Impact of Tetfund Infrastructural Facilities on the Academic Performance of Students of Abia State University, Uturu.

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Abstract
Educational infrastructural facilities constitute a very important factor in the proper functioning of any educational system and their availability to the students can influence their academic performance. The study investigates the impact of Tetfund as an intervention agency on infrastructural development in Nigerian Universities and its influence on the academic performance of Abia State university students. It is a descriptive survey carried out ex-post-facto. The population of the study consisted of 2,539 final year students in all the faculties of Abia State university uturu. Out of this population, a sample size of 762 students, that is 30%, was drawn using simple random sampling technique. A personally developed questionnaire tagged "Tetfund Infrastructural Impact and Student Academic Performance (TIISAPQ)" was used to collect data. The questionnaire items were validated and a reliability coefficient of 0.82 was obtained using Pearson product moment correlation coefficient statistic. Three research questions and one hypothesis were formulated for the study and data obtained were analyzed using mean and Pearson product moment correlation coefficient statistics. The findings revealed that there was a positive influence of infrastructural development on academic performance of students. Based on the findings, it was recommended that university administrators should ensure proper utilization of yearly fund allocation from tetfund on infrastructural development. There is the need for the admission of Abia State university students to be based on available infrastructural facilities.

Key words: Impact, Tetfund, Infrastructural development, Academic performance and University students

Introduction

The highest level of human capital development is trained at the apex of the educational system known as the university. The quality and efficiency of this human capital depends on the quality and quantity of infrastructural development in such institutions. Physical infrastructure is the bedrock of any university whether in developed or developing countries, for effective teaching and learning. The major essence of infrastructure in the education of students in higher institutions is to increase relevance, aesthetics, and staff motivation as well as improve on the academic achievement of students. The infrastructural development in higher education is complex and cost intensive. Thus, ensuring their quality and maintenance up to global standard is very challenging. Provision of stimulating learning environment and safety is a major consideration in infrastructural development (Uche, Okoli and Ahunanya, 2011).

In order to improve on the infrastructural status in Nigeria's educational institutions, a national donor agency known as Tertiary Education Trust Fund (TETFUND) became the substantial source of financial assistance to various educational institutions especially in the construction, completion or rehabilitation of capital projects embarked upon by those institutions. TETFUND was established as an intervention agency under the TETFUND ACT, 2011 and is charged with the responsibility of managing, disbursing and monitoring the education tax meant for public tertiary institutions in Nigeria. The law setting up the fund stipulates that 2% education tax be imposed on the profits of all registered companies in Nigeria.

Due to the commitment of the Federal government in revamping the higher education sector, most of the recent capital development projects in Nigerian institutions have been sponsored or financed by the fund and this is facilitated by the increasing inflow of funds over the years due to the efficiency of the Federal Inland Revenue Services (FIRS) in collecting the education fax fund.

Educational infrastructure constitutes an important factor in the proper functioning of any educational system and its availability to the students can influence their academic achievement. Ehiametalor (2001) sees infrastructure as the operational inputs of every instructional programme and constitutes elements that are necessary for teaching and learning. Hornby (2006) defines infrastructure as the basic systems and services that are necessary for an organization to run smoothly which include buildings, transport, water and power supplies.

Infrastructure in the context of this paper includes all physical facilities and materials, which facilitate and stimulate classroom teaching and learning aimed at achieving stated educational objectives. The influence of physical infrastructure cannot be underestimated as any university with well qualified and adequate teaching and non-teaching staff that lacks the much needed infrastructure will not be able to achieve it's stated objectives as such inadequacy will lead to loss of interest on the path of both staff and students due to poor learning environment.

Statement of the Problem

Infrastructural facilities are the essential tools with which activities and operations of an institution are carried out (Uche, Okoli and Ahunanya 2011). The decline in the standard and quality of Nigerian university education is one of the biggest challenges facing the nation for over two decades and has been a source of concern to stakeholders in the education sector. It has been observed by the researcher that high quality education was obtained in Nigerian universities in the seventies and early eighties. It was such that can be comparable to what was being offered by top class universities elsewhere in the world. However, rather than the quality of education continuing to appreciate, it has been depreciating due to a number of issues and challenges, mostly related to poor funding. Some of the challenges facing the public universities include inadequate lecture halls, hostels (and low standard of room atmosphere), light system, acoustics, furniture and sanitation. With enrolment explosion witnessed in the universities today, students are faced with poor living conditions, lack of equipment and materials as can be seen in the overcrowding of lecture theatres during lectures and examination periods. These points to the fact that inadequate infrastructure is one of the factors responsible for the decline in quality of education in Nigeria (Olagbemiro, 2010).

