CSCanada
Higher Education of Social Science
Vol. 12, No. 2, 2017, pp. 11-20
DOI:10.3968/9737

ISSN 1927-0232 [Print]
ISSN 1927-0240 [Online]
www.cscanada.net
www.cscanada.org

An Empirical Study of the Effects of Work Environment (Electric Power Supply) on Job Performance of Academic Staff in Nigerian Public and Private Universities

Michael Sunday Agba[a],*; Stephen I. Ocheni[b]

[a]Ph.D., Lecturer, Department of Public Administration, Faculty of Social Sciences, University of Calabar, Calabar, Cross River State, Nigeria.
[b]Ph.D., Professor, Faculty of Management Sciences, Kogi State University, Ayingba, Nigeria.
*Corresponding author.

Received 4 April 2017; accepted 9 June 2017
Published online 26 June 2017

Abstract

Boosting the job performance of academic staff in Nigerian tertiary institutions has remained a challenging managerial problem in the country. This study is an attempt to empirically examine the effects of work environment (with specific emphasis on electric power supply) on job performance of academic staff in public and private universities in Nigeria. Nigerian university system allows for government (public) and private ownership of universities under the regulatory guide of the National University Commission (NUC). One of the challenges facing Nigerian universities is infrastructure inadequacies (particularly electric power supply) fundamental to drive forward the system. This therefore, calls for a study of this nature to establish the effect(s) of this on the job performance of lecturers in the university system. In conducting the study, five research questions were designed to assess the regularity of electric power supply to offices of academic staff; establish whether the supply of electric power to the offices of academic staff is adequate and regular to create a conducive work environment; unravel the duties of academic staff which are dependent on the supply of electric power and establish the effects of electric power supply on the discharge of the duties of academic staff. Two hypotheses were also formulated to guide the study. The study adopted a survey design supplemented by other methods. A sample size of 300 respondents purposively selected from public and private universities was used as s basis for making inferences and generalisations. Data were generated through primary (questionnaire and observation) and secondary sources like textbooks, internet materials, journals articles, government publications, conference papers, newspapers and magazines. A questionnaire consisting of important questions was designed and administered. The responses from the questionnaires were coded and analyzed using descriptive method and the two hypotheses of the study were tested via Independent *T*-test statistical technique computed with the aid of the Statistical Package for Social Science (SPSS). Results revealed the existence of a significant positive relationship between regular and adequate electric power supply to offices and the job performance of lecturers in terms of teaching, research and administration. The study also revealed that work related factors like internet facilities, good library, conducive work environment, regular and good remuneration, training opportunities, regular promotion, access to affordable medical care, recognition/awards are significant determinants of the job performance of academic staff in Nigerian Public and Private Universities. It is therefore recommended among others that concerted efforts should be made by government and managers of Nigerian universities to ensure regular and adequate electric power supply in the system; and provide functional internet facilities, good library, regular and good remuneration, conducive work environment, training opportunities, access to well equipped and affordable medical care, regular promotion, recognition/awards since they are known to have positive effects on the effective performance of the duties of academic staff.

Key words: Work environment; Electric power supply; Job performance; University; Academic staff

Agba, M. S., & Ocheni, S. I. (2017). An Empirical Study of the Effects of Work Environment (Electric Power Supply) on Job Performance of Academic Staff in Nigerian Public and Private Universities. *Higher Education of Social Science*, *12*(2), 11-20. Available from: URL: http://www.cscanada.net/index.php/hess/article/view/9737
DOI: http://dx.doi.org/10.3968/9737

Copyright © Canadian Research & Development Center of Sciences and Cultures

INTRODUCTION

Higher educational institutions (tertiary institutions) in Nigeria are created to offer services significantly to the development and growth of the society (Udida, Bassey, Udofia, & Egbona, 2009). The National Policy on Education as cited in Olujuwon (2009), specified that, tertiary educational institutions in Nigeria are to attain the goals of contributing to national development through relevant high level manpower training; developing and inculcating proper values for the survival of the individual and the society; developing the intellectual capability of individuals to understand and appreciate their local and external environment; promoting and encouraging scholarship and community service, forging and cementing national unity and promoting national and international understanding and interaction; and acquiring both physical and intellectual skills, which will enable individuals to be self-reliant and useful members of the society. These goals depict that universities are to embark on teaching, research and development of programmes with minimum educational standards.

As conscience of society, mechanism for the provision of qualified manpower and the production of knowledge (Gibbons, 1998), universities outputs have received attention of scholars, government and researchers (Agba, 2007; Fashima, 2005; Prewitt, 2004; Saint, Hartnett, & Strassner, 2004; Sambo, 2002; Nwagwu, 1997). Principal in the attainment of the goals for establishing universities and other tertiary educational institutions are human, material and financial resources properly harnessed and mixed by appropriate authorities charged with the responsibility of running and managing tertiary institutions in Nigeria.

Importantly, the job performance of the human factor (academic and non-academic staff) in the university system is a key issue that has begged for government attention and scholarships. For instance, the concern for productivity especially in the Nigerian public sector has increased with intensity, culminating in the establishment of the National Productivity Centre under the Federal Ministry of Employment, Labour and Productivity (Umeh & Usman, 2000; Osoba, 1999). The National Productivity Centre has the mandate of stimulating productivity consciousness among Nigerian workers and to develop and supply the right technical solutions to productivity problems across all sectors of the national economy (Akinyele, 2007). At the level of the university system in the country, the National University Commission (NUC) is established to ensure quality assurance through accreditation of academic programmes.

