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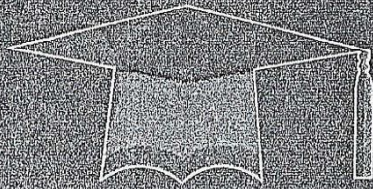
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Effect of Information Communication Technology Facilities on Students' Performance: A Comparative Study of Federal Government College and Bosso Secondary School, Minna, Nigeria

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ABSTRACT

This study examined the effect of ICT facilities on students' performance by comparing Federal Government College with ICT facilities and Bosso Secondary without ICT facilities. The comparison was conducted using subtests of English language and Mathematics on 62 JSS students from the two secondary schools both in Minna metropolis, Nigeria. Results indicated a significant difference in performance in both tests between Federal Government College and Bosso Secondary School. Differences in mean score were statistically significant in English language ($t = 2.60$) and Mathematics ($t = 4.96$). The study recommended that government should make available ICT facilities in all secondary schools to enhance teaching and learning.

Key words: ICT, students' performance, secondary school, ICT, Nigeria.

INTRODUCTION

The remarkable increase in efficiency and reliability in the delivery of information services has been attributed to the adoption of technology in information handling. Information technology has no doubt revolutionized the way in which we live and work especially in a library environment (Madu 2008). Computers have been used in education for one purpose or another, practically since its inception Madu (2005). Indeed some of the first generation computers were designed and built in universities and originally used for scientific research. Their very presence in educational institutions inevitably stimulated a certain amount of interest on how they could be used to help teaching and learning.

The Federal Republic of Nigeria has introduced information technology in the school curriculum. According to the Ekaette, (2004), the introduction of information technology in schools was for the nation "to successfully leap frog

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into information superhighway. Information technology has the capacity to process, store, refine and disseminate information in variety of ways. This is most likely to motivate both teachers and students in teaching and learning process.

Information technology may therefore enhance the flexibility of teaching and learning modalities as it will afford students increased access to print and digital sources. In Nigerian secondary schools, students take the same subjects, use the same textbooks and take the same public examinations. The use of information technology in the secondary schools is a new introduction to the school curriculum. While some schools have embraced this new innovation, others are yet to have it in their schools for the purpose of teaching and learning. The two secondary schools studied were Federal Government College Minna and Bosso Secondary School also in Minna. While Federal Government College had an information technology centre with internet facilities for teaching and learning, Bosso Secondary School had not

To date, however, little empirical research has been done on the usage and impact of the information technology (IT) at the secondary level in Nigeria. Also little attention is paid in the establishment of information technology centres in secondary. This may be attributed to lack of appreciation of what IT holds in teaching and learning process. The main objective of this study was to compare the performance of students from two secondary schools in Minna on two basic subjects, viz: English language and Mathematics. I hypothesized that there was no significant difference on English language and Mathematics tests between students of Federal Government College Minna and Bosso Secondary School Minna in the same class.

METHODOLOGY

The selection of sample (Table 1) for this study was purposively done, as I focused on final year students only. The two secondary schools were not equally endowed in information technology. While Federal Government College had information technology centre, Bosso Secondary School had not.

Table 1: Profile of Schools used in this study.

Profile	*FGC	**BSS
Population of students	720	450
Number of students sampled	67	61
Number of ICT teachers	5	-

* FGC: Federal Government College

** BSS: Bosso Secondary School

All the SS3 students in both schools were selected to participate in this study. There were 67 in FGC and 61 in BSS. However only 42 students from FGC and 20 students from BSS participated in the study. The difference in number is because there were more students in FGC than BSS and the final year

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students were purposively selected. Effort was made to match them by (Table 2) sex and reading ability as measured by their raw scores at the end of year English language examination.

Table 2: Distribution of FGC students and BSS students by age and sex.

Profile	Sex	FGC	Mean Age	BSS	Mean Age
	Girls	21	17	10	18
	Boys	21	19	10	19
		42		10	

Procedure

Tests of English language and Mathematics were administered on the sampled students from both schools in SS2. Both tests were designed using English Language and Mathematics syllabi for SS2 students. Teachers of English Language and Mathematic validated and confirmed that the test items fell within areas covered by the syllabi for both subject. The English language tests consisted of twenty multiple choice items which were content dependent. The meaning in context had to be picked from a choice of four alternatives. The mathematics test had multiple choice items from which students picked the correct answers.

Data Analysis

Mean scores of the two groups of students from the two schools were compared using the T-test at the 5% probability level of significance.

RESULTS AND DISCUSSION

From the two tests, students of Bosso Secondary School obtained lower rating than their counterpart from Federal Government College, Minna. Differences in mean scores were statistically significant in English language and in mathematics (Table 3). Therefore, there is a significant difference in performance in English Language and Mathematics tests between the two students of the two schools.

The mean English language score of students in Bosso Secondary School (BSS) is 9.281 this is lower than that of Federal Government College (FGC) which stands at 11.563. The standard deviation of Bosso Secondary School is 5.511 while that of Federal Government College is 3.391. In Mathematics, again, Federal Government College is higher in mean score with 14.313 while Bosso Secondary has mean score of 7.781. On standard deviation,

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Bosso Secondary School (BSS) has 5.925 while Federal Government College (FGC) has 4.326.

Table 3: Mean English Language and Mathematics test scores and standard deviation of FGC and BSS students.

English Language test score	BSS (n = 32)	FGC (n = 32)	t-value
Mean English language score	9.281	11.563	
Standard deviation	5.511	3.391	-2.60
Mean Mathematics score	7.781	14.313	
Standard deviation	5.925	4.326	-4.96

This difference was explained by the facts that the students of Federal Government College enjoyed ICT facilities. This enabled them to have information at their finger tips and made use of the available information in the study of both English language and Mathematics. On the other hand, the students of Bosso Secondary had not got the advantage of the use of ICT in their learning process.

CONCLUSIONS AND RECOMMENDATIONS

This study has again brought to the fore the importance of ICT, especially the education sector. There seems to be a significant difference in the performance on English language and mathematics tests. The students from Federal Government College with ICT facilities scored much higher than those of Bosso Secondary School without ICT facilities. It is therefore recommended that ICT facilities be made available to all students in our secondary schools. This is connected with the fact that the values of information technology enhance teaching and learning process. Students need to have better access to information and possibility for resource sharing.

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