



Availability and Adequacy of Information and Communication Technology Facilities for Learning Business Studies in Public Junior Secondary Schools Port Harcourt Metropolis

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ABSTRACT

This study examined the availability and adequacy of Information and Communication Technology Facilities for Learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis. The research adopted descriptive survey design. The target population for this study is 13,799 Business Studies Students and Teachers with a sample size of 389 Students and Teachers using Taro Yamane formula was used. Two research questions and two null hypotheses guided the study. Two (2) self-structured research instruments - Availability of Information and Communication Technology Facilities for Learning of Business Studies Inventory (AvICTFLBSI) and Adequacy of Information and Communication Technology Facilities for Learning of Business Studies Inventory (AdICTFLBSI) were used for this study to elicit information from the respondents which were validated with reliability coefficient of 0.87 and 0.79 respectively. Test -retest method was used to test the reliability of the instrument. The questionnaire was administered to the respondents from the target population. For data analysis, the research questions were analyzed with mean and standard deviation, while the hypotheses were tested with t-test statistics. The results revealed that Business Studies Students are not aware of the use of Information and Communication Technology facilities for learning Business Studies, also Information and Communication Technology facilities are not available and adequate for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis, Conclusion drawn from the study was that non-availability of Information and Communication Technology facilities for learning business studies in Public Junior Secondary Business Studies in Port Harcourt Metropolis may not help the students to grow with the modern trends of advancement and innovation in technologies.. Based on the findings the researchers recommended that Information and Communication Technology facilities should be made available and adequate in the learning of Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.

Keywords: Information and Communication Technology, Business Studies, Students, Junior Secondary Schools

INTRODUCTION

Information and Communication Technology promotes vigorous education, allow for inventive teaching and self-pacing learning (Afolabi, 2006). However, Tella Toyobo, Adika & Adeyinka in Nwosu & Udofia (2010) viewed Information and Communication Technology as that which can be useful in numerous ways in the teaching and learning practice to help learning through the use of word processing, internet- browsing for information and using email to assign obligations, and as a device for promoting learning when incorporated into the design and planning of instructions. Giving credence to this, Ololube (2006) viewed the simultaneous use of audio and text, images, graphics and motion picture in Information and Communication Technology as that which gives opportunities to the students to build up capabilities for high excellence learning, and to enlarge their inventive capabilities in teaching and learning of Business Studies in Secondary Schools.

Information and Communication Technology facilities if available ought to be properly utilized for positive result attainment. Availability of Information and Communication Technology facilities may

not be a guarantee for their proper utilization. Use of Information and Communication Technology facilities is as important as making them available. It remains one of the main responsibilities of heads of schools to ensure that available Information and Communication Technology facilities are well utilized. The success of a school programmes depends much on the way facilities are utilized as this, affects the overall performance of such school. Consequently, Ololube (2006) opined that a greater proportion of educational objectives are achieved when there is effective utilization of Information and Communication Technology facilities than when contrary becomes the case. Expectation is that Information and Communication Technology facilities should be adequate and properly utilized in Secondary Schools to inculcate in the learners skills for individual survival and national development. Akudo & Obunadike (2009), observed that awareness towards the adequacy and use of Information and Communication Technology as teaching and learning material is increasing in the classroom in the third world countries. In schools where Information and Communication Technology is adequate, students have access to device that fine-tune to their interest and offer important and instant response for literacy development, which is presently not completely implemented in secondary schools in Nigeria (Emuku & Emuku, 2000). The adequacy of Information and Communication Technology to teaching and learning will give the students the opportunities to access information of their interest and interact with experts in other parts of the world. This will help to further develop their understanding, knowledge as well as make them gain new information. Hence, Azih & Nwosu (2012) attributed low extent usage of Information and Communication Technology in schools to not having access to Information and Communication Technology facilities.

However, a close observation of schools in Port Harcourt metropolis shows that Information and Communication Technology facilities seem to be available and utilized in some private schools and seem to be scarcely available in public secondary schools. Based on this premise, there is the need to explore the extent of awareness, availability, adequacy, accessibility and utilization of Information and Communication Technology facilities for successful learning of Business Studies in public Junior Secondary Schools in Port Harcourt Metropolis. A study such as this is necessary in this period of technological era so as to empirically document the true fact concerning the significance of Information and Communication Technology in effective learning of school subject, like Business Studies.

Purpose of the Study

The purpose of this study was to investigate the availability and adequacy of Information and Communication Technology facilities among Teachers and Students in learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis. Specifically, the study attempted to:

1. Examine whether Information and Communication Technology facilities are available for Teachers and Students and to learn Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.
2. Determine if Information and Communication Technology facilities are adequate for Teachers and Students to learn Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.