Since the job performance of employees of universities especially academic staff is a strong factor in determining the extent to which the goals of teaching, research and public service are realized, creating an enabling environment such as sustained monetary incentives, and the provision of adequate and reliable power supply that will serve as motivational tools for all academic staff is a precondition for productivity enhancement in Nigeria. It has been observed that productivity in the Nigerian public sector despite reforms and institutional capacity building efforts has been on persistent decline (Eze, 1981; Nwachukwu, 1988). According to Ajayi et al. (2011, p.1), among the numerous problems confronting university in Nigeria is the poor job performance of some academic staff. As they further maintained, in recent years, stakeholders in the education industry complained about the job performance of academic staff in the Nigerian universities as some failed to demonstrate the dedication, commitment, devotion, punctuality, fairness, honesty and patriotism expected of them. This calls for research of this nature that would make useful recommendations on ways of reversing the trend. In the past, emphasis has been on monetary incentives (which this study does not intend to undermine) neglecting the importance of electric power supply in stimulating high job performance of academic staff in the university sector.

Regular and adequate power supply remains the driving force for socio–economic and technological transformation of every nation (Agba, 2010; Akpabio & Akpan, 2010). Unfortunately, despite huge capital investments in the sector, endowed energy resources of the country and reforms in the power sector, Nigeria consistently suffers from shortages of electric power supply (Akpan, 2005; Odiaka, 2006; Ogumodede, 2006; Okafor, 2008). Nigeria has repeatedly been experiencing the problem of incessant power outage; with the citizens and organizations already accustomed to living and operating several hours, days, weeks and even months without electricity (Okparaaocha, 2010). With a population of 170 million depending on a grossly insufficient and meager electricity of less than 2,000 megawatts (MW), every sector of the country is affected (Agba, 2010). This, according to Club De Madrid (2007), is a major barrier to growth and development in vast areas of the world.

Studies on the effects of the components of work environment (of which the electric power supply is one) on the job performance of academic staff seem contradictory. For instance, Durotolu (2000), in his study discovered a no significant relationship between work environment and academic staff performance. This is at variance with the findings of Hoy and Miskel (1989), Nkom (2000) and Aiyegbusi (2000), which demonstrated that work environment is a determinant of job performance of workers. Despite the above contradictions in findings, it is important to note that the possibility of the non- attainment or inadequate accomplishment of the teaching and research functions of lecturers due to infrastructural inadequacies have been raised by studies

Copyright © Canadian Research & Development Center of Sciences and Cultures

on organizational and workers performance (Akpan, 2012; Mbipom, 1999). This study is therefore conducted within this backdrop to examine the effects of work environment (electric power supply) on the job performance of academic staff in Nigerian public and private universities. The study is an attempt at clearing Irele's concern that "everybody knows about electricity in this country. But we don't reflect on the repercussion" (Irele, 2011, p.49) in terms of productivity, organizational and employee performance. The study stems from the human resource management assumption that in addition to monetary incentives, the provision of adequate and regular electric power supply and other infrastructure facilities are fundamentals in motivating academic staff for high job performance.

Research Questions

The following research questions are addressed in the study:

i How regular is the supply of electric power to the offices of academic staff in Nigerian public and private universities?

ii Is the supply of electric power to the offices of academic staff in Nigerian Universities satisfactory to create conducive work environment?

iii What responsibilities of academic staff in Nigerian Universities are dependent on the supply of electric power?

iv What effect(s) does regularity/irregularity of electric power have on the discharge of the duties of academic staff in Nigerian Universities?

v In what ways can regular and adequate power supply be ensured and job performance of academic staff enhanced in Nigerian Universities?

Hypotheses

The following hypotheses were formulated to guide the study:

Hypothesis I

H_0: Electric power supply to offices of academic staff in Nigerian universities has no significant influence on lecturers' output in terms of teaching.

H_1: Electric power supply to offices of academic staff in Nigerian universities has a significant influence on lecturers' output in terms of teaching.

Hypothesis II

H_0: Research output of academic staff in Nigerian universities is not dependent on electric power supply to offices.

H_1: Research output of academic staff in Nigerian universities is dependent on electric power supply to offices.

1. LITERATURE REVIEW

1.1 Empirical Review of Related Literature

In general terms, this chapter presents in a review form, relevant studies and contributions of several authors in electric power supply, job effectiveness of staff, and Nigerian university system. Existing literatures were thematically reviewed to provide a background knowledge and appraisal of variables under consideration in the research hypotheses and objectives of the study. The literatures reviewed also covered empirical and theoretical scholarships with a view to establishing the effects of electric power supply on the Job Performance of Academic Staff in Nigeria universities.

1.2 Overview of Tertiary Institutions in Nigeria

Nigeria's formal education system is composed of primary, secondary and tertiary education (Anyanwu, Oyefusi, Oaikhenan, & Dimowo, 1997). Education at each of these levels shows that human resources of any nation determine ultimately the character and pace of its economic and social development. Formal education is the major institutional mechanism for developing human skills and knowledge (Anyanwu, Oyefusi, Oaikhenan, & Dimowo, 1997) fundamental in transforming human and material resources for national development. Saint (2009), quoted World Bank Report on Higher Education in Sub-Saharan Africa, to the effect that, almost no one now doubts that modern economic and social development anywhere in the world is becoming more rather than less, skill intensive, and is requiring increasingly higher levels of education, technical competence and computer literacy. Saint further acknowledges that, higher education can now be justified as strategic investment in human capital formation that boosts productivity and enhances national economic competiveness.

