
**CONTROL METHODS USED IN TECHNICAL COLLEGE
MANAGEMENT BY COLLEGE ADMINISTRATORS IN NORTH-EAST
GEO-POLITICAL ZONE OF NIGERIA**

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Abstract

The study examined the effectiveness of control methods put in place in the management of technical colleges in North-East Geo-political Zone of Nigeria. One research question was answered and one hypothesis tested. The study was based on the social systems theory which was found relevant to the study in that it viewed a social system as a school, consisting of a community of adults, youths and children working in concert towards the solution to problems of the school. Descriptive survey research design was used, in which a structured questionnaire, trial-tested and having a coefficient of stability of 0.81, collected data from administrators, teachers and 300 level students. Findings of the study revealed that the control methods being used in technical college

management by college administrators, such as enforcement of school rules, and supervision of instruction during class visitation, in the North-East Geo-political Zone of Nigeria were moderately effective. The study also found that there was no significant difference in the mean scores of administrators, teachers and students on the effectiveness of the control methods being used in technical college management. The findings implied that to a certain extent, administrators were putting in some effort to check the excesses of staff and students and as well instill discipline in the colleges. The study recommended that to keep pace with developments in educational management, administrators of the technical colleges would be required to put in more effort towards enhancing the effectiveness of the control methods put in place in the management of the technical colleges.

Key Words: Control methods, Effectiveness, Management

One fundamental problem bedeviling countries of Africa is how to carve out an effective pathway for achieving technological development. Technological development is however, impossible without the right type of education. One type of education that can lead to technological development is technical and vocational education (TVE). TVE, according to the Nigeria National Policy on Education (FGN, 2004), is that type of education that equips recipients with functional so as to be useful members of the society. The goals of TVE, as spelt out in the National Policy on Education, are to provide trained manpower in the applied sciences, technology and commerce, particularly at sub-professional level; to provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; to provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the convenience of man; to give an introductory professional studies in engineering and other technologies; and to give training and impart the necessary skills to individuals who shall be self-reliant and enterprising economically. One institution vested with the responsibility to realize the goals of TVE is the technical college. This type of institution trains individuals in various skills (Okoro, 2006).

As the number of technical colleges in Nigeria began to increase, management challenges were experienced which affected the effectiveness of the administrators of the technical colleges. The term “effectiveness”, according to the BusinessDictionary.com (n.d.) means the degree to which targeted problems are solved. It means doing the right thing, in contrast to the term “efficiency” which means doing the thing right. Wikipedia (n.d.) also defined effectiveness relating to management to mean getting the right things done. The Free Dictionary (2012) viewed effectiveness as

a concept which produces a strong impression or response, or having an intended or expected effect. Effectiveness is therefore, taken to mean the extent to which technical college administrators are able to realize the goals of the technical colleges through the use of appropriate management practices.

Administrators of technical colleges (the term “administrators” is used in this study to refer to Principals, Vice Principals and Senior Masters) have been saddled with the responsibility of managing the technical colleges. They are required to ensure that the colleges operate under a peaceful atmosphere in order that teaching and learning effectively take place. However, in order for the administrators to effectively perform this function, they need to employ division of labour which, according to Okeke (2001), is a participatory decision making process where teachers and students are motivated by being assigned specific roles. Teachers in this study refer to classroom teachers, Heads of Department, Heads of Section, Labour Master, Discipline Master, Food Master, Health Master, Senior Master, Games Master, who assist the college administrators in discharging their functions (Edem, 2006; Okoro, 2006).

Students in this study refer to final year students, including prefects, who assist technical college administrators in the discharge of their functions. Often times, administrators involve students in the formulation of policies that affect the students. The administrators involve the students in the planning and implementation of co-curricular activities like sports and in the discipline of students’ misbehaviours (Mgbodile, 1997). The administrators also assist students to set up their own union government which, in the words of Edem (2006), develop in students political awareness and sensitivity to participate in school governance.

