

ASSESSMENT OF COMPUTER STUDIES CURRICULUM IMPLEMENTATION IN PUBLIC SENIOR SECONDARY SCHOOLS OF BAYELSA WEST SENATORIAL DISTRICT

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Abstract

The present paper is an evaluation of the implementation of computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial District. This study adopted descriptive research design. This design enabled the researcher to evaluate the implementation of Computer Studies Curriculum in public senior secondary schools in Bayelsa state. The population consisted of all the Computer Studies teachers in public senior secondary schools in the two (2) LGA's of Bayelsa West Senatorial District, with a total of 36 schools. The total population of teachers in all the public schools in the area is 287 makes up of 130 male and 157 females. The research instrument used for this study was a questionnaire. The instrument was content and face validated by two experts in the department of Curriculum Studies and Instructional Technology, Faculty of Education, Ignatius Ajuru University of Education. The questionnaire was administered to a group of 98 public senior secondary school teachers in the Senatorial District, after a brief explanation of the purpose of the study to the respondents in the sampled schools. The instrument was administered to them and retrieved after their responses. The period of data collection lasted for four weeks. Data obtained for research questions was analyzed using mean and standard deviation. Data obtained from the test was used to answer the research questions using mean and standard deviation while Z-test was used in analyzing the hypotheses at 0.05 level of significance. The data analysis showed that there is no significant difference between the views of male and female teachers on the extent of implementation of objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial District. It also showed that there is no significant difference between the views of male and female teachers on the extent of availability and adequacy of resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in the district.

KeyWords: *Evaluation, Implementation, Computer Studies Curriculum, Public, Senior Secondary Schools, Bayelsa, and Senatorial District*

Introduction

The Federal Republic of Nigeria (2014), stated the teaching of computer science at all levels of education. This may be connected to the fact that the valuable role of Computer Studies in the development of a nation needs not be over emphasized. Ibole (2020) believes that ICT rules the universe; it serves and ensures human survival, Jegede (2013) asserts that, the development in information communication technology has so greatly affected the lives of every human being so much that, to be ignorant of the basic knowledge of this development is to live an empty, meaningless, and probably unrealistic life. Valley and Withier (2019) strongly believe that, a solid foundation in computer sciences is essential to free-thinking

participation in the world. It is also clear that, this basic knowledge of ICT is essential to unlocking doors to a wide variety of professional opportunities. Computers play a major role in technological development all over the world. Countries which have successfully integrated computers in their educational system have very developed economies (Mwaniki, 2017). Nowadays computers which are a common form of ICTs, play an important role in the education sector, especially in the process of integrating technology into the educational activities. The education sector is the most effective sector to anticipate and eliminate the negative impacts of information and communication technology. Computer has a long history of existence. Today computer technology has undergone series of transformations.

According to Kremer (2018), computer is an electronic machine that operates with remarkable speed. Initially, many believed it was impossible that computer could be a scientific field of study during the late fifties; it gradually later became accepted among the greater academic population. Computer science is the science that deals with the theory and method of processing information in digits. Computer has become a rapidly growing discipline as the technological age advanced. Computer studies or science could also be understood as the blending of principles, theories and applications of technologies that underlies the access of information. The information that the computer scientists uncover, processes, stores and communicates is often encoded in a computer memory. From the above explanations, it could be deduced that computer science is wholly referring to the science of computing which is the use of computer to process data or perform calculations. Computers have virtually touched nearly every aspect of human endeavor. Kremer (2018) defined computer as an electronic machine that operates with remarkable speed and reliability, A microprocessor "brain" and electronic memory work together to enable the computer process data.

Computers were invented to solve many mathematical problems in the early stage. But today, computers have gone beyond that and there is hardly any area of life where computer cannot be applied. In a rapidly changing world, secondary education is essential for an individual to be able to access and apply information. Such ability must include the adequate use of computer. Also, the Economic Commission for Africa has indicated that the ability to use computer in accessing information is no longer a luxury, but a necessity for development. Unfortunately, many developing countries especially in Nigeria are still low in computer application and its use (Aduwa, 2020). According to Abbas et al (2013), computers have affected our lives in many ways, especially in the field of education. Computer studies is a process of training, designed to give knowledge, develop skills and abilities that could lead to the development of mental alertness and the right attitude to life. Today computer technology has undergone series of transformations. Evoh (2017) emphasized that secondary education is essential for the creation of effective human capital in any country. The need for the inclusion of computer science in the education curriculum of the Nigerian secondary schools cannot be overemphasized. In this technology-driven age, every one requires ICT competence to survive (Adom & Anie 2018).

