

# A Statistical Modelling of Institutional Facilities in Southwest States of Nigeria.

ONEMAYIN KOLAWOLE JOSEPH, RAJI YAKUBU MUHAMMED

Department of Statistics  
The Federal Polytechnic, Ado-Ekiti, Nigeria  
Corresponding email: onemayin\_jk@fedpolyado.edu.ng

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## Abstract

*This research paper sought to explain the statistical model of institutional facilities in southwest states of Nigeria, a primary data was collected using the method of questionnaire to investigate whether the institutions has the capacities to cater for the students admitted into the various institutions. A bar chart was used to represent the response from the students and also, correlation was used to check for the modelling of the institution facilities it was observed that the probability values of the tested variables are 0.000 which is less than the significance value (0.05), we can conclude that, there is a relationship between academic performance and institutional facilities in southwest states of Nigeria.*

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## I. INTRODUCTION

Education for any Nation is believed to be veritable machinery for the development of a country. This is obvious because of the roles played by educated people in the development of science, social- economic and political structure to improve the individual, families and making the society a better place to live. In the light of these values, education today must prepare the child to function effective as an adult to be, and these cannot be achieved without adequate school facilities.

As it is understood that tertiary education is an important wheel for the development and progress of a nation so the importance of educational facilities which play host to a large number of users with various needs as characterized by tertiary education facilities cannot be overemphasized (Hassanain and Mudhei, 2006). This study focuses on the facilities management in the Federal University of Technology, Minna in comparison with the state of the physical structures in the University.

Education, either formal or traditional exists in every society. However, the history of school facilities could be traced to the era of formal system of education. It equally changes with the system of education, even though, such other facilities like money and human resources are required. Over the years, enrolment into the secondary education has been on the increase, following series of educational programmes being introduced. One of such is the Universal Basic Education (UBE) scheme. Also, successive governments have and are still allocating an appreciable percentage of their annual budgets to the provision and maintenance of school facilities meant to improve the sector.

Good school facilities support the educational enterprises. Research has shown that clean air, good light and a small quite comfortable and safe environment are important for academic achievement (Cotton 2001).

While factors such as student socio – economic status and parental involvement are among the most important predictors of students' academic performance so also are school buildings district and state. Hence, improving school facilities offers a feasible opportunity for improving academic performance. This has brought with its attendant problems such as inadequate school facilities and consequently poor academic performance on students. Okeke (2009) acknowledged this situation when he asserted that with expansion of secondary schools in Nigeria, there has been a general cry about the standard of education in the country as a whole. Over the years, the performance of students has fallen in examination. This is to say that academic performance of most students were very poor. To achieve these goals, a lot needs to be done in the academic performance of school systems.

Students' academic performance appears to have been affected by a myriad of factors; these factors include school facilities and teachers' qualification just to mention a few (Steward 2006).

## **II. STATEMENT OF THE PROBLEM**

For smooth teaching and learning process, inadequate facilities will really be a great obstacle in all schools; everyone knows that academic performance of each student is depending on facilities exposed to while learning, but when they are lacking, some problems are faced. In any institution students, there are variations in their academic performance.

Researchers have been trying to find out how these variations come about and what are responsible for them, the major factor that seems to contribute to poor academic performance is inadequate provision of educational facilities in the institutions. The researcher tends to investigate the statistical modelling of institutional facilities in southwest states in Nigeria.

## **III. REVIEW OF RELATED LITERATURE**

The primary purpose of the teaching and learning process is to bring about desirable change in the learner's behaviour through critical thinking. This process does not take place in a vacuum but rather in an environment structures to facilitate learning. Olaleye (2011) observed that for proper teaching and learning to take place, there must be adequate infrastructure. However casual observation reveals that in many public tertiary institutions in Nigeria, the lecture halls are overcrowded and many of the students stay outside because of inadequate accommodation. Several studies have shown that a close relationship exists between the physical environment and the academic performance of students. Ajayi and Ayodele (2001), in their study proved that adequate supply of instructional resources has significant effects on students' performance and enhances the effectiveness of instructional delivery and supervision, such instructional facilities include lecture rooms, office accommodation, laboratories, workshops, sporting facilities, equipment in libraries, and so on.

