PROBLEM OF IMPLEMENTATION OF COMPUTER EDUCATION IN JUNIOR SECONDARY SCHOOLS IN SOME SELECTED LOCAL GOVERNMENT AREA IN ADAMAWA STATE

Aisha Ahmed Hamman
Federal College of Education,
Yola, Adamawa State
aishaahmed4@gmail.com

ABSTRACT

The study is a descriptive survey designed on the problems of implementation of computer education in Junior Secondary Schools in some selected local government areas in Adamawa State. The study area consist of Yola North, Yola South and Fufore Local Government Areas. The focus of the study is on the availability of physical infrastructural facilities, teachers' qualification and adequate funding by the government for the successful implementation of computer education in the study area. Research thesis were tested, structured questionnaire was administered to obtained relevant data necessary for the study. The population of the study consisted of 13,197 student and 1,189 teachers in the twenty six (26) Junior Secondary School selected in the local government areas amounting to the sum of 4,386 respondents. The Yaw Yamane formular was adopted to determine the sample size for both students and teacher. This narrowed the sample size to 689 with the sample of 388 for student and 299 by some experts in field the Z-test was used significance. Analysis of the result shows that the hypothesis the Z-calculated is less than the Z-critical as a result of the findings the studies came up with some recommendations: government should strive to ensure the adequacy in the provision of funds for computer education to enhance its implementation, necessary facilities should be provided and qualified and relevant teachers should be employed..

Keywords: Problem, implementation, computer, education

INTRODUCTION

Education is universally acknowledged as an instrument per excellence which is vital for national development. According to Oyekan (2000), it is a process of imparting knowledge, attitude, skills and values to the learners; this takes place in various schools with the purpose of ensuring total development of mankind. Human beings need to have a specific set of skills to survive in this competitive world in other to progress, this set of skills is referred to as education. Education is important, both economically and socially. Education plays a vital role in the growth and development of any country. Computer is a powerful teaching tool and a medium of instruction that has helped to improve students' performance in schools' subjects and has taken care of problems confronting teachers. It guides students through a course of instruction and in such a way facilitates the understanding of the subject matter. Computer Education is seen as a key to National Development. Oduyemi has linked Computer Education to National Development stressing the importance of ICT to National development. Oduyemi noted that, in a developing country like Nigeria, there is the need to empower its citizens to be able to compete favourably in the global world.

According to the National Policy on Education (1981, 2004), the broad aim and objectives of Secondary Education in Nigerian educational system are preparation for useful living within the society (self employment) and preparation for Higher Education. Curriculum being a powerful vehicle for educational attainment (Offorma, 2005), secondary school curriculum is far from achieving the goals of Secondary Education. Several Authors including Obunya, (2004) in ERMWACA, noted that the National policy of Education was well structured and content were adequately defined but the implementation calls for question. Babafemi, (2007) in Dike (2009) investigation revealed that, students' potential are not properly channelled as schools lack basic infrastructure necessary for effective implementation, inadequate professional teachers, negligence of practical component on teaching ICT in specific, inadequate funding to mention but a few. The focus of this study is to examine the problems in the implementation of Computer Education in junior secondary schools in Adamawa State.

METHODOLOGY

The study is a descriptive research design and a descriptive statistical method is employed. Descriptive statistics is a statistical method that quantitatively described or summarised features of a collection of information. It provides

simple summaries about the sample and about the observation that have been made (Mann, 1995). The demographic data was analysed using mean score and any score that is less than 3:00 is rejected or disagreed while scores with 3:00 and above is accepted or agreed in the study.

DATA ANALYSIS, RESULT AND DISCUSSIONS

The findings are presented on tables 1 to 3.

Research question 1: What are the physical infrastructural facilities available in junior secondary schools for the implementation of computer education programmes?

Table 1: Perception of both teachers and students on the availability of physical infrastructural facilities.