This calls for early acquisition of computer skills by students. Oduroye (2012) has emphasized the increase in demand for computer literacy in Nigeria. This is because employees realize that computer and other ICT

facilities can enhance efficiency, and employees have also realized that computers can be a threat to their jobs, and the only way to enhance job security is to become computer literacy. Teaching and learning these skills is a concern among professionals. A good background in computer science enables people to quickly learn and understand how things around them work. Hall-Rose (2014) asserts that people need to master a minimum amount of scientific and technological knowledge to understand the world around them. Knowledge in computer is therefore pertinent, that every individual, young, old, male or female be scientifically literate in order to have a better survival. In the light of the above facts Muhammad (2019) posits that ICT plays the following roles in education:

- It promotes the principle of life-long learning/education.
- It increases a variety of educational services and medium/method.
- It promotes equal opportunities to obtain education and information.
- It develops a system of collecting and disseminating educational information.
- It promotes technology literacy of all citizens, especially for students.
- It develops distance education with national contents.
- It promotes the culture of learning at school.
- It supports schools in sharing experience and information with others.

The computer Science teacher's role is one of a facilitator of learning experience. The teacher is the one who provides learning opportunities and necessary guidance, to increase both the quality and quantity of learning acquired by the students. Educational researchers have shown that, teachers who are able to guide their students through learning situations by indirect influence such as questioning, prompting or leading rather than by direct teaching, informing or explaining, produce students who are less dependent and in general learn more effectively (Ben Yunus,2012) asserts that, the classroom teacher forms the cornerstone in curriculum implementation as the main force and the last person that ensures that any curriculum is implemented according to specification, Therefore, if a teacher is untrained or unwilling to implement curriculum plans, his or her desired success cannot be attained, Also, there is the need for the teacher to be equipped with appropriate instructional resources.

Hence the aim of this study is to determine the male and female teachers' perception on the level of implementation of computer studies curriculum in Bayelsa West Senatorial District.

Methodology

This study adopted descriptive research design. This design enabled the researcher to evaluate the implementation of Computer Studies Curriculum in public senior secondary schools in Bayelsa West Senatorial District. The population consisted of all the Computer Studies teachers in public senior secondary schools in the two (2) LGA's of the Senatorial District, with a total of 36 schools. The total population of teachers in all the public schools in the area is 287 made up of 130male and 157 female. (Source: BSSSSB, 2024).Out of 287 Computer studies teachers were select from the two (2) L.G.A's, while ballot technique was used to select a total of ninety-eight (98) computer studies teachers from ten (10) schools each from two (2)L.G.A's in the public senior secondary schools in Bayelsa West Senatorial District.

Instrument for Data Collection

The research instrument used for this study was a questionnaire titled "Evaluation of the Implementation of Computer Science Curriculum" (EICSC), made up of 21 items, designed for teachers in public senior secondary schools in Bayelsa West Senatorial District. The items were divided into two (2) sections, A and B. Section "A" contained demographic data of the respondents while section "B" was used to elicit information from the respondents based on the CIPP model and were rated on a 4-points rating of Very High Extent (VHE)-4pts, High Extent (HE)-3pts, Low Extent (LE) -2pts and Very Low Extent (VLE) -1 pt. The questionnaire is attached as appendix to the research work. The comments from the validators were used for the final draft of the study.

Method of Data Collection and Analysis

The questionnaire was administered to a group of 98 public senior secondary school teachers in Bayelsa West Senatorial District, after a brief explanation of the purpose of this study to the respondents in the sampled schools. The instrument was administered to them and retrieved after their responses. The period of data collection lasted for two weeks. Data obtained for research questions was analyzed using mean and standard deviation. A standard reference means of 2.50 was adopted for the purpose of determining the level of implementation of Computer Studies curriculum in senior secondary schools in Bayelsa West Senatorial District. Data obtained from the test was used to answer the research questions using mean and standard deviation while Z-test was used in analyzing the hypotheses at 0.05 level of significance.