The effect of physical infrastructure on performance of Nigeria University students cannot be ignored as it affects the quality of students churned out of these universities, which in turn affects the nation's productivity. Inadequate physical facilities tend to affect the university teachers, hence their productivity is low. This perhaps is one of the causes of brain drain in the country as the teachers are discouraged. It is against this backdrop that this paper sets out to ascertain the impact of TETFUND on infrastructural development and academic achievement of university students in Abia State University, Uturu.

Three research questions were posed to guide the study. They are:
1. How adequate are the infrastructural facilities provided by Tetfund in Abia State University, Uturu?

2. To what extent does infrastructural facility provided by Tetfund influence the academic performance of students in Abia State University, Uturu?
3. Are these facilities adequately maintained?

One null hypothesis was formulated for the study thus;

H_O: There is no significant relationship in the opinion of students regarding the impact of Tetfund on provision and adequate maintenance of infrastructural facilities and students academic performance in Abia State University, Uturu.

Review of Related Literature

Physical infrastructure contributes directly or remotely to the teaching and learning process in the educational system (Uche, Okoli and Ahunanya, 2011). Akinsolu (2012) stated that the availability of adequate infrastructure is necessary for the attainment of educational objectives. Adeboyeje in Akinsolu (2012) corroborating this stated that availability of infrastructure determines the quality of instruction and performance of students. The brain being a physiological system can be stimulated both positively and negatively by it's surroundings (Chan and Petrie, 1998).

Researchers have proved that student's performance and academic achievements in examinations are correlated with infrastructural condition and quality (McGuffey, 1982; Earthman and Lemasters, 1998 in Naz, khan, Daraz, Rehman, Hussain and Alams, 2013). Anderson (1999) stated that provision of physical facilities to students school design, mapping and topography play a vital role in student's academic achievement and personality development that result in the enhancement of basic skills. Fakayede, Omotesho, Tsoho and Ajayi (2008) stressed that the insensitivity of the government to providing basic infrastructures may have informed the stress on the available ones of which maintenance is quite irregular, leading to eventual breakdown in many instances. This may have lead to loss of productive time and low productivity on both the part of teachers and students.

Poor academic performance of students in Nigerian universities could be as a result of poor teacher performance which have been attributed or linked to poor motivation at work (Ofoegbu, 2004). It has been observed that conditions that would have led to an improvement in the academic performance of students in universities including state of infrastructures in the institutions are poor (Oredein, 2000). This would negatively influence the psychological state of mind of both teachers and students thereby leading to lack of interest and commitment and ultimately result in low productivity of teachers and poor performance of students.

Castaldi (in Lawanson and Gede, 2011) stated that when a skillful teacher works in a well designed and highly functional college building with necessary instructional facilities, he/she is likely to achieve a higher level of instructional effectiveness than when those facilities are not provided.

Infrastructural availability has remained the focus of interest of academics and researchers. Earthman, Cash and Van Berkum (in Naz *et.al*. 2013) in their study found that students who study in standard buildings perform better in test scores than their counterparts in substandard buildings. Cash (1993) did a research in Virginia, USA on the Impact of building condition on students' academic achievement and found that infrastructural condition had a significant correlation with students' achievement with socio-economic factors remaining constant. Chan (1996) in his research on the impact of infrastructure on students' achievement in Georgia U.S.A after classifying the school environment into modern learning environment and obsolete learning environment found that students who learnt under the modern learning environment performed better than those in obsolete learning environment. He concluded that technology and adaptabilities of modern environment equipped students better for success in academics. Similarly, Lewis (2000) in his study in Milwaukee sampled 139 schools, which were tested across modern facilities to judge the effect of such qualities over students' learning and observed a positive impact of quality infrastructure on students' academic performance. Nwagwu (2004) opined that availability of quality and adequate infrastructure are very necessary for the accomplishment of any educational goals and objectives while Obasi (2005) observed that students become more focused in their academic pursuit with little or no supervision if the environment is conducive and facilities available for academic activities.

