

EFFECTIVENESS OF LEADERSHIP CHARACTERISTICS OF TECHNICAL COLLEGE ADMINISTRATORS IN NORTH-EAST GEO-POLITICAL ZONE OF NIGERIA

By

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Abstract

The study examined the leadership characteristics of technical college administrators in the North-East Geo-political Zone of Nigeria. One research question and one hypothesis were answered and tested respectively. The study employed descriptive survey research design in which a 13-item structured questionnaire, validated and trial tested, collected data from 75 technical college administrators, 135 technical teachers and 180 students. The data were analyzed using the Statistical Package for Social Sciences version 17, to answer the research question and to test the hypothesis at 0.05 level of significance. The study found that leadership characteristics of technical college administrators, such as dependability, responsibility, friendliness, emotional stability and integrity, were moderately effective. The study also found that a significant difference existed in the mean scores of administrators, teachers and students on the leadership characteristics of technical college administrators. A post-hoc Scheffe test showed that administrators were the respondent group responsible for the significant difference in the mean scores of respondents. The findings of the study implied that if the goals of the technical colleges must be realized, and that the technical colleges did not experience one form of leadership crisis or the other, administrators needed to improve upon their own personalities and leadership. Consequently, the study recommended that administrators of the technical colleges needed to improve on their administrative and leadership characteristics towards the effective management of the technical colleges, in areas such as responsibility, emotional stability, integrity, cooperation and intelligence.

Key Words

Leadership Characteristics Management

INTRODUCTION

Technical colleges are institutions that train individuals in various skills. According to Okoro (2006), technical colleges which were formerly called trade centres, are the principal vocational schools that provide full vocational training to students in Nigeria. The technical colleges provide training to individuals in trades such Refrigeration and Air-conditioning, Electrical Installation, Radio, Television and Electronic Work and Plumbing. In addition to the trade courses, students are required to offer general education subjects, which include English Language, Mathematics, Chemistry and Physics (FRN, 2004). According to Okoro, the technical colleges provide a three-year training that leads to the award of an “O” level certificate known as the National Technical Certificate (NTC) or the National Business Certificate (NBC). Initially, graduates were awarded the City and Guilds/WAEC (Technical) Certificate.

Technical colleges in Nigeria aim to realize the goals of technical and vocational education (TVE) which, according to the National Policy on Education (FRN, 2004) 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.

Over the years, the number of technical colleges in Nigeria increased considerably (Ozigi & Ocho in Enemali, 2000; Yakubu & Mumah, 2001; Toscanycademy; 2013). The increase in the number of technical colleges across Nigeria created management challenges which affected the effectiveness of administrators of the technical colleges. The term “effectiveness” refers to “an indication of the impact of a group of activities performed on the achievement of learning outcomes.” (Olaitan, Nwachukwu, Onyemachi, Igbo & Ekong, 1999:30). For this study therefore, the term effectiveness refers the impression made from management practices, resulting in the achievement of the goals of the technical college. The effectiveness of a technical college is linked to the effectiveness of the administrators’ leadership characteristics. According to Evarard and Morris (1999), the effectiveness of a school depends on the principal collaborating with the teaching staff to achieve a common and explicit vision. The authors maintained that the principal of an effective school has a specific administrative plan of action, is reliable, and creates a climate of respect. The Principal also has the ability to set clear objectives and to realize them. He or she demonstrates flexibility, confidence, undertakes initiatives and uses school finances efficiently. The eSchool News (2012) sampled the opinions of educators on what makes for an effective school administrator. Opinions from such survey indicated that school administrators are those persons who have the vision, communication skills and the enthusiasm to encourage teachers to teach more effectively and even to learn new strategies.