Maintenance, on the other hand can be defined as a combination of any actions carried out to retain an item in or restore it to an acceptable condition (Lee, 1981; ICE, 1983; Davis, 1986, Lee; 1987). Maintenance, be it periodic, preventive or routine serves the primary purpose of preventing the premature failure of the facility and restoring it to its initial status or at least to a level comparable to its initial condition. (Bokinini, 2006). It is however appreciated that a gap continues to emerge throughout the life of the facility due to some legally or environmentally imposed factors. The merits of well-maintained facilities are innumerable, majorly among these are, as Doherty (2009) opined; (a) the creation of right impression, (b) improvement in employee efficiency and (c) reduction in operational costs. Maintenance management can be regarded as the main thrust of facility management as adopted in the Nigerian context (Opaluwa, 2002).

The school facilities consist of all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, landscape, farms and gardens including trees, roads and paths. Others include furniture and toilet facilities, lighting, acoustics, storage facilities and packing lot, security, transportation, ICT, cleaning materials, food services, and special facilities for the physically challenged persons. These facilities play pivotal role in the actualization of the educational goals and objectives by satisfying the physical and emotional needs of the staff and students of the school.

## **IV. METHODOLOGY**

Atsar (2008) opined that research design is not only concerned with what is being sought but the best way of getting it done. The essence of this study is to determine the modelling of institutional facilities in southwest states of Nigeria. Primary source of data collection was employed in the course of this research work. One thousand two hundred (1200) questionnaires were administered to students in the institution, a thousand (1000) was able to retrieved back to assess the performance of the facilities managers in the institution. All data collected were collated; organized and relevant answers were adopted in order to ensure a meaningful presentation and analysis of data collected. Analytical tools were basically the descriptive statistical, which includes

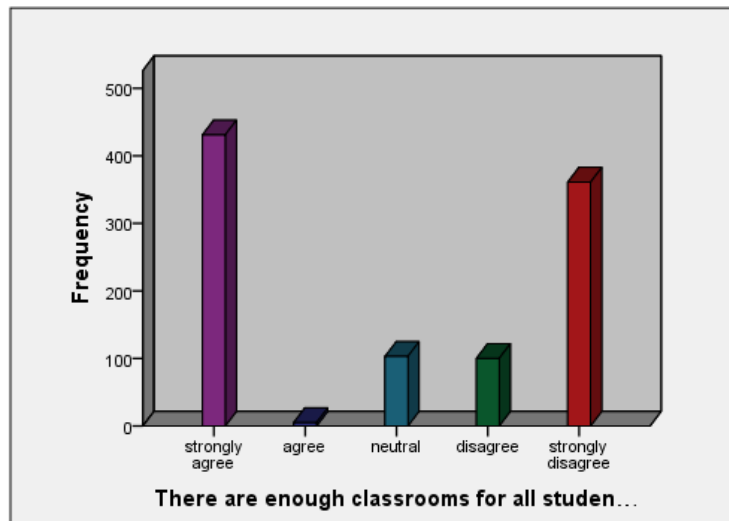
Key: percentage, charts, spearman rank correlation model.

## **V. DATA ANALYSIS AND DISCUSSION**

Gender of the respondents				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	500	50.0	50.0	50.0
Valid female	500	50.0	50.0	100.0
Total	1000	100.0	100.0	