That notwithstanding, provision of infrastructural facilities directly influence the social and psychological development of the students thereby affording them the opportunity for the demonstration of their potential and emotional state. Such available physical facilities encourage students to be dynamic towards absorption of knowledge thereby improving their academic performance (Naz *et. al.*, 2013).

Method

The study employed a descriptive survey design carried out ex-post-facto. The population comprised of 2,539 (2012/2013) final year students in all the faculties of Abia State University, Uturu and thirty percent (30%) of the population was chosen as the sample. Thus, the sample consists of seven hundred and sixty two students (762) selected using both stratified and simple random sampling techniques. The choice of final year student's was because they have spent enough

time in the institution and therefore will be more experienced to respond objectively to the questionnaires. Data were collected using a researcher constructed questionnaire titled "Tetfund Infrastructural Impact and Student Academic Performance Questionnaires (TIISAPQ)". The questionnaire sought information on the impact of tetfund's infrastructural facilities on the academic performance of students. The instrument was structured in line with Likert's type four point scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagreed (SD).

The instrument (TIISAPQ) was subjected to face and content validity test by experts in Educational Administration as well as Measurement and Evaluation. The reliability of the instrument was tested using test-retest method and data collected were analyzed using Pearson product moment correlation coefficient statistic. A reliability coefficient of 0.82 was obtained. This was considered adequate for the study. Mean and Pearson correlation coefficient statistics were used to analyze the data collected.

Results

The data on impact of Tetfund's infrastructural facilities on the academic performance of Abia State university students are presented in tables one - four respectively.

Research question one: How adequate are the infrastructural facilities provided by Tetfund in Abia State university, Uturu?

In answering this question, the information elicited from the students on adequacy of infrastructural facilities was subjected to mean and pooled mean statistic. The result is presented in table 1.

Table 1: Mean Analysis of Adequacy of Infrastructural Facilities in ABSU.

S/N	ITEM SPECIFICATION	SA (4)	A (3)	D (2)	SD (1)	$\sum x$	$\overline{X}$	POOLED-MEAN	DECISION
1	Adequate classroom and furniture are provided.	200 / 800	289 / 867	165 / 330	119 / 119	2,116	2.80		Agreed
2	Adequate libraries and books are provided	100 / 400	125 / 375	314 / 628	223 / 223	1,626	2.13		Disagreed
3	Adequate hostels, staff quarters and furniture are provided.	130 / 520	115 / 345	365 / 730	269 / 269	1,864	2.44	2.59	Disagreed
4	Regular provision of water and power within the school compound.	210 / 840	305 / 915	78 / 156	169 / 169	2,080	2.73		Agreed
5	Adequate provision of ICT centers and facilities (electronic libraries)	174 / 696	368 / 1,104	136 / 272	84 / 84	2,156	2.83		Agreed

Decision range: Mean of 2.5 and above is positive while below 2.5 is negative.

Table 1 shows the opinion of the final year university students regarding adequacy in infrastructural provision at the university. They agreed that adequate classrooms and furniture are provided with a mean score of 2.80 but disagreed with the fact that adequate libraries and current books are provided with a mean score of 2.13. They also disagreed that adequate hostels, staff quarters and furniture are provided with a mean score of 2.44. However, mean score of 2.73 showed that the students agreed that there is regular power and water provision within the school environment. The students also agreed that there is adequacy in the provision of ICT centers and facilities with a mean score of 2.83.

The result showed a pooled mean of 2.59. This is positive and more than the decision range of 2.5 indicating that infrastructural facilities are adequately provided to the final year students of Abia State University for proper classroom teaching and learning.

Research question two: To what extent do the infrastructural facilities influence the academic performance of students in Abia State University?.

In order to answer this question, the information from the students on the influence of infrastructural facilities on their academic performance was subjected to mean and pooled mean statistic. This result is presented in table 2.

Table 2: Mean Analysis of Infrastructural Facilities Influence on Academic Performance of ABSU Students.