Over the years, the effective management of technical colleges in Nigeria was affected by several factors, among which was the challenge of control and supervision. There was a weak control of men and materials on the part of administrators (Ihebereme & Obi, 2004). According to Chibuzor (1990, the term “control” is used to refer to the process by which the superior, through motivating power and force, exercises authority over the subordinates. In the words of Edem (2006;6), control means “the method of regulating, curbing, and checking the excesses of individuals and bodies in the pursuance of their organizational duties”. Control deals with methods put in place to supervise people and what they do relating to their official functions. However, because there was weak control mechanism in the technical colleges, several cases of students’ unrest and growing staff disaffection were recorded (Fagbemi in Igbo, 2002; Ochu & Ochu, 2002; Yaduma & Moses, 2005; Ihebereme, 2006a).

In order for administrators, teachers and students to effectively manage technical colleges, the challenge relating to the control methods used in the management of the technical colleges would need to be addressed. To do this however, there was the need to undertake a research on the effectiveness of the control function of technical college administrators in the North-East Geo-political Zone of Nigeria.

Purpose of the Study

The purpose of the study was to ascertain the effectiveness of the control methods being used in technical college management by college administrators in the North-East Geo-political Zone of Nigeria

Research Question

How effective are the control methods being used in technical college management by college administrators in the North-East Geo-political Zone of Nigeria?

Hypothesis

There is no significant difference in the mean scores of administrators, teachers and students on the effectiveness of the control methods being used in technical college management by college administrators in the North-East Geo-political Zone of Nigeria.

Review of Related Literature

The study was based on the social systems theory whose major proponent was Talcott Parsons, America's preeminent social theorist throughout the mid-20th century (Wikibooks, n.d.). Parsons social system is synonymous with society and emerges from the interaction of individuals (Parsons, 1951). Parson's social systems tended towards equilibrium as the society members' actions are to a significant degree oriented toward a single integrated system of ultimate goals common to the members (Parsons in Heyl, 1968). According to Hoy and Miskel (1982), a social system is a model organization that possesses a distinctive total unity beyond its component parts, made up of subunits, elements and subsystems that are interrelated. A social system has been defined by Hoy and Forsyth (1986:16) as a set of interacting personalities characterized by interdependencies of elements, complex networks of social relationships, with individual actors motivated by their personalities; it has "distinctive unity that goes beyond its component parts, and interaction with its environment (open system)." According to Homan in Ukeje, Okorie and Nwagbara (1992:118), a social system refers to the "activities, interactions and sentiments of group members, together with the mutual relations of these elements with one another during the time the group is active..." The social systems theory is relevant to this study because, as Musaazi (1985) explained, the school is a social system consisting of a community of adults, youths and children working in concert towards the solution to problems of the school.

The word "control" is related to the way personnel behaviour and activities are managed in order that teaching and learning can effectively take place. The term is used to refer to the process by which the superior, through motivating power and force, exercises authority over the subordinates (Chibuzor, 1990). Control, according to Edem (2006:6), also means "the method of regulating, curbing, and checking the excesses of individuals and bodies in the pursuance of their organizational duties". Control deals

with methods put in place to supervise people and what they relating to their official functions.

Supervision is an important aspect of the management of human and material resources. In a technical college, the principal frequently checks the excesses of his staff and the way and manner teaching and learning take place in the college. The principal carries out this function through supervision. Supervision therefore, is a behaviour that is formally provided by an organization for the purpose of directly influencing teaching behaviour in such a way as to improve students' learning (Obilade in Jagaba, 1994:12). For effective management however, the principal needs to rise up to the challenge of properly managing the college by effectively supervising work, staff and students (Garuba, 1997).

Supervision is also described as internal supervision. Internal supervision as a management function of a school head is an additional behaviour system whereby the school head interacts with the teaching process in such a way as to take charge and improve the provision and actualization of learning opportunities for students (Igbo, 2002). According to Eregie and Ogiamen (2007:83), school supervision is "a whole mechanism systematically designed to accomplish the end of public education so that the internal structure of the school is determined by functions which are carried on towards those ends". Internal supervision, in the words of Odinamba in Onuselegu (2008:32) "is the formal programme or procedure which a principal applies to facilitate teachers' knowledge, skills and competencies".