Analysis and Results

Research Question One: To what extent are the objectives of the computer studies curriculum being achieved in public senior secondary schools in Bayelsa West Senatorial district?

Table 1: Mean and standard deviation ratings in the mean response of male & females teachers on the implementation of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial district (context variable)

S/N	ITEMS	VHE	HE	LE	VLE	N	CUM RATING	X	STD	Rmks
1.	To increase public awareness in science and technology.	25	38	20	15	98	296	3.02	0.86	Accept
2.	To direct the science and technology efforts of the nation along well-defined national goals	63	27	4	4	98	345	3.52	.094	Accept

3.	Develop rudimentary skills in the use of computer for text writing, computation, and data.	85	11	1	1	98	376	3.84	.098	Accept
4.	To use the computer and thereby acquire basic skills such as using the keyboard, accessing and editing a file at the, operating system level.	55	36	4	3	98	339	3.45	0.93	Accept
5.	Using the computer to facilitate learning.	29	37	19	13	98	278	2.83	0.84	Accept
Grand Mean								3.33	0.91	Accept

Criteria mean 2.5

The result from table 1 above shows Mean and standard deviation on implementation of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa west Senatorial district. Items 1, 2, 3 and 4 had mean scores of 3.02, 3.52, 3.84 and 3.45 with standard deviation ratings of 0.86, 0.94, 0.98 and 0.93. This indicates that the respondents strongly agreed that implementation of the of Computer studies Curriculum in Public senior schools in Bayelsa West, increases public awareness in science and technology, it directs the science and technology efforts of the nation along well defined national goals, it develops rudimentary skills in the use of computer for text writing, computation and data, to use the computer and thereby acquire basic skills such as using the keyboard, accessing and editing a file at the operating system level. Item m5 had a mean score of 2.83 with standard deviation rating of 0.84, this means that the respondents agreed that computer to facilitate learning, The grand mean of 3.33, which is greater than the criterion mean the criterion mean of 2.50 and depicts that the respondents strongly agreed on the implementation of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa West.

Research Question Two: What is extent is the extent of availability and adequacy of resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district?

Table 2: Mean score and standard deviation in the mean reference of male & females' teachers on the availability of adequate resources for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district

S/N	ITEMS	VHE	HE	LE	VLE	N	CUM RATING	X	STD	Rmks
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1.	There are quality teaching and learning materials for the implementation of computer science in my school	7	10	69	12	98	208	2.12	0.76	Rejected
2.	We do not have enough equipment to meet up computer science requirements	14	81	3	-	98	305	3.11	0.35	Accepted
3.	Materials such, as lesson,74,11,11,2,98, 353,3.60,0.68,Accepted, used for teaching in most senior secondary schools are outdated	74	11	11	2	98	353	3.60	0.68	Accepted
4.	There are rooms for improvement in computer science content if resources are available in public senior secondary school in Bayelsa State.	67	16	11	4	98	342	3.49	0.72	Accepted
5.	Inadequate availability of materials resources such as instructional materials is a problem to the effective computer science curriculum content	68	16	11	3	98	345	3.52	0.70	Rejected
Grand Mean								3.17	0.88	Accept

Result from table 2 shows that item 1 had a mean score of 2.12 with standard deviation ratings of 0.76. This shows that the respondents disagreed that there are quality teaching and learning materials for the implementation of computer science in the school. Item 2 had a mean score of 3.11 with standard deviation ratings of 0.35. This revealed that the respondents strongly agreed that they do not have enough equipment to meet up computer science. Requirements. Items 3,4 and 5 had mean scores of 3.60, 3.49 and 3.32 with standard deviation ratings of

0.68,0.72and0.70.These indicates that the respondents strongly agreed that materials such as lesson note for teaching in most senior secondary schools are outdated, there are rooms for improvement in computer

science content if resources are available in public senior secondary school in Bayelsa State and there are inadequate availability of materials resources such as instructional materials is a problem to the effective computer science curriculum content. However, research question two yielded a grand mean of 3.17, which is greater than the criterion means of 2.50 and depicts that there is availability of adequate resources, for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district is significantly low.

Hypotheses

Ho₁: There is no significant difference between the opinion of male and female teachers on the extent of realization of the objectives of Computer studies Curriculum in public senior secondary school in Bayelsa West Senatorial (context variable).