S/N	Item	Students N=198 $\overline{x}s$	δs	Teachers N=154 $\overline{x}t$	Δt	$\overline{x}G$	Remarks
1	There are computer laboratory in our school.	4.02	0.88	3.05	1.23	3.54	Agreed
2	Computers are available in the laboratories.	3.95	1.15	3.55	1.12	3.75	Agreed
3	Computers are utilized during the lessons.	3.68	0.92	3.95	1.15	3.82	Agreed
4	The computers are all functioning effectively.	3.80	0.60	4.30	0.45	4.05	Agreed
5	There are enough computer accessories in your school.	4.23	1.08	3.50	0.81	3.87	Agreed
6	Adequate infrastructural facilities can promote computer education.	3.00	1.41	3.68	0.92	3.34	Undecided
7	Lack of infrastructural facilities can impede computer education programme.	3.10	0.83	3.00	1.41	3.05	Undecided
8	The school does provide computer textbooks for students in the school.	2.30	0.90	3.50	0.81	2.90	Undecided
9	The school lacks access to internet connection.	3.91	0.99	3.95	1.51	3.93	Agreed

Table 1: this table shows that, generally teachers and students have agreed that there are available physical infrastructure of implementation of computer education in junior secondary schools for students. The mean response values obtained range from 2:30 to 4:23, the lowest mean response 2:30 was recorded for the statement: that the school does provide computer textbooks for students in the school. While the highest mean response is 4:23 was recorded for the statement: that there are enough computer accessories in the school. Response of the teachers on the other hand shows the same trend that is similar to that of the students. The main response value obtained ranges from 3:00 to 4:30, the lowest mean response 3.00 was recorded for the statement: lack of infrastructural facilities can impede computer education program while the highest mean response 4.30 was recorded for the statement: the computers are all functioning effectively. Moreover, the standard deviation value recorded for both the students and teachers ranges from 0.08 to 1.51. These low values are indicative of a low level of dispersion in the perception of the two groups of respondents.

Research Question 2: What is the level of qualification and how relevant are the teachers teaching computer education in junior secondary schools?

Table 2: Perception of teachers and administrators on the qualification and relevance of teachers teaching computer education in schools in the study area.

S/N	Item	Teacher N=154 $\overline{x}y$	δt	Administrators N=50 $\overline{x}A$	δA	Grand mean $\overline{x}G$	Remarks
10	There are enough teachers of computer education in your school.	3.73	1.32	3.70	1.10	3.72	A
11	The computer teachers are not professional and are not qualified.	2.70	1.19	2.00	0.89	2.35	D
12	The teachers conduct practicals during lessons.	2.60	1.36	3.70	1.10	3.15	UD
13	Students have access to computers.	2.70	1.27	2.90	0.70	3.30	UD
14	Teachers are sponsored to go for refresher courses in computer education.	3.90	0.70	3.50	1.41	3.70	A
15	There are enough laboratory attendants to manage the centre.	3.5	1.15	2.90	1.14	3.25	UD
16	The attendants are computer literate.	3.73	1.32	4.50	1.50	4.12	A
17	The attendants are sufficient in number.	3.82	0.93	2.70	1.27	3.26	UD
18	There is steady power supply at all times.	3.59	1.15	2.60	1.36	3.11	UD
19	The students can manipulate the computer.	4.05	0.85	3.60	1.03	3.83	A
20	Most of the schools in the study area have computer centers.	3.59	1.15	3.59	1.15	3.59	A
21	The centers are equipped with necessary accessories.	3.50	1.41	3.10	4.35	3.93	A
		3.46	1.15	3.32	1.33		

Table 2: this table shows that, generally teachers and administrators have agreed that there are qualified and relevant teachers for teaching computer education in the study area. For the teachers, the mean response value obtained ranges from 2.70 to 4.05 while the lowest mean response 2.70 was recorded for the statement: computer teachers are not professional therefore are not qualified and not relevant and the highest response mean 4.05 was recorded for the statement: the students can manipulate computers. Response on the other hand for administrators shows the same trend as that of the teachers. The mean response value obtained ranges from 2.00 to 4.50 while the lowest mean response 2.00 was recorded for the statement: computer teachers are not professional and not qualified and the highest mean response value 4.50 was recorded for the statement: the attendants are computer literate.
Therefore, standard deviation value that was recorded for both teachers and administrators ranges from 0.70 to 4.35. These low values are indicative of a low level of dispersion in the perception of the two groups of respondents.

Research Question 3: How adequate and sufficient is the funding for the implementation of computer education programmes in junior secondary schools in Adamawa State?

Table 3: Perception of administrators and teachers on funding of the implementation of computer education programme in the study area.