Administrators of technical colleges faced challenges relating to the management of the institutions. The term “management” refers to the utilization of resources for the achievement of set objectives (Aliu, 2001; Okeke, 2001). One fundamental challenge in the management of technical colleges especially in the North-East Geo-political Zone of Nigeria dealt with the leadership characteristics of the technical college administrators. The study by Nzeako (2008) buttressed this point when it found that poor leadership by principals were hampering the smooth administration of secondary schools. Therefore, most of the principals of the technical colleges lacked the essential managerial and technical skills, abilities and leadership qualities necessary for the smooth

management of the technical colleges (Enemali, 2000). Leadership issues such as communication, determination of rules and regulations and adherence to those rules and regulations constituted serious challenges for the principals. Consequently, there was weak control and coordination between principals and staff (Ihebereme & Obi, 2004). Ochu and Ochu (2002) and Ihebereme (2006) pointed out that communication gap between management and staff and between management and students could result to rumour mongering, deliberate lies and distortion. Where rumours are rampant in an educational institution, it leads to distrust and lack of confidence in group activity. As regards technical colleges in the North-East Geo-political Zone of Nigeria, if this situation prevailed and was left unchecked, it could degenerate into leadership crisis. There was therefore, the need to address it.

Purpose of the Study

The purpose of the study was to ascertain the level of effectiveness of administrators' leadership characteristics in technical college management.

Research Question

What is the level to which administrators' leadership characteristics are effective in technical college management?

Hypothesis

There is no significant difference in the mean scores of administrators, teachers and students on the level of effectiveness of administrators' leadership characteristics in technical college management

LITERATURE REVIEW

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 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 need for leadership in a school has been felt (Katz & Khan in Ocho, 1997). Kaltz and Khan gave four concrete reasons why an organization such as a school needs leadership. These reasons are the completeness of the organization design, changing environmental conditions, internal dynamics of organizations, and the nature of human membership in organizations. The authors argued that human behaviour is so variable that it is not possible to make provision for all contingencies, hence the incompleteness of the organization design. Similarly, organizations function in changing environments and their survival and effectiveness depend on their ability to change in line with environmental changes. An organization in operation is subject to various forms of imbalance arising from the need to maintain equilibrium, to grow, meet differing needs of subsystems within it or needs of individual members. Because of this, organizations are by design

internally dynamic. Furthermore, Kaltz and Khan argued that the need for leadership is felt because of the nature of human membership in organizations. In other words, the individuals that make up the membership of one organization belong to many different organizations and engage in activities and various other relationships. More so, individuals can also change in behaviour as a result of maturation, and increase in experience and age, hence the need for leadership.

In view of the fact that every organization needs leadership, the managerial and leadership characteristics of technical college administrators bear a lot on the way the technical colleges are managed. Poor demonstration of leadership characteristics affects the smooth operation of the technical colleges (Enemali, 2000). Similarly, poor communication and lack of an effective drive for adherence to school rules lead to weak coordination between a school administrator and his staff (Ochu & Ochu, 2002; Ihebereme & Obi, 2004). Where there is a breakdown in communication between a school administrator and staff, the outcome is rumour mongering, distrust and lies and distortion (Ihebereme, 2006). All these bear heavily on the leadership qualities of the school administrator.

Leadership has been perceived in several ways. Leadership “implies action and interaction with persons and things with a view to attaining a specific objective, sometimes planned in advance, sometimes at the heat of moment” (Okeke, 1986:119). Leadership means “the act of influencing the activities of others in a group towards goal setting and goal achievement” (Udoh, Akpa & Gang, 1997:52). Leadership, according to Stogdill in Ukeje (1999:13) refers to the process of “process of influencing the activities of an organized group towards goal setting and goal achievement.” It also means the “act of uniting and stimulating followers towards the achievement of particular goals in particular situation” (Aremu, 2000:68). Aremu added that the effectiveness of a leader chiefly depends on the suitability of the leadership styles leaders employ over the people. Tella (2002:2) saw leadership as “the process of influencing and directing a group towards achievement of given objectives.” In this connection, leadership in this work refers to the act of making others to perform their duties towards the achievement of the goals of technical colleges.

Okeke (1986:128) listed managerial and leadership characteristics of school administrators to include dedication, hard work, integrity and high quality outcome. Morphet, Johns and Reller in Ocho (1997) found that the following characteristics correlated significantly with leadership characteristics, among others: insight, initiative, cooperation, originality, ambition, persistence, and emotional stability. Ukeje (1999:15) buttressed this by listing the characteristics to include intelligence, self-confidence, initiative, achievement and responsibility. Reynolds and Teddlie (2000) held that five elements characterize an effective school administrator. The elements are stability, commitment to involving others, being instructive, providing frequent and personal control, and recruiting and replacing suitable personnel. Therefore, a school administrator achieves school goals better if he involves staff in the day to day running of the school and in providing effective leadership and control. Musaaazi in Oye (2002:72) listed the characteristics of leadership as dependability, friendliness, emotional stability, fluency of speech, alertness and insight into situations, self-confidence, knowing how to get things done, popularity, persistence, cooperativeness, intelligence, and achievement.