Research Questions

The following research questions guided the study:

1. To what extent are Information and Communication Technology facilities available to Teachers and students for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis?
2. How adequate are the Information and Communication Technology facilities for Teachers and Students in learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis?

Hypotheses

The following hypotheses guided the study:

1. There is no significant difference in the mean ratings of Teachers and Students on the extent of availability of Information and Communication Technology facilities for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.
2. There is no significant difference in the mean ratings of Teachers and Students on the Extent of adequacy of Information and Communication, Technology facilities for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.

METHOD

The study adopted descriptive research design. The population of this study consists of 13,799 Business Studies Student and Teachers (that is 831 Teachers and 12,968 Students) of all Public Junior Secondary Schools in Port Harcourt Metropolis. The breakdown of the population is presented in Table 1.

Table 1: Population of the Study

S/N	Schools	Teachers	Students	Total
1	Government Girl’s Secondary School, Oromenike	68	1214	1282
2	Enitonia High School, Port Harcourt	41	882	923
3	Community Secondary School, Nkpolu-Oroworukwo	73	957	1030
4	Community Secondary School, Okoro-nu-odo	54	764	818
5	Community Secondary School, Rumu-Apara	51	997	1045
6	Akpor Grammer School. Ozuoba	50	564	614
7	Community Secondary School, Rumu-Ekini	47	523	670
8	Government Girls Secondary School Rumuokwuta	69	1035	1104
9	Community Secondary School, Abuloma	59	795	854
10	Community Secondary School, Elekahia	60	886	946
11	Government Comprehensive Secondary School, Borokiri	77	1103	1180
12	Government Girls Secondary School, Rumueme	71	1117	1188
13	Community Secondary School, Rukpokwu	39	502	541
14	Government Secondary school, Amadi Ama	37	894	931
15	Community Secondary School, Ogbogoro	35	635	670
	Total =	831	12,968	13,799

The simple random sampling technique was adopted for this study and Taro Yemen formula was used to draw a total sample size of three hundred and eighty nine (389) business studies students and Teachers (that is, 89 Teachers and 300 Students respectively) of the sample population.

Two (2) self-structured research instruments developed by the researchers known as Availability of Information and Communication Technology Facilities for Learning of Business Studies Inventory (AvICTFLBSI) and Adequacy of Information and Communication Technology Facilities for Learning of Business Studies Inventory (AdICTFLBSI) were used for this study to elicit information from the respondents, The instruments were made up of seventeen items each with response options of Very High Extent (VHE) – 4 points, High Extent (HE) – 3 points, Low Extent (LE) – 2 points and Very Low Extent (VLE) – 1 point. was adopted. The points were rated as follows:

The instruments were validated by a specialist in Measurement and Evaluation and two experts in Business Education all from the Department of Business Education carried out the face and content validation. The test re4est reliability method was adopted to determine the reliability of the instrument. The instrument was administered to 30 Junior Secondary School Students of Community Secondary School Rumu-Apara, one of the Government owned school in Obio/Akpor Local Government Area to complete, and after two weeks the same instrument was re-administered to the same group of students. The two results obtained were correlated using the Pearson’s Product Moment Correlation Coefficient (r) to ascertain reliability co-efficient of 0.87 and 0.79 respectively. Mean and standard deviation scores were used to answer the research questions and t-test statistics to test the null hypotheses.

RESULTS

Research Question 1: *To what extent are information and communication technology facilities available for teachers and students in learning Business Studies in public junior secondary schools in Port Harcourt Metropolis?*

Table 2: Mean and Standard Deviation Computations about the Extent to which Information and Communication Technology Facilities are Available for Learning of Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis

(N = 389)

S/N	ICT Facilities	Total Response	Mean Score	STD. Dev. Score	Remarks
1	Internet facilities	746.88	1.92	0.195	NA
2	Computer	560.16	1.44	0.14	NA
3	Overhead projector	707.98	1.82	0.142	NA
4	Scanner	715.76	1.84	0.175	NA
5	Electronic typewriter	688.53	1.77	0.167	NA
6	Dictating machine	820.79	2.11	0.191	NA
7	Fax machine	474.58	1.22	0.187	NA
8	Telephone	676.86	1.74	0.165	NA
9	Audio conferencing	859.69	2.21	0.173	NA
10	Video conferencing	828.57	2.13	0.192	NA
11	Photocopier machine	529.04	1.36	0.082	NA
12	Laminating machine	536.82	1.38	0.175	NA
13	Electronic mail	525.15	1.35	0.159	NA
14	Social media packages	637.96	1.64	0.146	NA
15	Teleconferencing	731.32	1.88	0.177	NA
16	Educational softwares	750.77	1.93	0.169	NA
17	Printer	879.14	2.26	0.168	NA
	Grand Mean		1.997	0.166	