S/N	ITEM SPECIFICATION	SA (4)	A (3)	D (2)	SD (1)	$\sum X$	$\overline{X}$	POOLED MEAN	REMARKS
6	Provision of classrooms and furnitures enhance learning	206	346	106	104	2,178	2.86		Agreed
		824	1,038	212	104				
7	The current books provided assist students in research work	130	170	256	206	1,748	2.29		Disagreed
		520	510	512	206				
8	Provision of adequate hostels assist students in learning	174	160	238	190	1,842	2.42	2.63	Disagreed
		696	480	476	190				
9	Provisions of offices, land and staff quarters ensure access of students to lecturers for academic consultations.	183	151	263	165	1,876	2.46		Disagreed
		732	453	526	165				
10	Regular provision of electricity ensures that the students can read in the hostels or classrooms till late at night	286	347	67	62	2,381	3.12		Agreed
		1,144	1,041	134	62				

Decision range: Mean of 2.5 and above is positive while below 2.5 is negative.

Table 2 shows the responses of the students regarding the influence of infrastructural facilities on students' academic performance. The responses with a

mean score of 2.86 shows that students agreed that provision of classrooms and furniture enhances learning but disagreed that books provided were not adequate and could not assist them in their research work. Also, a mean score of 2.29 and 2.42 indicated that students disagree that provision of adequate hostels enhance their comfort thereby assisting them in learning as well as provision of offices, lands and staff quarters ensures their easy access to their lecturers for academic consultation. Moreover, the mean score of 3.12 shows that students agreed that regular provision of electricity ensure that students can study till late in the night, thereby enhancing their academic performance.

The result showed a pooled mean of 2.63 which is positive and more than the decision range of 2.5 indicating that adequate provision of infrastructural facilities has a positive impact on students' academic performance.

Research question three: Are the available infrastructural facilities adequately maintained?

In order to answer this question, the information elicited from the students on regular and adequate maintenance of available facilities was subjected to mean and pooled mean statistic.
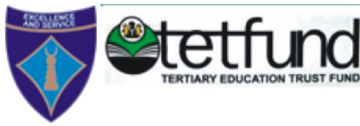
Table 3: Mean Analysis of Maintenance of Infrastructural Facilities

S/N	ITEM SPECIFICATION	SA (4)	A (3)	D (2)	SD (1)	$\sum X$	$\overline{X}$	Pooled mean	Remarks
11	The ICT centres and facilities (electronic libraries) are properly monitored and adequately maintained.	215 860	336 1,008	101 202	110 110	2,180	2.86		Agreed
12	Infrastructures are regularly monitored and adequately maintained	220 880	380 1,140	87 174	75 75	2,269	2.98		Agreed
13	There is regular supervision of other facilities	198 792	367 1,101	116 232	81 81	2,206	2.90	2.82	Agreed
14	Facilities are renovated to meet the modern standards and times.	150 600	320 960	133 266	159 159	1,985	2.60		Agreed
15	There are regular maintenance of hostels and staff quarters.	174 696	352 1,056	110 220	126 126	2,098	2.75		Agreed

Decision range: Mean of 2.5 and above is positive while below 2.5 is negative.

Table 3 shows the responses of the students on adequate maintenance of available infrastructural facilities in the institution. The responses with a mean score of 2.86 and mean score of 2.98 indicated that students agreed that the ICT centers and facilities are regularly monitored and adequately maintained. Also, the Mean score of 2.90 showed that students also agreed that there is regular supervision of these facilities. Moreover, facilities are renovated to meet modern standard and times as

well as regular cum adequate maintenance of hostels and staff quarters with a mean score of 2.60 and 2.75 respectively.

The result showed a pooled mean of 2.82, which is positive, and more than the decision range of 2.50 indicating that available infrastructural facilities are adequately maintained by the authorities thereby ensuring student security and comfort during classroom teaching and learning.

Hypothesis: There is no significant relationship in the opinion of the students regarding provision and maintenance of infrastructural facilities and students academic performance.

The above hypothesis was analyzed using Pearson's product moment correlation coefficient (r) statistic. The result is presented in table 4.