Since primary and secondary education is outside the scope of this study, the review of literature is restricted to Nigerian tertiary institutions. The establishment of Yaba Higher College in 1932 marked the beginning of higher education in Nigeria. The aim was to produce "assistants" who would relieve colonial administrators of menial tasks (Olujuwon, 2009). Eight years after, the University College, at Ibadan was established in 1940. Following the growing need for higher education, regional universities in the then three regions (Northern, Eastern and Western) in the country were established. In the East, the University of Nigeria (1960), in the West the University of Ife (1961)—now Obafemi Awolowo University and in the North, Ahmadu Bello University, Zaria (1962). University of Ibadan was granted full-fledged university status in 1962. The University of Lagos was established in 1962 and as a city university; it offered courses in humanities, social sciences, medicine, law, and engineering and part-time programmes for workers (Olujuwon, 2009).

Copyright © Canadian Research & Development Center of Sciences and Cultures

University of Benin was established in 1970 thus bringing the number of Nigeria first-generation universities to six. Since this period (1970) for the mid-2005, the number of tertiary educational institutions has expanded to the point that Nigeria boasts of more institutions than South Africa although South Africa's tertiary education enrollments are higher. As at 2005, Nigeria had 23 private universities, which increased to forty-one (41) in 2010. Data released in 2010 shows that Nigeria boast of twenty-seven (27) Federal Universities, thirty-three (33) States Universities. Before the establishment of the nine universities by President Jonathan, the staff strength of the country's universities is 99,464 comprising of 27,394 academic staff and 72,070 non-teaching staff. Total students for enrolment in Nigerian universities as in 2009 is put at 1,096, 312 (Okojie, 2009).

Nigeria's higher education system operates annual academic session of two semesters and under normal circumstances this runs from October to June (Obasi, 2007). Although, in most cases; semesters in most federal and state universities are irregular due to crisis in the system. As Saint, Hartnett and Strassner (2004), put it, the potential of higher education systems in developing countries including Nigeria to fulfill the responsibility for establishing them is frequently thwarted by long standing problems of finance, efficiency, equity, quality and governance.

These challenges and others may have accounted for the paradigmatic shift which culminated in the establishment of private universities in Nigeria. According to Obasi (2007), the internal driving forces for private universities include the inability of public universities to cope with the increasing demands for admission; inability of the governments to fund expansion; the concomitant falling standards in public universities; frequent closure and unstable academic calendar due to staff and students' unrests. The external driving forces are rooted in the prevailing neo-liberal economic policies, globalization and the Information and Communication Technology (ICT) revolution all of which have affected higher education worldwide. For instance, as argued by Varghese (2004), in many centrally planned economies, the transition from state planning to market forces was associated with the expansion of the private sector in higher education. Nigeria's university system allows for public (federal and state) universities and private universities.

Fundamental to the survival and performance of the universities in Nigeria are a number of variables among which is the electric power supply, job performance of the human component in the system, funding of tertiary educational institutions, condition of service and infrastructure facilities. Many studies on job performance (Hackman & Odman, 2000; Sutermaster, 2000; McGregor, 1999; Vroom, 1990) reveal that skill, knowledge, motivation, attitude, autonomy, recognition, challenges, responsibility, supervision, environmental factors have impact on workers' job performance. With consistency to the focus of the study, it is rational to ask what role does electric power play in a society or work environment. To answer this question, takes us to the next section of this chapter.

The literatures reviewed in this section established the importance of tertiary institutions in fostering national development through teaching, research and national development. However, most did not point in a cogent form how the above objectives can be achieved. Although there studies which seem to point to the ways of enhancing job performance like Hackman and Odman, 2000; Sutermaster, 2000; Mcgregor, 1999; they are however, deficient on the grounds that they are foreign based without empirically related to the Nigerian situation.

2. IMPACT OF ELECTRIC POWER SUPPLY ON WORKERS' PRODUCTIVITY IN NIGERIA

Electricity is a basic necessity for human activity, socio-economic and technological development of every nation (Agba, 2010; Akpabio & Akpan, 2010). Thus, the importance of attaining a regular power supply has been at the core of developmental debate and governmental programmes in Nigeria. According to Okonkwo (2010), for millions of Nigerians and businesses, without access to electricity, the day finishes much earlier than in richer countries for lack of proper lighting. This applies to lecturers faced with inadequate and irregular power supply, thus, making the day's work to finish much early.

In relation to workers' productivity in Nigeria, electric power supply, when regular and adequate in terms of quality, allows workers to extend the length of time spent on production and hence on income producing activities. In terms of human capital development, it allows students and academic staff time to read or do other academic activities. More so, regular and satisfactory supply of electric power allow access to television and film, which open rural residents and workers to new information that can instill the idea of change and the potential for self-development (Agba, 2010).

Without doubt, constant power supply as well as the provision of other infrastructural facilities is the driving force of industrial development of any economy (Agba, 2010; Okafor, 2008). Alliance for Rural Electrification (2007), notes that, electricity allows for the installation of safety measures such as street lighting, security lighting, remotes alarm systems, electric fences, road signs and warning lights. More so, it improves the health conditions of workers including academic staff in Nigerian tertiary institutions by providing drinking water and lighting for medical centres where vaccines could be preserved, blood storage refrigerators could be installed, operations could be carried out with sterilization measures, diseases could be prevented by x-rays and pregnancies could be

Copyright © Canadian Research & Development Center of Sciences and Cultures

monitored by ecographies. This will help in creating a stable workforce empowered with the potentials for productivity and high job performance in the Nigerian university system (Alliance for Rural Electrification, 2007).

