilities and finance used for the sustenance and improvement of a given set-up efficiently and effectively (Adekunle 1999). The aim of management therefore, is to coordinate the human, physical, material and financial resources so that they can be utilized economically, efficiently and effectively. According to Zakariya, Yahaya and Muhammed (1997) Management in technology education involves strategic innovation, initiating and bringing about change, creative, problem solving and decision making, actively seeking out alternatives and opportunities, formulating goals and priorities, redeploing resources, responding

resolving conflicts dynamic or active leadership, diplomacy, statesmanship and a high degree of risk taking and entrepreneurship

Technical college is that section of technology education, meant for either professional teaching or for production of low-level manpower (skilled labour) ie artisans, craftsmen and master craftsmen for the labour market (F. M. E, 2000). Technical college programme and technology education at the senior secondary school level, is the foundation for building a veritable technology education at any given society, the quality of which is highly depend on the kind of management accorded that particular society.

However the backwardness and slow rate of development in technology/economic stagnation, is a reflection and product of poor state of management accorded technology education most especially at the technical college level, which is seen as the bedrock of our technological development. In order to make Nigeria a producing nation rather than a consuming nation the National Policy on Education (1998) recommended the establishment of one technical college for each of the areas in the country. But surprisingly as at 1998, the total number of Federal Technical Colleges stands at 12 (twelve), while that of states is 122 (one hundred and twenty two) (Ogunleye, 1999). Despite this small percentage of available technical colleges out of the larger number recommended, the performance has not been anything to write home about in terms of independence of graduates, their gainful employment and contribution to technological growth in the country. Hence the question of efficient management of this sector of technology education becomes imperative to find a lasting solution to the nagging problem of technological backwardness in the society

#### **Purpose of the Study**

The purpose of this study can be specifically delineated as follows:

- (I) To identify the deficiencies in the management of technical colleges in Niger State
- (II) To find out how funds released to the technical colleges are being utilized or managed
- (III) To proffer solutions to the identified deficiencies in the management of technical colleges in Niger State.

#### **Research Questions**

For the purpose of this study the following research questions were posed: -

- (i) Are there some deficiencies in the management of technical colleges in Niger State?
- (ii) How are funds released to the technical colleges being utilized or managed?
- (iii) What are the solutions to the identified deficiencies in the management of technical colleges in Niger State?

#### **Research Design**

This study employed the use of descriptive survey research design. According to Osuala (1982) surveys are oriented towards the determination of status of a given phenomenon, they focus on people and their beliefs, opinions attitudes and behaviour.

#### **Area of the Study**

The study was carried out in all the technical colleges in Niger State.

#### **Population**

The target population for the study composed of all the administrators (principal and vice principal) and the teachers in technical colleges in Niger State.

**Sampling Technique**

The sample for this study consist of all the principals from the six (6) technical colleges twelve vice principals and one hundred and twenty teacher's selected randomly from the target population.

**Instrument for Data Collection**

The questionnaire was the sole instrument used for data collection. Itemised questions were used for answering the research questions, and all the one hundred and thirty eight (138) questionnaires were returned and used for analysis.

**Methods of Data Analysis**

The data collected was analysed on a modified four point likert-type rating scale using strongly Agree (SA) = 4; Agree (A) = 3, Disagree (D) = 2, strongly Disagree (SD) = 1. The mean of the responses was used to ascertain the central tendency of the respondents opinion to answer the three (3) research questions, any item that attracted up to 2.5 and above was considered agree and 2.49 and below was considered disagreed.

**Results**

The results of the data analyses are presented in the order of the research questions.