The list provided by Everard, Morris and Wilson (2004:23) reveals a wide range of other leadership characteristics of school administrators, as follows: Analytical thinking, impact and influence, developing potential, information seeking, personal convictions, respect for others, strategic thinking, team working, understanding people, and knowledge of the environment. These leadership characteristics go to demonstrate to a large extent the qualities school administrators possess in managing their schools. It is possible for administrators to not possess all these

characteristics. However, because leadership is one of the very vital and yet difficult human endeavours, it is important for the administrators to possess quite a number of these characteristics. A conscious and a wise application of some of the characteristics have the tendency to lead to administrator success.

METHODOLOGY

The study employed descriptive survey research design. The North-East Geo-political Zone of Nigeria, being the study area, comprised six States, namely, Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe State. The North-East zone is located between latitude 9° - 14° E and longitude 11° - 14° N (Abdullahi & Musa, 2004, Nigeria Latitude and Longitude, 2012). The Zone had a total of 33 State-owned technical colleges. A 13-item questionnaire, designed by the researchers, based on existing literature, was used to collect data from a sample of 390 respondents, made up of 75 administrators, 135 technical teachers and 180 students.

The items in the questionnaire treated on a five-point scale 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 validated the instrument which was then trial-tested on 20 respondents drawn from technical colleges outside the study area. The test re-test method was used in estimating the reliability of the instrument by means of the Pearson Product Moment Correlation Coefficient (ρ). The Pearson (ρ) was found to be 0.81. Mean (\bar{x}) and standard deviation ($\bar{\sigma}$) 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). The true limits of real numbers were used in effecting decision where a mean score (\bar{x}) of 3.50 and above was considered “effective” and a mean score of less than 2.50 was considered “ineffective”. Mean scores ranging 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

What is the level to which administrators’ leadership characteristics are effective in technical college management?

The data collected to provide answer to this research question are presented in Table 1.

Table 1: Mean and Standard Deviation of Responses of Administrators, Teachers and Students on the Level to Which Administrators' Leadership Characteristics are Effective

S/N	Items	Administrators $n_A=75$		Tech. Teachers $n_T=135$		Students $n_S=180$		Grand Mean \bar{X}_G	Remarks
		\bar{X}_A	$\bar{\sigma}_A$	\bar{X}_T	$\bar{\sigma}_T$	\bar{X}_S	$\bar{\sigma}_S$		
1.	Influence	3.95	1.19	3.73	1.28	3.45	1.33	3.64	Effective
2.	Dependability	3.43	1.53	3.82	1.25	3.08	1.45	3.41	Mod. Effect.
3.	Responsibility	3.61	1.25	3.28	1.25	2.45	1.27	2.96	Mod. Effect.
4.	Friendliness	3.80	1.25	3.62	1.26	3.18	1.57	3.45	Mod. Effect
5.	Emotional stability	3.77	1.19	3.27	1.33	3.31	1.32	3.39	Mod. Effect.
6.	Fluency of speech	3.93	1.19	3.73	1.13	3.35	1.48	3.59	Effective
7.	Initiative	4.08	1.12	3.44	1.36	3.52	1.49	3.60	Effective
8.	Integrity	3.72	1.09	3.53	1.39	3.17	1.39	3.40	Mod. Effect.
9.	Cooperation	3.83	1.27	3.13	1.42	3.01	1.11	3.21	Mod. Effect.
10.	Intelligence	3.69	1.13	3.29	1.54	3.34	1.31	3.39	Mod. Effect.
11.	Persistence	3.67	1.23	2.71	1.41	3.33	0.98	3.18	Mod. Effect.
12.	Personal conviction	3.87	1.25	3.62	1.18	3.26	1.60	3.50	Effective
13.	Achievement	3.65	1.21	3.39	1.49	3.08	1.38	3.29	Mod. Effect.
Grand mean		3.77		3.43		3.39		3.47	Mod.Ef.