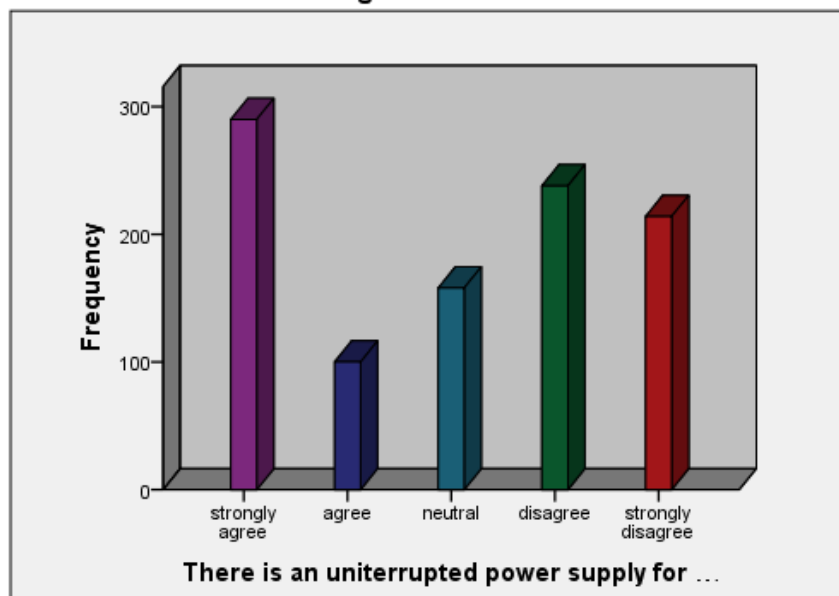
This table shows that the percentage of male is 50% while that of the females is 50%. It indicates that both the genders responded well to questionnaires.

**There are enough classrooms for all students to study at all levels**

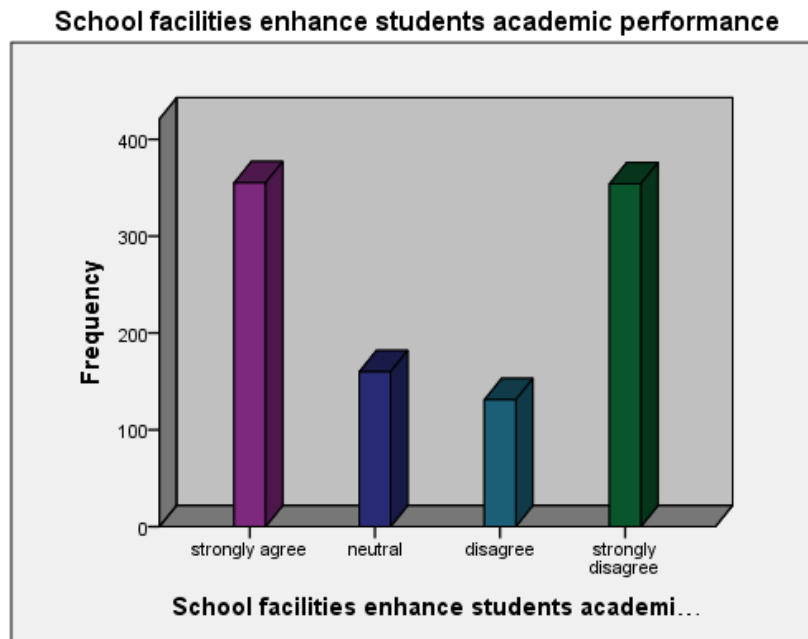


**Fig: 1**

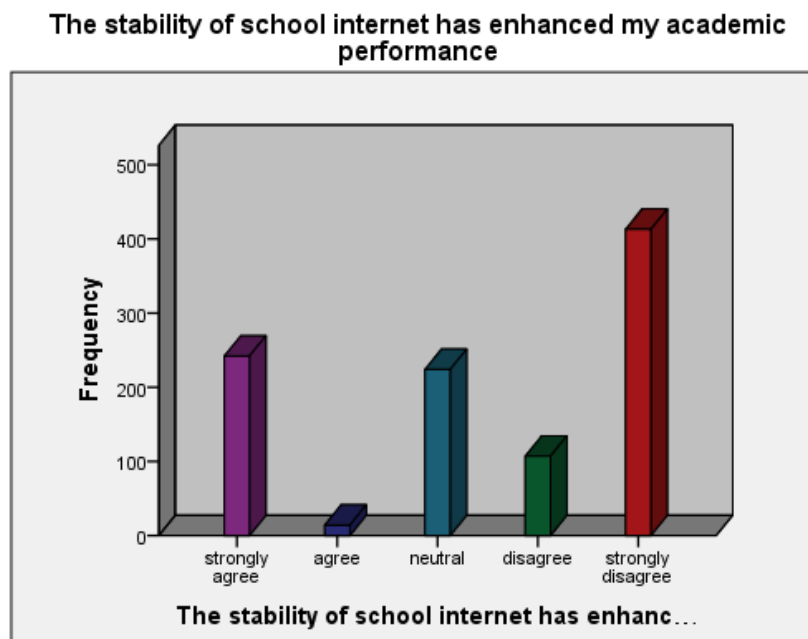
**There is an uninterrupted power supply for student to study during and after exam**