**Research Question 1**

Are there some deficiencies in the management of technical colleges in Niger State

Table 1: Responses of administrators and technical teachers on the deficiencies in the management of technical colleges in Niger State

		$N_1 = 18, N_2 = 120$			
	Items	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_t$	
1.	Technical college administrators lack the spirit of collective responsibility in the proper running of the colleges.	2.10	2.62	2.36	Dis
2.	Equipment in most technical colleges are poorly handled and maintained by teachers and students.	3.40	3.26	3.33	Ag
3.	There is no proper monitoring of how technical college	3.36	3.41	3.39	Ag

Table 1: Mean Scores of Administrators and Teachers

Administrators				
Technical colleges are not adequately equipped	3.61	2.40	2.51	Agree
Technical colleges lack the ability to improve or maintain relevant training materials and equipment	2.41	2.50	2.46	Disagree
Inadequate training materials dampen students' morale in the colleges	3.63	3.50	3.56	Agree
Many technical college workshops are not adequately equipped	3.69	3.53	3.61	Agree

Key:

$N_1$  = number of Administrators

$N_2$  = number of teachers

$\bar{X}_1$  = Mean of Administrators

$\bar{X}_2$  = Mean of Teachers

$\bar{X}$  = Average Mean of Administrators and Teachers

Table 1 revealed that administrators disagreed with items 1 and 5 while the teachers agreed with the items. Both the administrators and the teachers agreed with items 2, 4, 6 and 7. Also the administrators agreed with item 4 where the teachers disagreed with the item.

Research Question 2

How are funds released to the technical colleges being utilized or managed

Table 2: Responses of teachers and administrators on how funds released to the technical colleges are being utilized or managed

#	Items	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_t$	
8	Payment of allowances to technical teachers.	2.62	2.48	2.55	Agree
9	Purchase of new equipment and tools.	2.10	2.00	2.05	Disagree
10	Provision of first aid treatment materials in the workshop.	2.50	1.99	2.25	Disagree
11	Regular maintenance of workshop facilities.	2.50	2.22	2.36	Disagree
12	Supply of stationeries and other consumable materials	3.00	2.70	2.85	Agree
13	Funding of students Industrial work				

	experiences in items (SIWES)				
		2.60	2.00	2.30	Disagree
14	Running cost released to technical colleges are diverted or misappropriated	2.30	3.00	3.10	Agree

Table 2 revealed that the administrators agreed with items 8, 10, 11 and 13 while the teachers disagreed with the items. Both administrators and teachers disagreed with items 9. Also the administrators disagreed with items 14 whereas the teachers agree with the item.

**Research Question 3**

What are the solutions to the identified deficiencies in the management of technical colleges?

Table 3. Responses of the administrators and teachers on the possible solutions to the identified deficiencies in the management of the technical colleges.

$N_1=18$   $N_2=120$

	Items	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_t$	Remark
15.	There must be the spirit of collective responsibility by the administrator in the management of technical colleges	3.40	3.52	3.46	Agree
16	Equipment in technical colleges workshop be adequately maintain in order to prolong their life-span	3.49	3.63	3.56	Agree
17.	Government should ensure regular and persistent monitoring of technical colleges activities for better performance	3.33	3.67	3.50	Agree
18	Government anti-				

	corruption drive should be spread to catch any erring technical college administrator, found misappropriate fund	2.63	3.50	3.07	Agree
19.	Adequate and modern equipment relevant to the societal needs should be supplied to all technical colleges by the government	3.54	3.66	3.60	Agree
20.	There must be cordial relationship between administrators and teachers for the smooth running of the technical colleges.	3.00	3.48	3.24	Agree
21.	Funding of the technical colleges should not be left to Government alone to bear.	3.23	3.55	3.39	Agree
22.	Promotion of teachers in technical colleges should be tied to up-dating their knowledge and improvement on the job objectively evaluated.	3.62	3.43	3.53	Agree

Table 3 revealed that both the administrators and teachers agreed with all the items raised under research question 3 which has to do with solution to the identified deficiencies in the management of technical colleges and having an average mean score ranging between 3.07 – 3.60.