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

The grand means of the results range between 2.96 and 3.64. Out of the 13 items in the table, four were rated effective by respondents. They are items 1, 6, 7 and 12. The remaining nine items, that is, 2, 3, 4, 5, 8, 9, 10, 11 and 13 were rated moderately effective. The overall grand mean of the table is 3.47. This result shows that leadership characteristics of administrators of technical colleges in the North-East Geo-political Zone of Nigeria are moderately effective. The standard deviation of the mean scores of the responses of the respondents ranged between 0.98 and 1.60. The deviation scores show that the response scores of the respondents are closer to the mean. That is, the

respondents vary more closely in opinion regarding the leadership characteristics of technical college administrators.

Test of Hypothesis

There is no significant difference in the mean scores of administrators, teachers and students on the effectiveness of administrators' leadership characteristics in technical college management.

The data which tested this hypothesis are presented in Table 2.

Table 2: Analysis of Variance (ANOVA) Test for Comparing the Mean Scores of Responses of Administrators, Teachers and Students on the Effectiveness of Administrators' Leadership Characteristics in Technical College Management

Sources of Variation	df	Sum of Squares	Mean Squares	F-cal	F-critical	Significance	Decision
Between Means	2	2.17	1.09	16.89	3.26	S	Reject
Within Means	36	2.32	0.06				
TOTAL	38	4.49					

At degrees of freedom (df) 2 and 36 and level of significance 0.05, the calculated value of F (F-cal) is 16.89. This is much higher than the critical value (F-crit) of 3.26. This result shows that there is a significant difference in the mean scores of administrators, technical teachers and students on the effectiveness of administrators' leadership characteristics in technical college management. Therefore, the null hypothesis, H_{01} , is rejected. However, in order to determine which respondent group was responsible for the significant difference in the mean scores of respondents, a Post-hoc test using Scheffe was carried out. The result of the test is presented in Table 3.

Table 3: Scheffe's Pair-wise Comparison on the Mean Scores of Responses of Administrators, Teachers and Students on the Effectiveness of Administrators' Leadership Characteristics in Technical College Management

Pairing type	Df	F _s	F prime (F')	Result
Admin vs Tech. teachers	2	6.49	6.52	$F_{s1} < F'$
Admin vs Students	2	18.4	6.52	$F_{s2} > F'$
Tech. teachers vs Students	2	3.24	6.52	$F_{s3} < F'$

The result of the Scheffe test in Table 3 shows that administrators and technical teachers do not differ significantly in the mean scores of their responses as their Scheffe result, F_{s1} , of 6.49 is less than the F prime (F') of 6.52. Similarly, technical teachers and students do not differ significantly in

their mean scores as their Sheffe result, F_{S_3} , of 3.24 is less than F' . However, administrators and students differ significantly in their mean scores as their Scheffe result, F_{S_2} , of 18.4 is much higher than F' . Therefore, administrators are the respondent group that is responsible for the significant difference in the means scores of the responses of administrators, technical teachers and students on the leadership characteristics of technical college administrators. It can also be seen from the ANOVA table in Appendix L that the mean score of the responses of administrators is relatively higher than those of technical teachers and students.

FINDINGS OF THE STUDY

The results of the study revealed the following findings:

1. Four leadership characteristics of technical college administrators in the North-East Geopolitical Zone of Nigeria were effective, as evident in Table 2. They are influence, fluency of speech, initiative and personal conviction.
2. Eight leadership characteristics were found to be moderately effective. They are dependability, responsibility, friendliness, emotional stability, integrity, cooperation, intelligence, persistence and achievement.
3. A significant difference existed in the mean scores of administrators, teachers and students on the leadership characteristics of technical college administrators. A post hoc Scheffe test indicated that administrators were the respondent group responsible for the significant difference in the mean scores of respondents.