S/N	Item	Teachers N=154 xy	Δt	Administration N=154 ⁻xA	Δt	Grand mean ⁻xG	Remarks
22	Funds can facilitate the smooth takeoff of the computer education programme in JSS.	3.64	0.98	3.10	0.83	3.37	UD
23	Fund is provided for the purchase of computer and accessories.	3.77	1.13	3.70	1.10	3.74	A
24	Sponsorship is given to the teachers for workshop and seminars.	3.91	1.41	3.90	0.54	3.91	A
25	Funds allocated is used judiciously.	4.22	0.10	2.40	1.11	3.31	UD
26	Lack of fund impede the progress of the programme.	4.02	0.88	2.70	1.19	3.36	UD
27	The laboratory attendants are well paid.	3.59	1.33	3.30	0.8	3.45	UD
28	Fund is given for internet service in the school.	2.64	2.41	3.90	0.54	3.27	UD
29	Cost of internet service is not affordable to all.	3.05	1.23	4.22	0.10	3.70	A
30	Students can manipulate computer.	3.59	1.27	3.68	1.24	3.64	A
31	Regular training and workshops are conducted to upgrade staff on latest knowledge on computer education.	3.68	1.24	3.30	0.78	3.78	UD

Table 3: this table reveals that generally administrators and teachers indicated the funding of the implementation of computer education programmes in junior secondary schools in the study area. For the mean responses value obtained ranges from 2.40 to 4.22 while the lowest mean response 2.40 was recorded for the statement: fund is given for internet service in the school and the highest mean response 4.2 allocated was used judiciously.

Response for administrators and teachers on the funding of the programme by the government for the implementation of computer education in junior secondary schools in the study area. For the mean response value obtained ranges from 2.40 to 4.22 while the lowest mean response 2.40 was recorded for the statement: fund is given for internet services in the statement fund allocated is judiciously used.

Response for teachers on the other hand is showing a similar trend that is similar to that of the administrators mean response value obtained ranges from 2.64 to 4.22 while the lowest mean response 2.64 was recorded for the statement: fund is given for internet services in the school and the highest mean response 4.22 was recorded for the statement: cost of internet service is not affordable to all. Therefore the standard deviation recorded for both administrators and teachers ranges from 0.88 to 1.24 respectively. These low values are indicative of the low levels of dispersion in the perception of the two groups of the respondents

TESTING OF HYPOTHESIS

Null hypothesis 1 (HO₁)
There is no significance difference between the mean score of the responses of students and teachers on the availability of physical infrastructural facilities in the study area. The test of the hypothesis mean response value obtained for teachers and students (presented in the table 1) was subjected to the students Z-test analysis.

Table 4: Summary analysis of the perception of the teachers and students on the availability of physical infrastructural facilities in the study area.

Categories	Mean	S.D	Df	Z-cal	Z-crit	Remarks
Students	3.55	0.97				
Teachers	3.61	1.05	351	0.55	1.96	Not Significant

Table 4: this table shows that the z-calculated is 0.55 which is less than the z-critical which is obtained at 0.05 level of significance, subjecting this to the decision rule, null hypothesis i(H_{0i}) not significant therefore, both students and teachers are not significantly ($p<0.05$) different in their perception of the availability of physical infrastructural facilities in junior secondary school in Adamawa State.

Null Hypothesis 2 (HO₂)
There is no significant different between the mean score of the responses of teachers and administrators on the relevance and qualification of teachers teaching computer education in junior secondary schools in the study area.

Table 5: Summary analysis on the perception of teachers and administrators on the qualification and relevance of teachers teaching computer education in junior secondary schools in Adamawa State.

Categories	Mean	S. D	df	z-cal	Z-crit	Remarks
Teachers	3.29	1.11				
Administrators	3.42	0.82	203	0.89	1.96	Not Significant

Table 5: this table shows that, the z-calculated is 0.89 which is less than the z-critical of 1.96 which is obtained at 0.05 level of significance, subjecting this to the decision rule the null hypothesis (HO₂) is not significant therefore, both teachers and administrators are significantly (P< 0.08) different in their perception on the relevance and qualification of teachers teaching computer education in junior secondary schools in Adamawa State.

Null Hypothesis 3 (HO₃)
There is no significant difference between the mean score of the responses of administrators and teachers on adequate funding of the computer education programmes by the government.
Table 6: Summary analysis on the perception of administrators and teachers on the adequate funding of computer education programmes by the government in the study area.

Categories	Mean	S. D	df	z-cal	z-crit	Remarks
Administrators	3.46	1.15				
Teachers	3.32	1.33	203	0.72	1.96	Not significant

Table 6 shows that, the z-calculated is 0.72 which is less than the z-critical of 1.96 obtained at 0.05 level of significance subjecting this to decision rule the null hypothesis (Ho₃) not significant, therefore, both administrators and teachers are significantly ($P<0.05$) different in their perception on the adequate funding of computer education in junior secondary schools by the government in some selected local government in Adamawa State.