The National Policy on Education (FRN, 2004) listed the following objectives of school supervision as 1) To ensure adequate planning for all educational services; 2) To provide efficient and administrative management control for the maintenance of the system; 3) To ensure quality and control through regular inspection and continuous supervision of instructional and other educational services; and 4) To provide adequate and balanced financial support for all educational services. In light of this therefore, Abama (2002:29) listed the purposes of school supervision to include improving methods of teaching and learning, coordinating and integrating all educational efforts and materials to ensure continuity. Belts (2004:34) further stressed that supervision, as a management technique, is meant to build and maintain an efficient teaching and learning environment, create and maintain an effective teaching workforce, and control the workforce in the school. Without checking the way the workforce performs its duties, the aims and objectives of technical and vocational education, as spelt out in the National Policy on Education (FRN, 2004) will not be realized. Therefore, supervision is an important management function that the school head needs to pay serious attention to.

There are certain key areas of school supervision that a school head must pay attention to. Kochhar, 2002:68) listed the following areas of school supervision: 1) supervision of instruction work; 2) supervision of extracurricular activities and programme; 3) supervision of school environment; 4) supervision of school records;

supervision of developmental aspects of the school; and supervision of pupil growth. This implies that in a technical college, the principal cannot fold his arms and watch the way things happen, although Kochhar (2002) argued that there are certain limitations to effective supervision in a school. Some of the limitations are fear of teachers, fear of antagonism, lack of actual experience, and too limited contact.

Students' behaviour problems in schools are identified by Ipaye (1999) to be a function of the managerial leadership. Ipaye pointed out that cultism, drug abuse and other forms of students' behaviour problems do not only challenge principals' managerial abilities but they affect students' performance, thereby lowering standards (Ipaye, 1999). Where there is inadequate supervision by school administrators, indiscipline in schools assumes high proportions (Ipaye, 1999; Loto, 2003; Magaji, 2004). Furthermore, managerial inconsistency and the disintegration of the school system has been one of the causes of cult activities in Nigerian schools (Magaji, 2004). Cult members have over the years led gangs and spearheaded protests and demonstrations against school authorities. The consequences of all these cult activities are loss of lives and property, destruction of personality and societal values, and eventually the closure of the schools (Magaji, 2004).

According to Mishra (1997:208), there are certain characteristics that are generally associated with disciplinary problems in schools. These characteristics are: 1) Rules were unclear or perceived as unfairly or inconsistently enforced; 2) Students do not believe in the rules; 3) Teachers and administrators did not know what the rules were or disagreed on the proper responses to students' misconduct; 4) Teacher-management cooperation was poor or the management inactive; 5) Teachers tended to have punitive measures; 6) Misconduct was ignored; 7) Schools were large or lacked adequate resources for teaching. In effect, schools are operating under these conditions without proper direction and guidance. This creates room for students and students to do as they like, since no one is checking their behaviours.

In order to effectively tackle students' disciplinary problems, school administrators need to visit classes and workshops to check students' progress and presence (Jagaba, 1994). In fact, in the words of Mubi and Tahir (1994:65), "Supervisory functions include initiating and taking leadership roles such as ordering and guiding, motivating as well as coordinating personnel". Supervision and effective control and the evolution of vital students' extra-curricular activities are also identified to be necessary (Kochhar, 2002). Furthermore, showing interest in students, the institution of students' council, motivation of students, and formation of disciplinary advisory committees, are measures that will go a long way in tackling students' disciplinary problems in schools in Nigeria (Kochhar, 2002). Equally, the measures, if effectively handled, removes communication gap between the school management and staff and students. This often results in effective management practices in the school system.

Considering the serious nature of discipline, Ada (1999) carried out a study on “Development and a validation of Administrative Strategies for Controlling Disciplinary Problems of Secondary School Students in Cross River State”. The sample for the study consisted of 91 principals, 194 vice principals, 91 deans of studies and 282 guidance consellers from three educational zones of the State. Mean and two-way Analyses of Variance were used to analyze the data collected. Findings of the study showed that three administrative strategies, namely, proper fencing of school compound, effective use of classroom control records, and the appointment of loitering committee were effective strategies in controlling loitering among the studies. Seven strategies, including provision of standard examination halls, suspension of students, and appointment of honest examination supervisors, were useful and effective in controlling examination misconduct. In order to strengthen the administration of the schools, the study recommended for the involvement of students in decision making. It also recommended that the Parent-Teacher Associations (PTA) should embark on fencing of their respective schools.