DISCUSSION OF FINDINGS

In Table 1, the study found that leadership characteristics of technical college administrators such as dependability, responsibility, emotional stability, integrity, intelligence and achievement were moderately effective. This finding indicates that there will be fairly low quality outcome in the technical colleges in which there is room for improvement in the leadership characteristics of the administrators. This is because dedication, emotional stability and integrity which Okeke (1986) saw as very crucial in school management towards the realization of the goals of the school are only moderately effective. In the same vein, the administrators are not likely to achieve much as vital leadership characteristics such as cooperation, persistence, emotional stability, intelligence and achievement advocated by Morphet, Johns and Reller in Ocho (1997) are only moderately effective. Furthermore, the finding which shows that cooperation as a vital leadership characteristic was only moderately effective points to the fact that the technical college administrators were not seriously attracting the cooperation of their staff to accomplish the goals of the college. Otherwise, Evarard and Morris (1999) had argued that the effectiveness of a school depends on the administrator collaborating with teachers to achieve a common and explicit vision. This finding is viewed by Enemali (2000) as poor demonstration of leadership which has the tendency to lead to breakdown in communication between School Heads and their staff. Where there is poor communication between School Heads and staff, the outcome is rumour mongering, distrust, lies and distortion (Ihebereme, 2006). This has the tendency to weaken productivity in the technical college system.

On the other hand, influence, initiative, fluency of speech and personal conviction were leadership characteristics that the study found to be effective. This finding agrees with the view of Udoh, Akpa and Gang (1997) who saw leadership as the act of influencing people's behaviour towards the achievement of group goals. This finding also agrees with what Aremu (2000) said that leadership deals with stimulating followers towards the achievement of the goals of the school. On

the whole, with these leadership characteristics being effective, Musaazi in Oye (2002) said there will be high quality outcome in the management of the technical colleges.

It was found from the result of the study that a significant difference existed in the mean scores of the responses of administrators, teachers and students on the effectiveness of administrators' leadership characteristics. A Scheffe post hoc multiple comparison test showed that administrators were the respondent group responsible for the significant difference. The finding of the study is supported by Bultz (n.d.) whose work found no significant relationship between teacher perception of principal leadership characteristics and students' achievement data. The study is also supported by the work of Lee (2011) which found significant differences in the opinions of managers and employees on the leadership characteristics of South African managers. On the whole, the differences in the opinions of respondents on leadership characteristics of technical college administrators found in this study go to explain, in the words of Lee, the sources of dissatisfaction or misunderstanding which are required to be addressed by the technical colleges or their regulatory bodies and proprietors.

CONCLUSION AND RECOMMENDATIONS

Technical colleges were established to give training and impart the necessary skills to individuals who shall be self-reliant and economically enterprising. However, management of the technical colleges in the North-East Geo-political Zone of Nigeria was an increasingly complex and precarious enterprise. The technical colleges were bedeviled by leadership and managerial challenges resulting in cases of student unrests. Consequently, the study examined the effectiveness of the leadership characteristics of technical administrators. Using descriptive statistics to analyze the data collected from a 13-item questionnaire, findings showed that technical college administrators' leadership characteristics were moderately effective.

The finding of the study implied that if the goals of the technical colleges must be realized, as spelt out in the National Policy on Education (FGN, 2004), administrators of the technical colleges need to improve upon their own personalities and leadership. If this is not the case, the technical colleges are likely to suffer some leadership crises. Consequently, the study recommended that administrators of the technical colleges need to improve on their administrative and leadership characteristics towards the effective management of the technical colleges, in the following areas, among others: responsibility, emotional stability, integrity, cooperation and intelligence. The study also recommended that a further study be carried out on the impact of administrators' leadership characteristics on technical teacher performance.