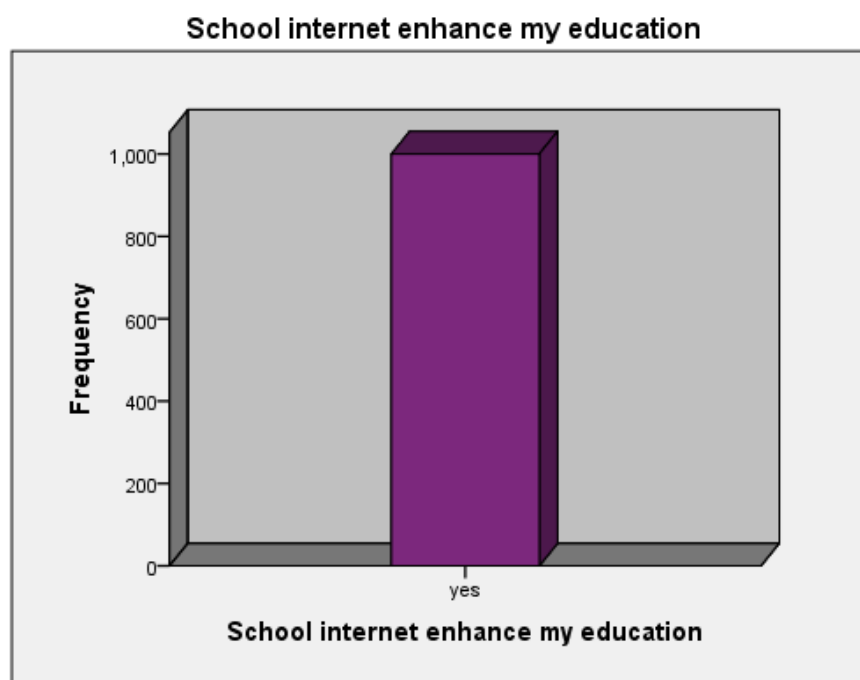
**Fig: 2**



**Fig: 3**



**Fig: 4**



**Fig: 5**

Correlations			Looking at the present situation of rapid development usage of personal computers and smart phones, do you think digital libraries really have substantial impact in promoting education over smart phones and personal computers	Do you have access to school bus
Spearman's rho	Looking at the present situation of rapid development usage of personal computers and smart phones, do you think digital libraries really have substantial impact in promoting education over smart phones and personal computers	Correlation Coefficient	1.000	.112**
		Sig. (2-tailed)	.	.000
		N	1000	1000
	Do you have access to school bus	Correlation Coefficient	.112**	1.000
		Sig. (2-tailed)	.000	.
		N	1000	1000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Using the spearman rank correlation for the analysis, we have the model to be:*

$$\rho = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

## VI. RESULT AND CONCLUSION

This research sought to explain the statistical modelling of institutional facilities in southwest states of Nigeria, to get the objectives done, the researcher collected a primary data which is mainly questionnaire at the institution at the one of the south west states in Nigeria, 1200 questionnaires was distributed to the students to know how the school facilities has enhanced their learning during their stays in school, and a thousand was able to retrieved back, a bar chart was used to represent the response from the students and also, correlation was used to check for the modelling of the institution facilities it was observed that the probability values of the tested

variables are 0.000 which is less than the significance value (0.05), we can conclude that, there is a relationship between academic performance and institutional facilities in southwest states of Nigeria.

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