DISCUSSIONS

Based on the result obtained of physical facilities in secondary schools in Adamawa State which was responded by both students and teachers indicated that there is no significant difference (P<0.05) in their perception on physical facilities. The study reveals that there are computer laboratory in the schools, computers are available in the laboratories, computers are being utilized during lessons and that the computers are functioning effectively. The study was similar to Chan (1996) on the impact of physical infrastructural environment on students' success. The study found students' achievement to be highest in modern learning environment and that technology and adaptabilities of modern environment better equipped students for success. Ahmed (2003) observed that, in most of the secondary schools in the country, teaching and learning take place under un-conducive learning environment while basic physical and maternal resources are lacking thus underlying computer education.

Furthermore, the perceptions of teachers and administrators on the qualification and relevance of computer education teachers in secondary schools in Adamawa State reveal that, there is no significant difference (P<0.08) on the relevance and qualification of computer education in Adamawa State which include: there are enough computers education, teachers are send for seminars, workshop and other training on computer education, and also there are attendants for computers laboratories and that they are literate. This agrees with the views of Bukaliya and Mubika (2011) that the qualification of majority of the teachers are far from being satisfactory due to lack of exposure to college curriculum that caters for ICT training.

Lastly, the perception of administrators and teachers on the provision of fund by the government for the successful implementation of computer education in junior secondary schools in Adamawa State reveals that, there is no significant difference (P<0.05) on the provision of fund by the government for Computer Education implementation in junior secondary school which include: lack of funds can hinder the implementation of the programme, the fund allocated are not justified for the purpose, the attendants are not paid well, lack of fund for accessing the internet services. The findings are similar to the work of Aboderin and Solomon (2014) where the descriptive design was employed for the study. The study reveals that, computer resources were lacking in schools and budgetary and funding were the major factors militating against the successful implementation of computer education in secondary schools

CONCLUSION

The study established that, it is crystal clear that lack of physical infrastructural facilities has impact on the implementation of computer education programmes in junior secondary schools in Adamawa State. Lack of professional qualified and relevant computer education teachers and inadequate funding by the government have contributed immensely in the failure for the successful implementation of Computer Education programmes in junior secondary school in the study area. Therefore, provision of physical infrastructural facilities, employment of professionally qualified teachers that are relevant to Computer Education, and provision of adequate funding by the government will go a long way in the successful implementation of computer education programmes in junior secondary schools in the study area.

RECOMMENDATIONS

Based on the findings of this study the following recommendations are made for action:
  ➢ Government at all levels should ensure the adequate provision of physical infrastructural facilities such as computer accessories for the smooth take off of the Computer Education programmes.

  ➢ Effort should be made by the government to recruit, train and re-train teachers in the area of computer education.

  ➢ Government at all levels should strive to ensure adequate provision of funds for the successful implementation of Computer Education programme as well as purchase of computer accessories and also provide internet services which is not affordable to all.

> ➢ Electricity generators and solar inverters should be provided to ensure steady power supply in case of power outrage from National Power Grid.

REFERENCES

Abidoye, J. A. Aderele, S. O & Adelokun, A. K. (2011). Information and communication technology (ICT) and teacher education programmes in Nigeria. Nigerian Journal of Teachers Education and Technology 9 (1), 92 – 99.

Aduyemi, D. (2013). Computer Education: key to national development. Ubuku Amaka. http://unt.ij/za/hsh.

Ahmed, H. O (2003). School facilities as co-relates of students achievement. E-journals.org/index.php/esj/article ---/117

Bukaliya, R. & Mubika, K. A. (2011). Teachers' competence in information and communication technology, implication for computer education in Zimbabwe secondary school. International Education, 1 (4) 414 – 425.

Chan, W. (1996). Effect of physical infrastructure on --- archives arches.net/----/mainland China.

Dike, V. (2009) in Babafemi, G. O. & Adebibu L. O. (2007). Application of computer technology in circulation sub-system. Available in www.uniilorin.edu.ng/index.php.

Federal Republic of Nigeria (2004). National Policy on Education (NERDC). Yaba, Lagos.

Mann, Prem S. (1995). Introductory statistics (Ed). Wikipedia http:/en.m.wikipedia.org/----/----descriptive.

Obanya, P. (2002). ICT Education in Nigerian public school. www.resjournal.comjournal/education.NEAA publication, Benin

Offorma, G. C. (2015). Implementation of Nigerian secondary schools curriculum. rocate. www.ncxare.org

Oyekan S. O. (2000). Foundation of teachers' education Okiti Papa. Edumota printers Nigeria.