In a study conducted by Akpama, Okoro, and Chikuni (2008), it was discovered that in the Cross River State University of Technology, electric power is used by academic staff, students and the university community to power the following electrical appliances: air conditions, ceiling fan, computer, laptop, kettle, mobile phone charger, water heater, iron, printer, etc. These equipments are key factors in creating an enabling environment that permit workers to function effectively in their job given tasks. Opatolu (1995), expanded the point, by noting that, experience, conducive work environment, possession of teaching qualification, disposition, interest in the job, dedication and commitment, and others are important determinants in academic staff performance.

Considering the importance of electric power supply as a component of the work environment, its provision has become essential; thus, government investment in the power sector to boost the electric power supply. For instance, Table 1 below shows government capital investments in the National Electric Power Authority (now Power Holding Company of Nigeria-PHCN and in most recent time electricity distribution company by reason of the restructuralisation of the sector) between 1995-2001.

Table 1
Government Capital Investments in the National Electric Power Authority (NEPA) (1995 – 2001)

Year	Capital investments (N'Million)
1995	1,426.3
1996	1,179.2
1997	1,000.0
1998	2,700.0
1999	2,481.0
2000	22,292.8
2001	51,945.3

Source: CBN Annual Report. (2001). *Annual reports and statement of account*. Abuja: CBN. This report is cited in Ilori, B. (2004). *The role of government in the development of infrastructure* (p.10). Retrieved from http://www.cenbank.org/out/Publications/reports/occasionalpapers/RD/2004/Jos-02-3.pdf

Table 1 above shows among others the inconsistency in the budgetary allocation to the power sector with the highest financial commitment coming from the civil administration of Obasanjo in 2001. In attempt to improve the power sector of the country, the Obasanjo administration (1999-2007) invested about 16 billion US Dollars but with minimal performance; majorly, because of corruption, poor gas supply, poor settlement of electric bills, vandalisation of power installations, poor maintenance of power installations, etc. (Oladimeji, 2005; Ikechukwu, 2005; Johnson, 2007; Nwachukwu, 2007; Agba, 2007, 2010). As Costello (2001) cited in Dike (2004), succinctly notes, Nigeria has enough money to tackle its poverty challenges (energy poverty inclusive) if government can win the battle against corruption and mismanagement.

It is generally believed that, these problems have affected energy use per person in Nigeria compare to other African countries like Cameroon, Ghana, Egypt, Morocco, and Algeria. For instance, Table 2 below, shows a comparative analysis of energy use per person in nine African countries.

Table 2
A Comparative Analysis of Energy Use Per Person in Africa

Countries	Energy use per person (KWh/Cap/Year)
Cameroon	184
Nigeria	85
Ethiopia	21
Kenya	126
Tanzania	55
Uganda	38
Burkina Faso	29
Ghana	204
Senegal	114
Algeria	581
Egypt	900
Morocco	430
World Average	2106

Source: Young (2005). *UN-water and the United Nations world water assessment programme*. Presented at the xiith World water Congress. New Delhi, November 22-25, India.

The importance of the above analysis, for Nigerian universities like other Nigerians is that, Nigerian academic staff suffer from energy poverty compared to academic staff in other Africa countries; thus, affecting the quantity of energy consumed by person in the country.

3. METHODOLOGY

A survey design method was adopted to study the effects of work environment (electric power supply) on the job performance of academic staff in Nigerian universities. Data obtained were used descriptively and inferentially on the variables investigated.

The population of the study consisted of academic staff of selected from public and private owed Nigerian universities. In term of description, the population of the study consist of professors, Associate Professors, Senior Lecturers, Lecturers 1, II, Assistant Lecturers, and Research Fellows serving in the various academic departments and institutes of the two university type being studied. A total sample size of 300 academic staffs was purposively selected and this formed the basis for making inferences in the study. The purposive sampling technique used in the study was to ensure that stakeholders competent to fill the questionnaire were selected for the study. This approach enhances the quality and representativeness of data generated and the findings of the study.

Copyright © Canadian Research & Development Center of Sciences and Cultures

To ensure the content validity of the research instrument (questionnaire), the researcher compared the items raised in the questionnaire with the hypotheses and research questions of the study. Through this, the researcher was able to ensure that the research instrument covered the variables intended to be investigated in the study. To ensure the face validity, the research instrument was validated by pre-testing it among some academic staff in Nigerian universities. The research instrument was also subjected to the professional scrutiny of experts in research methodology for the purpose of boosting its content and face validity. Reliability (consistency of a measure, Osuala, 1982) was ensured by editing process of cross checking each questionnaire filled and retrieved.

Data from the questionnaires administered were presented in tabular form followed by a brief disquisition. The hypotheses of the study were tested using the *T*–Test statistical technique. The computation for the test of hypotheses was done with the aid of the computer software package: SPSS 16.0 for windows. SPSS stands for statistical package for social science (www.spss.com).