NA = Not Available

Table 2 shows the calculated mean and standard deviation scores of the responses of the Business Studies Students in Public Junior Secondary Schools in Port Harcourt metropolis regarding the extent to which information and communication technology facilities were available for the learning of Business Studies in junior secondary schools. In the Table, the computed mean scores of the Business Studies Students regarding the extent to which all the 17 listed information and communication technology facilities were available for the learning of Business Studies in junior secondary schools were lower than the average mean score of 2.5. This indicates that the information and communication technology facilities were not available for the learning of Business Studies in Junior Secondary Schools in Port Harcourt metropolis. The table also shows that the calculated grand mean for the business studies students is 1.997 which are less than the average mean score of 2.5. This reveals that the information and communication technology facilities for the learning of Business Studies in junior secondary schools were not available. From the foregoing, the researchers therefore conclude that information and communication technology facilities for the learning of Business Studies in Public Junior secondary schools in Port Harcourt metropolis were not available.

Research Question 2: *How adequate are the information and communication technology facilities for teachers and students in learning Business Studies in public junior secondary schools in Port Harcourt Metropolis?*

Table 3: Mean and Standard Deviation Computations about the Extent of Adequacy of Information and Communication Technology Facilities for Learning Business Studies in Port Harcourt Metropolis.

(N = 389)					
S/N	ICT Facilities	Total Response	Mean Score	STD. Dev. Score	Remarks
1	Internet facilities	867.47	2.23	0.183	NA
2	Computer	789.67	2.03	0.188	NA
3	Overhead projector	727.43	1.87	0.167	NA
4	Scanner	723.54	1.86	0.169	NA
5	Electronic typewriter	848.02	2.18	0.187	NA
6	Dictating machine	696.31	1.79	0.165	NA
7	Fax machine	859.69	2.21	0.173	NA
8	Telephone	48.30	1.15	0.156	NA
9	Audio conferencing	871.35	2.24	0.181	NA
10	Video conferencing	878.57	2.13	0.192	NA
11	Photocopier machine	513.48	1.32	0.141	NA
12	Laminating machine	447.35	1.15	0.156	NA
13	Electronic mail	470.69	1.21	0.181	NA
14	Social media packages	723.54	1.86	0.169	NA
15	Teleconferencing	482.36	1.24	0.146	NA
16	Educational softwares	840.24	1.16	0.219	NA
17	Printer	898.59	2.31	0.168	NA
Grand Mean			1.809	0.173	

NA = Not Adequate

Table 3 shows the calculated mean and standard deviation scores of the responses of the Business Studies Students in Junior Secondary Schools in Port Harcourt metropolis regarding the extent to which information and communication technology facilities were adequate for the learning of Business Studies in junior secondary schools. In the Table, the computed mean scores of the Business Studies Students regarding the extent to which all the 17 listed information and communication technology facilities were adequate for the learning of Business Studies in junior secondary schools were lower than the average mean score of 2.5. This indicates that the information and communication technology facilities were not adequate for the learning of Business Studies in Junior Secondary Schools in Port Harcourt metropolis. The table also shows that the calculated grand mean for the business studies students is 1.809 which is less than the average mean score of 2.5. This reveals that the information and communication technology facilities for the learning of Business Studies in Public Junior secondary schools were not adequate. From the foregoing, the researchers therefore conclude that information and communication technology facilities for the learning of Business Studies in Public Junior secondary schools in Port Harcourt metropolis were not adequate.

Hypothesis 1

There is no significant difference in the mean ratings of teachers and students on the extent of availability of information and communication technology facilities for learning Business Studies in junior secondary schools in Port Harcourt Metropolis.

Table 4: T-test Computation of the Difference in the Mean Ratings of Teachers and Students on the Extent of Availability of Information and Communication Technology Facilities for Learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis

Variable	N	Mean Score	Std Dev. Score	Sum of Square	Est. Std. Error	t-ratio Cal.	t-ratio Crit.
Teachers	89	2.346	0.238	1386.67	1.2314	1.785 ⁺	±1.960
Students	300	2.185	0.217	1398.44			
N = 378	df = 387	P > 0.05		+ = Not Significant			

The calculated mean and standard deviation scores of the responses of the Business Studies teachers and Students in Junior Secondary Schools in Port Harcourt metropolis regarding the extent to which information and communication technology facilities were available for learning Business Studies in junior secondary schools are presented in Table 4. With N = 389, df = 387 and P > 0.05, the calculated t-ratio was 1.786 and the critical table value of t-ratio was ±1.960. At this point therefore the calculated t-ratio is not statistically significant at a 0.05 level of significance since it is smaller than the given critical value of t-ratio. The hypothesis is thus accepted (that is not rejected) and the conclusion is that there is no significant difference in the mean ratings of teachers and students on the extent of availability of information and communication technology facilities for learning business studies in junior secondary schools in Port Harcourt metropolis.