Nzeako (2008) examined the administrative strategies militating against the proper implementation of educational policies in secondary schools in Awka Educational Zone of Anambra State. A structured questionnaire collected data from a sample of 1055 respondents, comprised of 58 principals and 997 teachers. Mean answered the research question stated. The study found that poor leadership qualities and wrong application of disciplinary measures by principals were hampering the smooth administration of the secondary schools. It also recommended that principals should exhibit good leadership qualities towards effective student and staff motivation.

Methodology

The study employed descriptive survey design which is a non-experimental research whereby a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group (Akuezuilo & Agu, 2003). The area of the study is the North-East Geo-political Zone of Nigeria. The zone consists of six States, namely, Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe State. The North-East zone lies between latitude 9° -14°E and longitude 11° -14°N (Abdullahi & Musa, 2004, Nigeria Latitude and Longitude, 2012). The North-East has a total of 33 State-owned technical colleges (NABTEB, 2013). The population of the study was 2,008 subjects, made up of 132 administrators (that is, 33 Principals, 66 Vice Principals and 33 Senior Masters), 356 technical teachers, and 1,520 300L students. The Yaro Yamane formula was used to determine the sample size for students and teachers which stood at 317 and 188 respectively. There was however, no sampling done for the 132 administrators, as their size was manageable. Altogether the sample size for the study was 637 respondents.

A 10-item questionnaire was used to collect data. It was constructed by the researcher, based on existing literature, notably the management task areas of Gorton

(1984), the major operational areas of educational management advocated by Campbell and Greggs in Mgbodile (1997), and the management principles of Urwick & Gulick (Edem, 2006). The items in the sections were treated on a five-point scale. Respondents were required to tick the option which best described their views on the items. The five-point scale treated the items in the sections as follows:

Very Effective (VE)	-	5 points
Effective (EF)	-	4 points
Moderately Effective (ME)	-	3 points
Ineffective (IE)	-	2 points
Very Ineffective (VIE)	-	1 point

Four experts in the field of Industrial Technology Education and Educational Management validated the instrument in terms of face and content validation. In order to obtain a reliable instrument, the validated copy was trial-tested on 20 respondents at the Government Technical College, Bukuru, Jos, Plateau State, Nigeria, made up of four administrators, four teachers and 12 students. The test re-test method of estimating reliability was used to collect data for the reliability of the instrument. There was an interval of two weeks between the first administration of the test and the second. The two tests had the same content and structure. The results of the two tests were correlated using the Statistical Package for Social Sciences (SPSS) version 17, to obtain the Pearson Product Moment Correlation Coefficient (ρ). The Pearson (ρ) was found to be 0.81.

A total of six weeks was devoted to the administration of the questionnaire. At the end of the exercise, 486 copies of the questionnaire were returned. This represented 81.4%. However, at time of tallying the results, a total of 390 valid copies of the questionnaire were realized. These valid copies represented 65.3% of the total number of questionnaire administered. The valid copies consisted of 75 administrators, 135 technical teachers and 180 students. The analyses of the results were therefore, carried out on the 390 valid copies of the questionnaire. Mean (\bar{X}) and standard deviation (σ) were used to answer the research questions. The Statistical Package for Social Sciences (SPSS) version 17 was used to determine the mean and standard deviation, as well as the analysis of variance (ANOVA).

Table 1 shows the true limits of real numbers for the five-point scale and their designations.

Table 1: True Limits of Real Numbers

Limits	Designation
4.50 – 5.00	Very Effective (VE)
3.50 – 4.49	Effective (EF)
2.50 – 3.49	Moderately Effective (ME)
1.50 – 2.49	Ineffective (IE)
0.50 – 1.49	Very Ineffective(VIE)

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To effect decision, a mean (\bar{X}) of 3.50 and above was considered “effective” and a mean of less than 2.50 was considered “ineffective”. From the table, mean values that ranged between 2.50 and 3.49 were considered “moderately effective”. The decision rule for the F-ratio was: Reject the null hypothesis if the calculated F-ratio exceeds the tabulated F-ratio; otherwise do not reject the null hypothesis if the calculated value of the test statistic is less than the critical value (Nworgu, 2006).