Table 3: Z-test on the difference in the mean response of male and females teachers on the extent of realization of the objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial district

Variable	N	Mean	SD	z-real	Df	p-value	Decision
Male teachers	50	2.51	0.62	.557	96	.960	Accept Ho ₁
Female teachers	48	2.35	0.59				

Table 3 shows the summary of z-test on the difference in the extent of implementation of the objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial. The calculated z is ($Z_{(96)}=.960, P>.05$). The null hypothesis is retained at 05 level. This shows that there is no significant difference on the extent of implementation of the objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial.

Ho₂: There is no significant difference between opinion of male and female teachers on the extent of availability and adequacy of resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district.

Table 4.: Z-test on the difference in the mean reference of male & females teachers in the extent of available adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district

Variable	N	Mean	SD	z-real	Df	p-value	Decision
Male teachers	50	2.64					Accept Ho ₂
			1.84	.557	96	.960	
Female teachers	48	2.29	0.94				

Table 4 shows the summary of z-test on the difference in the extent of available adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in

Bayelsa West Senatorial district. The calculated z is ($Z_{(96)}=1.84, P>.05$). The null hypothesis is retained at 05 level. This shows that there is no significant difference in the extent of implementation of available adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools on Bayelsa West Senatorial district.

Discussion of Findings

Evaluation for the implementation of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial district

Research question one focused on the extent of attainment of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial district. The result from table 1 shows that the respondents strongly agreed that implementation of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa West, increases public awareness in science and technology, to direct the science and technology efforts of the nation along well defined national goals, it develops rudimentary skills in the use of computer for writing, computation and data, to use the computer and thereby acquire basic skills such as using the keyboard, accessing and editing a file at the operating system level and computer also facilitate learning. The grand mean of 3.33, which is greater than the criterion means the criterion mean of 2.50 and depicts that the respondents strongly agreed on the implementation of the objectives of Computer studies Curriculum in public senior secondary schools in Bayelsa West. When put to statistical test, the result from table 4.5 showed the summary of z-test on the difference in the extent of implementation of the objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial. The calculated z is ($Z_{(96)}=.960, P>.05$). The null hypothesis is retained at 05 level. This result =.960, shows that there is no significant difference on the extent of implementation of the objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial. The finding is agreement with Nigerian Educational Research and Development Council (NERDC) (2012) who asserts that the objectives of computer studies curriculum in agreement with national objectives as stated under the section on the philosophy of Nigerian education are to increase public awareness in science and technology, to direct the science and technology efforts of the nation along well-defined national goals e.g. self-reliance.

The availability and adequacy of resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district

Research question two sought answers the extent of the availability of adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district. Result from table 4.2 shows that the respondents disagreed that there are quality teaching and learning materials for the implementation of computer science in the school while they agreed they do not have enough equipment to meet up computer science requirements, that materials such as lesson note for teaching in most senior secondary schools are outdated, there are rooms for improvement in computer science content if resources are available in public senior secondary school in Bayelsa State and there are inadequate availability of materials resources such as instructional materials is a problem to

the effective computer science curriculum content. The grand mean of 3.17, which is greater than the criterion means of 2.50 and depicts that there is availability of adequate resources, for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district is significantly low. When put to statistical test, table 4.6 shows the summary of z-test on the difference in the extent of available adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools in Bayelsa West Senatorial district. The calculated z is ($Z_{(96)}=1.84, P>.05$). The null hypothesis is retained at 05 level. This shows that there is no significant difference in the extent of implementation of available adequate resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools on Bayelsa West Senatorial district. This finding is accordance with Ajeigbe, et al (2015) concluded that the availability and utilization is on the average and therefore recommended among others that there was the need to provide ICT facilities in schools for effective teaching of computer studies in secondary schools.

Summary of Findings

Based on the analysis of the data generated, it was found that:

1. There is no significant difference between the views of male and female teachers on the extent of implementation of objectives (context variable) of the computer studies Curriculum in public senior secondary schools in Bayelsa West Senatorial district.
2. There is no significant difference between the views of male and female teachers on the extent of availability and adequacy of resources (input variable) for the implementation of Computer studies curriculum in public senior secondary schools on Bayelsa West Senatorial district.

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