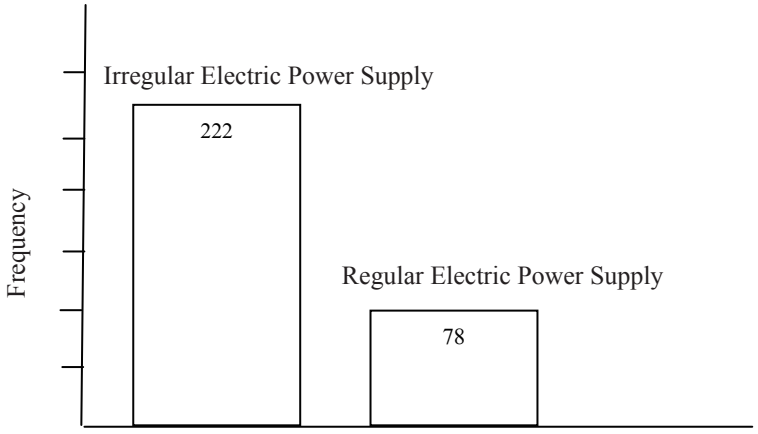

Figure 1
Regularity of Electric Power Supply
Source: Field Work, 2012.

The above finding is similar to that of Akpama, Okoro and Chikuni (2008). According to them, since the inception of the Cross River State University of Technology the institution is still battling with energy crises. As succinctly observed by one of the respondents, monumental corruption on the parts of those who run the system, lack of vision and bankruptcy of ideas on the part of the managers of the system are some of the reasons for the incidence of poor and irregular power supply in Nigerian public universities. If infrastructural facilities like electric power supply are the sinews for effective productivity in Nigeria, then the authorities of Nigerian universities must address the problem of short supply of electricity in the system.

4. TEST OF HYPOTHESES

4.1 Hypothesis I

Null hypothesis (H_0): Electric power supply to offices of academic staff in Nigerian universities has no significant influence on lecturers' output in terms of teaching.

Alternative hypothesis (Hi): Electric power supply to offices in Nigerian universities has a significant influence on lecturers' output in terms of teaching.

Decision rules: Reject H_0 if calculated value of Independent *T*-test > critical *T*-value, otherwise, retain H_0 if calculated Independent *T*-value < critical *T*-value.

Table 3
Summary of Independent *T*-test Analysis of the Influence of Electric Power Supply on Lecturers' Output in Terms of Teaching

Variable	*N*	*X*	*SD*	*T*
Teaching output of lecturers who have irregular electric power supply in their offices	222	17.39	0.22	2.724*
Teaching output of lecturers who have regular electric power supply in their offices	78	18.51	0.38	

Note. *Significant at 0.5, *df* = 298, critical *t* = 1.96.

Results of analysis in Table 3 show that, the calculated Independent *T*-test value (2.724*) of the influence of electric power supply on lectures' output in terms of teaching was in absolute terms greater than the critical *T*-value of 1.96 at .05 levels of significance with 298 degrees of freedom. More so, the mean (18.51) and standard deviation (0.38) values of the influence of regular electric power supply on lecturers' output in terms of teaching were greater than the mean (17.39) and standard deviation (0.22) values of the influence

Copyright © Canadian Research & Development Center of Sciences and Cultures

of irregular electric power supply on teaching output of lecturers.

These results implied that there is a significant influence of electric power supply on lecturers' output in terms of teaching. From the foregoing, the null hypothesis which states that electric power supply to offices in Nigerian universities has no significant influence on lecturers' output in terms of teaching is rejected since the calculated Independent *T*-test value of 2.724* is greater than the critical *T*-value of 1.96 at 0.5 level of significance with 298 degrees of freedom. The alternative hypothesis to the effect that electric power supply to offices in universities influences the teaching output of lecturers is accepted. This corroborates Ozor's remarks that infrastructural facilities are the sinews for effective productivity in Nigeria (Ozor, 2004, p.38).

4.2 Hypothesis II

Null hypothesis (H_0): Research output of academic staff in Nigerian universities is not dependent on electric power supply to offices.

Alternative hypothesis (H_i): Research output of academic staff in Nigerian universities is dependent on electric power supply to offices.

Decision rules: Reject H_0 if calculated value of Independent *T*-test > critical *T*-value. Otherwise, retain H_0 if calculated Independent *T*-value < critical *T*- value.

Table 4
Summary of Independent *T*-test Analysis of the Influence of Electric Power Supply on the Research Output of Academic Staff in Universities

Variable	*N*	*X*	*SD*	*T*
Research output of academic staff who have irregular electric power supply in their offices	222	16.18	2.21	6.177*
Research output of academic staff who have regular electric power supply in their offices	78	18.80	3.05	

Note. Significant at .05, *df* = 298, critical *t* = 1.96.

Table 4 indicates that the research output of academic staff in Nigerian universities is dependent on electric power supply to offices. This is because, the calculated Independent *T*-test value of 6.177* far exceeded the critical *T*-value of 1.96 at .05 levels of significance with 298 degrees of freedom. This finding is further strengthened by the fact that in Table 4, the influence of regularity of electric power supply to offices on research output of lecturers was higher by the values of calculated mean (18.80) and standard deviation (3.05) than the mean (16.18) and standard deviation (2.21) of the influence of irregular electric power supply on research output of academic staff. By the above analysis, the null hypothesis which states that research output of academic staff in Nigerian universities is not dependent on electric power supply to offices is rejected while the alternative hypothesis is accepted.