Presentation of Results

The results of the study are presented based on the research question and hypothesis

Research Question

How effective are the methods being used for planning school activities in technical college management by college administrators?

The data collected to provide answer to this research question are presented in Table 2.

Table 4: Mean and Standard Deviation of Responses of Administrators, Teachers and Students on the Effectiveness of the Control Methods Being Used in Technical College Management by College Administrators

S/ N	Items	Administra tors n _A =75		Tech. Teachers n _T =135		Students n _S =180		Gran d Mea n \bar{X}_G	Remar ks
		\bar{X}_A	$\bar{\sigma}_A$	\bar{X}_T	$\bar{\sigma}_T$	\bar{X}_S	$\bar{\sigma}_S$		
1	Establish school attendance policy	3.88	1.20	3.32	1.50	3.34	1.31	3.42	Mod. Effect.
2	Establishing procedures for dealing with students' disciplinary problems	2.92	1.26	2.85	1.36	3.43	1.47	3.10	Mod. Effect.
3	Supervision of students' progress	3.69	1.23	2.98	1.33	3.28	1.60	3.20	Mod. Effect.
4	Supervision of staff progress	3.96	1.13	3.68	1.28	3.15	1.31	3.50	Effecti ve
5	Establishing procedures for safety in the school	2.99	1.18	2.76	1.39	2.67	1.40	2.80	Mod. Effect.

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6	Coordinating school services	3.73	1.1	3.24	1.4	3.1	1.	3.30	Mod. Effect.
7	Supervision of instruction during class visitation	3.69	1.2	3.50	1.4	3.3	1.	3.40	Mod. Effect.
8	Initiating students' council	3.12	1.2	3.04	1.5	2.9	1.	3.00	Mod. Effect.
9	Supervision of students' registration	3.71	1.2	3.41	1.3	3.3	1.	3.60	Effective
10	Enforcement of school rules	3.01	1.1	2.79	1.4	2.5	1.	2.70	Mod. Effect.
Grand Mean		3.47		3.16		3.12		3.20	
Mod. Effect.									

KEY

n_A	=	Sample for administrators
n_T	=	Sample for teachers
n_S	=	Sample for students
\bar{X}_A	=	Mean score of administrators
$\bar{\sigma}_A$	=	Standard deviation of administrators
\bar{X}_T	=	Mean score of technical teachers
$\bar{\sigma}_T$	=	Standard deviation of teachers
\bar{X}_S	=	Mean score of students
$\bar{\sigma}_S$	=	Standard deviation of students
\bar{X}_G	=	Grand mean of the three respondents
Mod. Effect.	=	Moderately Effective

In Table 2, the grand mean scores of the respondents ranged between 2.70 and 3.60. The standard deviation of the mean scores of the responses of the respondents ranged between 1.11 and 1.60. This shows that the response scores of the respondents are closer to the mean. Out of the 10 items in the table, two items, i.e. 4 and 9 were rated effective by respondents. The remaining eight items, namely, 1, 2, 3, 5, 6, 7, 8 and 10 were rated moderately effective by respondents. The overall grand mean of the table is 3.20. This result indicates that the control methods being used in technical college management by college administrators in the North-East Geo-political Zone of Nigeria are moderately effective.

Test of Hypothesis

There is no significant difference in the mean scores of administrators, teachers and students on the effectiveness of the control methods being in technical college management by college administrators

The data which tested this hypothesis are presented in Table 3.

Table 14: Analysis of Variance (ANOVA) Test for Comparing the Mean Scores of Responses of Administrators, Teachers and Students on the Effectiveness of the Control Methods Being Used in Technical College Management by College Administrators

Sources of Variation	df	Sum of Squares	Mean Squares	F-cal	F-critical	Significance
Between Means	2	0.74	0.37	3.09	3.35	NS
Within Means	27	3.23	0.12			
TOTAL	29	3.97				

This hypothesis was tested at degrees of freedom (df) 2 and 27 and level of significance 0.05. The result showed that the calculated F value (F-cal) was 3.09 as against the critical value (F-crit) of 3.35. Since F-cal was less than F-crit, it meant that there was no significant difference in the mean scores of the responses of administrators, technical teachers and students on the effectiveness of the control methods being used in technical college management by college administrators. Therefore, the null hypothesis, H_{03} , was upheld.