Hypothesis 2

There is no significant difference in the mean rating of teachers and students on the extent of adequacy of information and communication technology for learning Business Studies in junior secondary schools in Port Harcourt Metropolis.

Table 5: t-test Computation of the Difference in the Mean Rating of Teachers and Students on the Extent of Adequacy of Information and Communication Technology for Learning Business Studies in Junior Secondary Schools in Port Harcourt Metropolis

Variable	N	Mean Score	Std Dev. Score	Sum of Square	Est. Std. Error	t-ratio Cal.	t-ratio Crit.
Teachers	89	2.231	0.221	1246.22	1.2643	1.929 ⁺	±1.960
Students	300	2.294	0.235	1215.17			
N 389	df 387	P > 0.05		+ = Not Significant			

The calculated mean and standard deviation scores of the responses of the Business Studies teachers and Students in Junior Secondary Schools in Port Harcourt metropolis regarding the extent to which information and communication technology facilities were adequacy for learning Business Studies in junior secondary schools are presented in Table 5. With N = 389. df = 387 and P > 0.05, the calculated t-test was 1.929 and the critical table value of t-ratio was ±1.960. Consequently, the calculated t-test is not statistically significant at = 0.05 level of significance since it is less than the given critical value of t-ratio. The hypothesis is thus accepted (that is not rejected) and the conclusion is that there is no significant difference in the mean rating of teachers and students on the extent of adequacy of information and communication technology for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis.

DISCUSSION

Based on the results of this study, the researchers discovered that Information and Communication Technology facilities were not available for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis. It was also discovered that no significant difference existed in the mean ratings of teachers and students on the extent of availability of Information and Communication Technology facilities for learning Business Studies in Port Harcourt Metropolis. The finding is in consonance with the result of (Okwudishu, 2005) who posits that, unavailability of Information and Communication Technology facilities in our schools hampers the students and teachers Use of Information and Communication Technology which therefore cannot aid them to compete favourably with their counterpart around the globe.

Based on the results of this study, the researchers discovered that Information and Communication Technology facilities were not adequate for learning Business Studies in Public Junior Secondary Schools in Port Harcourt Metropolis. It was also found out that no significant difference existed in the mean rating of teachers and students on the extent of adequacy of Information and Communication Technology for learning Business Studies in Port Harcourt Metropolis. The finding is in agreement with the result of (Aja, 2013). Who attributed factors like teachers in competency, inadequate Information and Communication Technology facilities, adequate funding and pervasive poverty in the Nigerian society as factors militating against the adequacy of Information and Communication Technology in learning business studies?

CONCLUSION

Based on the results and findings of this research work, the researchers therefore noted that non-availability of Information and Communication Technology facilities for learning business studies in Public Junior Secondary Business Studies in Port Harcourt Metropolis may not help the students to grow with the modern trends of advancement and innovation in technologies. For the fact that the Students are not aware of any Information and Communication Technology facilities, means it is not available for learning at the Public Junior Secondary Schools in Port Harcourt Metropolis. This implies that it will be a total error to talk about the adequacy, accessibility and utilization of the Information and Communication Technology facilities in the Public Junior Secondary Schools.

Educational Implications

It is a clear indication that in this study the availability and adequacy of Information and Communication Technology facilities for effective learning of Business Studies were absent or very low. Therefore, there is need to campaign strongly for Information and Communication Technology availability and adequate for effective learning of business studies in Secondary Schools in Port Harcourt Metropolis. The implication is that the students will not have the knowledge of these required and valued Information and Communication Technology facilities until graduation. The after effect is that students will find it difficult to participate in the society where Information and Communication Technology is at play.

RECOMMENDATIONS

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

1. The authorities of secondary education in Rivers State should stress on the need to make available about Information and Communication Technology facilities in the institutions.
2. Efforts should be intensified by the authorities of secondary education in Rivers State to ensure that Information and Communication Technology facilities are made adequate in schools.
3. The Government and Non-governmental agencies should strive to make Information and Communication Technology facilities adequate for effective learning of Business Studies in Rivers State.

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