REFERENCES

- Abdullahi, A.S. & Musa, S.M. (2004) Baseline study on ground water utilization in Damaturu, Yobe State. *International Journal of Food and Agricultural Research*, 1 (1 &2), 132-140.
- Aliu, Y.O. (2001). New methods and techniques in education, management and decision making. In O. Nnoli & I. Sulaiman (Eds.) *Reassessing the future of education in Nigeria*. Abuja: ETF publication.
- Aremu, J.Y. (2000). The role of leadership in the teaching and learning in educational institutions. *Forum Academia: Multidisciplinary Journal of Education*, 2 (1 & 2), 65 – 80.
- Enemali, J.D. (2000). A study of implementing problems facing technical colleges in Northern Nigeria. *Journal of Teacher Education*, 8 (1 & 2), 221 – 229.
- eSchoolNews (2012). What makes an effective school principal? Retrieved December 23, 2012, from <http://www.eschoolnews.com/2011/08/04/what-makes-an-effective-school-principal/>
- Evarard, K. & Morris G. (1999). *Effective school management*. English Language Edition. London: Paul Chapman publishing Ltd. Retrieved December 24, 2012, from [http://www.icsei.net/icsei/2011/Full % 20 Papers/0043.pdf](http://www.icsei.net/icsei/2011/Full%20Papers/0043.pdf).
- Federal Republic of Nigeria (2004). *National policy on education*. Lagos: NERDC Press.
- Heyl, B. (1968). The Harvard pareto circle. *Journal of the History of the Behavioral Sciences*, 4 (4), 316-334.
- Ihebereme, C. & Obi, B. (2004). *The theory of social revolutions*. Asaba: Unique publishers
- Ihebereme, C. (2006). Constraints to the effective administration of secondary schools. *Knowledge Review*, 13 (8), 79 – 84.
- Musaazi, J.C.S. (1985). *The theory and practice of educational planning*. Owerri: New Africa Publishing Co. Ltd.
- Nigeria latitude and longitude (2012). Retrieved 15 November 15, 2012, from http://www.mapsofworld.com/lat_long/Nigeria-lat-long.html.
- Nworgu, B.G. (2006). *Educational research: Basic issues and methodology*. Ibadan: Wisdom Publishers

- Nzeako, C.U. (2008). Administrative constraints of principals in the implementation of educational policies at secondary school level in Awka Educational Zone of Anambra State. *Knowledge Review*, 17 (15), 53- 56.
- Ocho, L.O. (1997). Administration and leadership in education. In A.N.Ndu, L.O. Ocho & B.S. Okeke (Eds.). *Dynamics of educational administration and management*. Awka: Meks publishers Ltd.
- Ochu, A.O. & Ochu, A.N.O. (2002). Financial management in growing vocational and technical institutions in Nigeria. *Journal of Technical Education Research and Development*, 2, 32- 41.
- Okeke, A.N. (1986). *Administering education in Nigeria*. Ibadan: Heinemann Educational Books (Nigeria) Ltd.
- Okeke, B.A. (2001). New methods and techniques in education management. In O. Nnoli & I. Sulaiman (Eds.) *Reassessing the future of education in Nigeria*. Abuja: ETF Publication
- Okoro, O.M. (2006). *Principles and methods in vocational and technical education*. Nsukka: University of Nigeria Publishers.
- Olaitan, S.O., Nwachukwu, C.E., Onyemachi, G., Igbo, C.A. & Ekong, A.O. (1999). *Curriculum development and management in vocational/technical education*. Onitsha: Cape Publishers International Ltd.
- Oye, M.K. (2002). The role of leadership in the management of schools. *Journal of Educational Development*, 2 (1), 69-75.
- Parsons, T. (1951). *The social system*. Glencoe: Free Press.
- Reynolds, D. & Teddlie, C. (2000). The process of school effectiveness. In C. Teddlie & D. Reynolds (Eds.). *The International handbook of school effectiveness research*. London: Falmer Press.
- Tella, P.O. (2002). Influence of leadership and motivation on organizational productivity. *Teacher Education Today: Journal of the Committee of Provosts of Colleges of Education in Nigeria*, 2 (1 & 2), 1 – 11.
- Toscanyacademy (2013). List of approved technical colleges in Nigeria. Retrieved April 19, 2014, from <http://toscanyacademy.com/blog/education/listofapprovedtechnicalcolleges>.

- Udoh, S.U., Akpa, G.O. & Gang (1997). *Educational administration in Nigeria: Theory and practice*. Jos: Faculty of Education, University of Jos press Ltd.
- Ukeje, B.O., Okorie, N.C. & Nwagbara, U.A. (1992). *Educational administration: Theory and practice*. Abuja: Total Publishers Ltd
- Ukeje, B.O., Akabogu, G.C. & Ndu .A. (1992). *Educational administration*. Enugu: Fourth Dimension Publishing Co. Ltd.
- Wikibooks (n.d.) Communication theory/Social Systems. Retrieved April 4, 2014, from http://en.wikibooks.org/wiki/Communicationj_Theory/Social_Systems
- Yakubu, N.A. & Mumah, S.N. (2001). Enhancing technological growth by the identification of appropriate resource requirements in technical and vocational education (TVE) in Nigeria. *Journal of Engineering Technology and Industrial Applications*, 1 (1), 221 – 227.