**Discussion of Major Findings**

The result of the study identified that the equipment in most technical colleges are poorly maintained and also there is no adequate equipment for the students' practical. In this regard most school workshops and laboratories are all made to close late in the afternoon and does not open until the next day. Ma'aji (1998) observed that this equipment could be profitably used during evening, weekend and public holidays to upgrade the skills of local artisans, industrial workers and other doing private contract works which could be potentials source of incomes to the school. This could be used for the maintenance and purchase of new tools and equipment and other consumable materials. In the same vein Uthman (2000) and Olaitan (1988) saw the need to privatise the workshop equipment and facilities, which will help in the effective management, increased efficiency and saving of reasonable money in the school. As some of these equipment were under utilisation. The analysis in table 2, revealed that the running cost released to the technical colleges are being diverted or misappropriated by the administrators. Therefore new tools, equipment and other materials cannot be purchased. There is the need that the



government should ensure regular and persistent monitoring of technical colleges activities for better performance. Fund is needed for provision and maintenance of infrastructures, facilities, student industrial work experience scheme (SIWES) and payment of allowance to teachers. However, it has been noted by Igwe (1997) in Asa and Uzochukwu (2000) that inadequate funding of technology education has been a major problem confronting technology education in Nigeria. It is only through adequate funding of technology education that new equipment and facilities for skill development can be put in place so that manpower will be developed for other sectors of the economy like agriculture, transport, health, manufacturing industries among others (Tajudeen 2000). With reference to solutions to the identifies deficiencies of the management of technical colleges.

Table 3, shows that any technical colleges administrator found misappropriating funds, the government anti-corruption organisations such as economic and financial crime commission (EFCC) and independent corrupt practice commission (ICPC) should deal decisively with erring technical college administrator in order to serve as a deterrent to any administrator who want to involve himself in such corrupt practices. Funding of technical colleges is very important so that modern tools and equipment can be supplied to the workshops in our technical colleges. This will help the students to acquire practical skills in order for them to be self-reliant i.e to become productive members to the society. However, the success of any educational programme largely depends upon the availability of resources needed in such programme. Fund must be adequate because without fund other related activities cannot be provided. Thus, adequate funding of technology education is instrumental for its success. Salami (1992) and Adeleye (2000). Identified inadequate funding as one of the constraints on technology education in Nigeria. Also Isiaka (1997) lamented that technology education suffers some serious problems, which have limited its effective contribution. This problem includes inadequate funding leading to inadequacies of human and materials resources. Much fund is needed to provide the needed equipment and infrastructural facilities. Unfortunately the government does not provide such funds. The funding of technical colleges should not be left to the government alone. Olaitan (1986) suggested that the sources of revenue for technical education be diversified. Organisations, industries, business communities, non-governmental organisation (NGO's) philanthropic organisation and well – meaning individuals in the society should come and contribute both in cash and kind for the implementation of technical education.

### **Conclusion**

It is quite clear that there is the need for effective management of our technical colleges by the administrators. Our technical college administrators should be people of high integrity, people of good moral and ethical character so that they make best use of the human material and financial resources at their disposal, for the products of our technical colleges to become useful to themselves and the society at large.

### **Recommendations**

For effective management of technical colleges to be achieved; the following recommendations are made: -

- The running cost released to technical colleges should not be misappropriated by technical college administrators, the fund should be used for the smooth running of the colleges.

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- Government should ensure that there is regular and persistent monitoring of the technical college administrator to ensure that there is effective management of both human, materials and financial resources in the college
  - Any technical college administrator found misappropriating funds, government should ensure that drastic disciplinary measure is taken against him to serve as a deterrent to others
  - Infrastructural facilities, machines, equipment, tools and other materials should be adequately maintained by teachers, instructors and students in order to prolong their life span.
  - Funding of technical colleges should not be left alone to the government, wealthy individuals alumni associations, parent teachers associations (PTA), multi-national organisations, corporate organisation philanthropic organisations, international donors should assist meaningfully in the smooth management and administration of technical colleges by way of contributing or giving aids in order to supplement the effort of the government.

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