From the questionnaire analysed, respondents agreed that academic staff are employed to develop the human capital of the country through teaching and training; to conduct research for national development and render community service. They are also of the opinion that while the discharge of the first two responsibilities is largely dependent on electric power supply to offices of lecturers, the performance of the later (community service) is not too dependent on regularity of electric power supply. Most of the respondents, especially from Nigerian public universities noted that, electric power supply to their offices is irregular and inadequate. Consequently, in question 11 of the research instrument, they observed, that, electric power supply to their offices have not created conducive work environment. The responses from private universities are quite different with regard to questions 10 and 11 of the research instrument. For instance, most lecturers from the private university sectors especially from the western region of the country observed that, there is regular and adequate supply of electricity to their offices and that this satisfactory provision has created conducive work environment for them. With regards to question 10 of the research instrument, respondents from public universities in the middle belt of the country indicated that electric power supply to offices of academic staff is between 6-7 hours. Despite this, respondents still maintained that they were not satisfied with the present supply of electric power probably because they wanted a supply of electric power that is above 6-7 hours; as this will stimulate and create conducive work environment for academic staff. As argued by Agba (2015), energy poverty/crisis has the tendency of reducing the quality of community services offered by universities; timely released of semester results of students and official mails; teaching and research outputs of academic staff, etc.

In question 14, most respondents are in agreement that the provision of regular and adequate electric power supply in the university should be complemented with good condition of service to avert poor job performance. Part of the effect of electric power supply on academic staff is captured in the responses from questions 22 and 24. Essentially, as stated by the respondents, electric power supply when regular and adequate, enables academic staff to spend long hours attending to academic responsibilities. One respondents particularly notes that the once electric power supply is regular and adequate, browsing and typing essential documents will become easy and faster. Furthermore, infrastructural facilities are tools of motivating academic staff as this may possibly engender commitment, dedication, and devotion to work. Good work attitude is likely to be manifested by

Copyright © Canadian Research & Development Center of Sciences and Cultures

lecturers when infrastructural facilities are adequate and functional.

The responses gathered from questions 25 and 30 of the research instrument were fundamental in further identifying the effects of electric power supply on job performance of academic staff in both public and private universities. As observed by one of the respondents, electricity is not a luxury but a necessity. According to the respondents, electric power supply increases the speed and promptness with which lecturers carry out assigned tasks. On the other hand, irregular and inadequacy of it, cause delay in job completion of lecturers. Other positive effects identified are:

i Electric power supply is a motivational tool as it allow access to information fundamental in getting academic tasks done on time thus increasing job satisfaction among academic staff in the university;
ii Electric power supply helps in boosting research outputs and enhances the use of multimedia techniques for lecture delivery;
iii The quality of teaching is dependent on electric power supply since modern teaching technique depend largely on electricity and internet facilities;
iv Electricity makes room for longer time to be spent on research related activities both in offices and home.

One of the respondents succinctly summarized the effect of electric power supply on his job performance thus:

> The availability of or regular supply of electricity increases my effectiveness and efficiency as an academic staff. It increases my zeal or urges me to work longer and get more satisfaction and comfort as I work.

In support of the above, another respondent puts the effect of electric power supply on his job performance, thus:

> In this ICT age, power is needed to keep basic equipment like laptops running and without this, it is difficult to work. The offices are poorly ventilated and without the fans working I can hardly settle down to work.

With the above findings, it is therefore not surprising when some of the respondents further identified the following as some of the effects of irregular and inadequate electric power supply in the university system:

i It slows down academic activities by making teaching and learning cumbersome;
ii It leads to work ineptitude and unfriendly work environment that affects the morale of workers;
iii Reduction in research output of academic staff;
iv It tasks the meager financial resources of academic staff who must source for extra source of electricity to do his work;
v It leads to work boredom by making work boring;
vi Makes completion of examination officers' work to be delayed and
vii Retards academic progress; damages electrical appliances in offices and increases the cost of production.

RECOMMENDATIONS

The recommendations of this study if implemented have the potential of improving the job performance of academic staff in the areas of teaching, research, community service and administration as well as enhance the efficiency of the university system. Importantly, the following recommendations are also made to correct the negative effects created by the ineffective performance of the structures established to provide electric power supply in Nigerian universities. The following recommendations are made in the study: Since electric power supply to offices in Nigerian universities has significant and positive effects on academic staff job performance in terms of teaching, there is need to explore effective and reliable means of electric power supply to lecturers' offices. To get this done, there is need for government (at federal and state levels) and the university authorities of public and private universities to invest in the purchase of electrical plants that will complement the power supply from Power Holding Company of Nigeria (PHCN) (Agba, 2015) and Electricity Distribution Companies as its now called.

The study also recommends that, the management of public and private universities faced with the problem of irregular and inadequate power supply caused by vandalisation of electrical installations should put in place security measures through which vandalisation of electrical installations can be forestalled. This could be achieved by posting security men around electrical installations and partnering with security agencies in the country to ensure the safety of electrical installations. By so doing, the irregular and inadequate electric power supply arising from vandalisaiton of electrical installations can be prevented (Ibid.). Thirdly, other motivational factors and incentives that are capable of enhancing the job performance of academic staff in the area of teaching research, community service and administration should be provided by appropriate authorities. In this regard, government and management of universities should provide regular and good salaries to lecturers, create conducive work friendly environment, internet facilities, regular promotion; training opportunities; good library, medical facilities, accommodation, recognition and reward and effective communication channel that will motivate lecturers to improve their performance at work. To do this, government and universities authorities will have to honour agreements with Academics Staff Union

Copyright © Canadian Research & Development Center of Sciences and Cultures

of Universities (ASUU) and other unions in tertiary institutions in Nigeria.