Table 4. Correlation Coefficient (Pearson) Analysis of the Relationship between Provision of Infrastructural Facilities and Students Academic Performance

ITEM SPECIFICATION	N	$\overline{X}$	STD	r	DECISION
Provision of infrastructural facilities	762	2.58	0.26	0.77	The two variables are related
Influence on the students performance	762	2.62	0.36		

Table 4 shows that (correlation coefficient between) provision of infrastructural facilities and students' academic performance is positively related (0.77). This shows that the level of infrastructural provision has equivalent impact on the level of students' academic performance. Consequently, the null hypothesis is rejected while the alternative hypothesis is accepted. This implies that there is a significant relationship between provision of infrastructural facilities and students' academic performance.

Discussion of Results

The findings of this study as presented in tables 1-4 show that there is a positive impact of provision of infrastructural facilities on the academic performance of students. This positive influence on students' academic performance indicates that infrastructural facilities are vital components of any educational institution and students' academic performance are correlated with adequate provision of infrastructural facilities.

Analysis of table one shows that there is adequate infrastructural facilities provision (pooled mean rating = 2.59). This has a positive influence on the learning output of students. The finding, thus, agree with that of Akinsolu (2012), who observed that the availability of adequate infrastructure is necessary for the attainment of educational objectives. It also agrees with that of Adeboyeje (in Akinsolu, 2012) who aver that availability of infrastructure determines the quality of instruction and performance of students. It is also pertinent to note however that Nwosu (2007) who observed that having sufficient state-of- the–art infrastructures but without effective instructional delivery leads to a total failure in the academic performance of students.

The findings of table two shows that availability of infrastructural facilities enhance improved academic performance of students (pooled mean rating = 2.63). The information elicited from the respondents tend to prove that infrastructural facilities ensures comfort of the students during teaching and learning thereby decreasing the level of isolation from school work, thus enhancing their academic performance. This agrees with the opinion of Nwagwu (2004) who maintained that availability of quality and adequate infrastructure are necessary for the accomplishment of any educational goals and objectives. It also agrees with the work of Obasi (2005) who observed that students become more focused in their academic pursuit with little or no supervision if the environment is conducive and facilities are available for learning. The finding also crroborates with the observation of Naz *et. al*. (2013) who stated that availability of infrastructural facilities is highly associated with good academic performance and personality development.

Analysis of data in table three showed that available infrastructure is being maintained adequately and regularly. This proves that the facilities are in good condition thereby ensuring adequate teaching and learning process. This agrees with the findings of Earthman et.al. (1996) who found that students who study in standard buildings perform better in test scores or examinations than their counter-parts in sub-standard and dilapidated buildings. It also supports the findings of

Chan (1996) who stated that students who learn under modern learning environment perform better than those who learn under obsolete learning environment.

Result from table 4 indicates that a positive relationship exist between infrastructural facilities and students academic performance. The findings show that academic performance of students is high in educational institutions where infrastructural facilities are provided and adequately maintained.

Recommendations

Based on the findings of the study, the following recommendations are made:

i. Administrators Abia State University should ensure that yearly allocation of funds from Tetfund is properly utilized in the construction and renovation of facilities in their institutions so as to create a better learning environment for the students.

ii. There should be adequate provision of modern books, ICT centers (e-libraries) to enable the Abia State university students improve their abilities and capabilities.

iii. Appropriate research environment through the provision of facilities, should be provided as the present age demands. This is to enable Abia State university students and lecturers meet up with current research challenges.

iv. Admission of students into various faculties in Abia State University should be based on the available facilities to avoid overcrowding, over use and pressure on the existing facilities leading to wear and tear and eventual breakdown.

v. Infrastructural facilities in Abia State University should be improved upon in term of quality during construction or renovation so as to improve their life span.

Conclusion

The study appraised the Tertiary Education Trust Fund (Tetfund) intervention on infrastructural provision and development in Abia State University, Uturu and found that Tetfund intervention was a veritable source

of infrastructural development. It is therefore, pertinent that this area of development be continuously encouraged so that the goals of tertiary education can be achieved, bearing in mind that effective teaching and learning is closely related to infrastructural availability. The result will lead to effective learning and better academic performance in Abia State University and by extension perhaps to other universities.

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