Findings

The results of the study revealed the following findings

- Two control methods were found to be effective as shown by the results of Table 4. They are supervision of staff progress and supervision of students' registration.
- Eight control methods being used in technical college management were found to be moderately effective. They are establishing procedures for dealing with students' disciplinary problems, supervision of students' progress, establishing school attendance policy and establishing procedures for safety in the school. Others are coordinating school services, initiating students' council, enforcement of school rules, supervision of instruction during class visitation.

3. There was no significant difference in the mean scores of administrators, teachers and students on the effectiveness of control methods being used in technical college management.

Discussion of Findings

The control methods found to be moderately effective in technical college management are establishing procedures for dealing with disciplinary problems, supervision of students' progress, establishing procedures for safety in the school, coordinating school services and initiating students' council. This finding in which the control methods are only moderately effective falls short of the requirement for effectively managing a school, because as Jagaba (1994) argued, in order for school administrators to be effective, they need to supervise students' progress constantly. Where students' progress is left unchecked or is done without much care and attention, it breeds other disciplinary problems. As explained by Ipaye (1999), students' behaviour problems in schools are a function of the managerial leadership of school administrators. Buttressing this point, Kochhar (2003), Loto (2003) and Magaji (2004) argued that administrators who do not devote enough time to supervising students' growth and progress are only creating room for students' behaviour problems to assume high proportions. More so, where administrators do not devote sufficient time and energy to set up students' council or to supervise school services as well as to establish procedure for dealing with safety, cult activities are likely to increase in schools and colleges (Magaji, 2004). Security is a vital aspect of school management. Unfortunately, the finding of the study shows that establishing procedure for safety in the colleges is only moderately effective. Insecurity in schools has the propensity to lead to social and academic ills such as theft, threat to life and property and examination conduct. In order for effective school management to ensure, administrators need to constantly pay attention to supervision of the school environment (Kochhar, 2002; Magaji, 2004).

Control methods which the study however, found to be effective are supervision of students' registration and supervision of staff progress. This finding agrees with the work of Jagaba (1994) who stressed that in order for administrators of schools to be effective in their management practices, they need to check the presence of staff and as well supervise the registration of students.

The study found that there was no significant difference in the mean scores of administrators, teachers and students on the effectiveness of the control methods being used in technical college management. This finding is supported by the work of Enemali (1993) which found no significant difference in the mean scores of the three groups of respondent on the effectiveness of the 18 techniques used in technical college management. More so, teachers (heads of department) and administrators did not differ on 30 out of the 33 management techniques.

Conclusions

One of the institutions vested with the responsibility of training individuals towards the realization of the goals of technical and vocational education was the technical college. This type of institution provides training and impart the necessary skills to individuals who are expected to be self-reliant and economically enterprising. However, the technical colleges in the North-East Geo-political Zone of Nigeria were facing management challenges. One of such challenges dealt with the control methods put in place in the management of the technical colleges. Consequently, the fundamental problem which the study addressed was that control methods put in place in the management of the technical colleges in the North-East Geo-political Zone of Nigeria were not effective.

Data collected from respondents using questionnaire showed that the control methods used in the management of technical colleges were moderately effective. This finding implied that administrators needed to put in more effort to check the excesses of staff and students. The administrators needed to put in more effort to enforce discipline in the management of the colleges. If this was the case, most disciplinary problems in schools and colleges across Nigeria would have been dealt with and the goals of the technical colleges realized.

In spite of this finding however, the study recommended that to keep pace with current developments in educational management, administrators of the technical colleges would still be required to put in more effort which would enhance the effectiveness of the control methods put in place in the management of the technical colleges. In this connection, certain improvements would be required in the following areas: establishment of a school attendance policy, supervision of students' progress, supervision of instruction during class visitation, and enforcement of school rules.

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