It is also recommended in the study that to ensure the regular and adequate power supply that will increase teaching, research and administrative outputs of lecturers, there is need to tackle the problem of corruption that has plagued the energy sector in the country. This can be achieved through strengthening the anti-corruption campaign in the country by bringing to book all corrupt public officials. Put differently, the search light of anti-corrupt agencies like the Economic and Financial Crime Commission (EFCC) should honestly be beamed on the activities/expenditures of the power sector and public universities (Ibid.). Furthermore, cultivating an effective and regular maintenance culture will go a long way in ensuring electric power supply to offices and by so doing provide conducive work environment that will improve the job performance of academic staff in Nigerian universities; and finally the study recommends that Nigerian universities should invest on cost saving energy sources like solar and wind. If funds are prudently invested in alternative energy sources, it will help boost the electric power supply to lecturers' offices as well as enhance their job performance.

REFERENCES

Agba, A. M. O. (2007). *External factors in industrial crisis: A study of higher institutions in cross river and Akwa-Ibom State, Nigeria* (Unpublished Ph.D dissertation). The Department of Sociology, University of Calabar, Calabar, May.

Agba, M. S. (2010). Combating corruption for sustainable developmental growth in Nigeria: Exploring the Paradigm of Divine Option. *International Business and Management, 1*(1), 16 -21.

Agba, M. S. (2010). *Implementation of energy policy in Nigeria: Implications for energy poverty and sustainable development in Kogi east senatorial district.* Being a Seminar paper presented to the Department of Public Administration, Kogi State University, Anyigba as Partial Requirement for the Award of Ph.D in Public Administration.

Agba, M. S. (2015). Electric power supply and work performance of academic staff in Nigerian universities: A synergy analysis. *Indian Journal of Commerce and Management Studies, VI* (1), 33-44.

Aiyegbusi, J. T. (2000). Communication of effective classroom instruction. *Journal of Business and General Studies, 1*(1), 31-35.

Ajayi, I. A., et al. (2011). Work environment as correlate of academic staff job performance in South West Nigerian universities. *European Journal of Educational Studies, 3*(1), 1-9.

Akinyele, S. T. (2007). A critical assessment of environmental impact on workers productivity in Nigeria. *Resource Journal of Business Managements,* (1), 50-61.

Akinyele, S. T. (2007). Need satisfaction: An effective tool for workers commitment to work. *Resource Journal of Business Management, 2*(1), 72-79.

Akpabio, E. M., & Akpan, N. S. (2010). Power supply and environmental sustainability in the university of Uyo: An agenda for full blown research in Nigeria. *Journal of African Studies and Development, 2*(6), 132-143.

Akpama, E. J., Okro, O. I., & Chikuni, E. (2008). *Energy audit/ assessment in the Cross River university of technology, Calabar, Nigeria.* Retrieved 2011, February 21 from http:www.active.cput.ac.za/energy/web/…/paper%20 -%20 Akpama%20E.pdf

Akpan, C. (2012). Resource management and job involvement among universities lecturers in South-South Nigeria. *European Journal of Business and Social Sciences, 1*(8), 12-22.

Akpan, T. (2005). Deregulating the Nigeria power sector: The case of privatization. *South-South Journal of Cultures and Development, 7*(1), 87-108.

Alliance for Rural Electrification. (2007). *Uses of electricity.* Retrieved from http://www.ruralelec.org/18.0.htm?& L = O

Anyanwu, J. C., Oyefusi, A., Oaikhenan, H., & Dimowo, F. A. (1997). *The structure of the Nigerian economy (1960-1970).* Onitsha: Joanee Educational Pub.

Awah, I. S., & Agba, A. M. O. (2007). *Stimulating tertiary institutions for sustainable development through proper funding and grant of full autonomy.* A paper presented at the 4th Annual National Conference of the Association of Encouraging Qualitative Education in Nigeria, Held at Federal College of Education (Technical), Asaba, Delta between 14-16th May, 2007.

Central Bank of Nigeria. (2001). *Annual report and statement of account.* Abuja: CBN.

Dike, V. (2011). *Reward systems, workers morale and productivity.* Retrieved 2011, January 29 from http://www. nigerdeltacongress.com/articles/reward_ systems_work_

Dike, V. E. (2004). *Managing the challenges of corruption in Nigeria.* Retrieved from http://www.nigerdeltacongress.com

Durotulu, A. O. (2000). *Administrative environment as a factor of academic staff performance in college of education in Kwara State, Nigeria* (Unpublished Ph.D. dissertation). University of Ibadan, Ibadan, Nigeria.

Education Right Campaign. (2006). *Education in Shambles: Arrest the decay, a clarion call on students, workers and youths for a rescue mission.* Retrieved 2009 April 16 from http://www.nigeriasolidarity.org

Eze, N. (1981). *Motivation and work productivity among Nigerian workers.* Paper presented at the First National Workshop on Organizational Behaviour and Management Held at the University of Ibadan, May 24- 27.

Fashima, D. (2005). Reforms in Nigeria university system: What direction? *National Freedom, 1*(6), 9-12.

Gambari, A. I., & Okoli, A. (2007). Availability and utilization of Information and Communication Technology (ICT) facilities in higher institutions in Niger State, Nigeria. *Information Technology, 4,* 34-46.

 Copyright © Canadian Research & Development Center of Sciences and Cultures

Gibbons, M. (1998). *Higher education relevance in the 21st century*. Prepared for the UNESCO World Conference on Higher Education. Paris: Association of Commonwealth Universities.

Hackman, J. R., & Odman, G. R. (2000). *Work redesign.* Addison-Wesley: Leading Mass.

Hoy, W. K., & Miskel, C. G. (1989). *Educational administrtation theory, research and practice.* New York: Randon House Inc.

Idoko, C. (2011, August 12). Nigerian varsities' academic staff weak-NUC boss. *Tribune*. Retrieved 2013, March 6 from http://www.tribune.com.ng/index.php/news/26551-Nigerian-academic-staff-weak-nuc-boss

Ikechukwu, O. (2005, June 17). Beyond service charters. *New Age*.

Ilori, B. (2004). *The role of government in the development of basic infrastructure.* Retrieved from http://www.cenbank.org/out/publications/ occasionalpapers /RD/2004/Jos-02-3

Irele, A. (2011, January 30). Interview with professor AbiolaIrele. *The Nation*.

Johnson, B. (2007, May 21). Odds against Yar'Adua. *The News*.

Mbipom, G. (1999). The challenges and realities of effective financing and administration of functional universities in Nigeria. *Nigerian Education Journal, 2*(2), 260-261.

McGregor, D. (1999). *The professional manager.* New York: McGraw Hill Book Company.

Nkom, A. A. (2000). *Instructional communication for effective teaching in university Educatio.* Kaduna: BI Shaanu Publishing.

Nwachukwu, C. (2007, May 30). Vandalisation, gas shortages cause low power supply. *The Punch*.

Nwachukwu, C. C. (1988). *Management: Theory and practice.* Onitsha: Africana Fep. Publishers.

Nwagwu, C. C. (1997). The environment of crisis in the Nigerian education system. *Comparative Education, 33*(1), 87-95.

Obasi, I. N. (2008). *Private higher education and public policy in Africa: A contrasting case of Nigeria and Bostwana.* Germany: CuvillierVerlag Gottingen.

Obasi, I. N. (2007). Analysis of the emergence and development of private universities in Nigeria (1999-2006). *Journal of Higher Education in Africa (JHEA/RESA), 5*(2/3), 39-66.

Odiaka, P. (2006, August 24). Power sector reforms: Still a reign of blackout. *The Guardian*.

Ogumodede, O. (2006). *Consumers' expectations of service delivery of PHCN: A study of Lagos and Ibadan Metropolis* (Unpublished MBA theses). Owerri: Imo State.

Okafor, E. E. (2008). Development crisis of power supply and implications for industrial sector in Nigeria. *Stud Tribes Tribal, 6*(2), 83-92.

Okojie, J. A. (2009). *Quality assurance in the Nigerian university system.* Foundation Day Lecture Delivered by Executive Secretary, National Universities Commission at Caleb University, Lagos, January 21.

Okonkwo, C. (2010). *Root cause of Nigerian electricity woes 1: Issues and problems.* Retrieved 2011, February 16 from http://focusnigeria.com/nigerian-electricity-woes.htm

Okparaocha, C. (2010, March 8). Alternative sources: Panacea for Nigeria's Power Problem? *Nigerian Tribune*.

Oladimeji, T. (2005, July 20). More Billing Pains from NEPA. *New Age.*

Olujuwon, T. (2009). *Education in Nigeria: A futuristic perspective.* Retrieved 2009, May 22 from http://www.osds.uwa.edu.au/-data/page/37666/tola_oluguwon.pdf

Opatolu, J. O. (1995). Some salient aspects of instructional effectiveness in the teaching of physical education activities in junior and secondary schools. *The Nigerian Teacher, 4*(1), 26-34.

Osoba, A. M. (1999). *Productivity in Nigeria.* Proceedings of a National Conference. Ibadan: Productivity Prices and Income Board.

Osuala, N. C. (1981). *Introduction to educational research,* Ibadan: Heinemann Educational Books.

Ozor, E. (2004). *Public enterprises in Nigeria: A study in public policy-making in a changing political economy.* Ibadan: University Press.

Prewitt, K. (2004). Higher education, society and government: Changing dynamics. *JHEA/RESA, 2*(1), 35-56.

Rotimi, D. A. (2010, December 7). Covenant university: Vacancies for academic staff. *The Punch*.

Saint, W. (2009). Tertiary education and economic growth in Sub-Saharan Africa: The world bank report. *International Higher Education, 58,* 1-4.

Saint, W., Hartnett, T. A., & Strassner, E. (2003). Higher education in Nigeria: A status report. *Higher Education Policy, 16*(2), 259-281.

Saint, W., Hartnett, T. A., & Strassner, E. (2004). Higher education in Nigeria: A status report. *World Education News and Reviews, 17* (5), 1-13.

Sambo, A. A. (2002). The Nigerian education system: Brief history. *National Freedom, 1*(16), 8-9

Sutermaster, R. A. (2000). *People and productivity,* New York: McGraw Hill.

Udida, L. A, Bassey, U. U., Udofia, I. U., & Egbona, E. (2009). *System performance and sustainability of higher education in Nigeria.* Being a Paper Presented at the 11th International Conference of Educational Management Association of South Africa (EMASA), 7-9 August.

Umeh, E. O. C., & Usman, G. A. (2000). *Increasing productivity in Nigeria*. Proceedings of the 1st National Conference in Nigeria. Lagos: National Manpower Board.

Varghese, N. V. (2004). Patterns in ownership and operation of private higher education institutions. In N. V. Varghese (Ed.), *Private Higher Education.* Paris: IIEP.

Vroom, V. H. (1990). *Work and motivation.* New York: John Wiley and Sons Inc.

Young, G. (2005). *UN – Water and the United Nations world water assessment programm*e. Presented at the XIIth World Water Congress. New Delhi, November 22-25, India.

Copyright © Canadian Research & Development Center of Sciences and Cultures