Implementing ICT Techniques in Teaching for the Effective Implementation of the New Nine Years UBE Curriculum in Anambra State (Pp. 367-376)

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Abstract

Implementing ICT Techniques in Teaching for effective implementation of the new nine years UBE curriculum is the objective of this research study. The study investigated the effective implementation of ICT in the new nine years UBE curriculum. The survey was based on four research questions. A sample total of 3048 science and non-science teachers consisting of 551 science teachers from private primary and 823 science teachers from public junior secondary schools, and 731 non-science teachers from from private primary and 943 non-science teachers from government owned junior secondary school from the six different educational zones in Anambra State. A questionnaire titled "implementing ICT Techniques in Teaching for Effective Implementation of the New UBE Curriculum" (IICTEINUBEC) was used for data collection. Data was analyzed using mean ratings. The Findings include that the schools did not have ICT course outlines specifying the progressive topics to be learnt by primary and Secondary school students, science based subjects which require the use of ICT for its effective teaching / learning are not being used. It was recommended that teachers should not teach the use of ICT in education independently but portraying its scientific nature correlating it with other conventional science subjects taught in schools and

that ICT based education courses should be structured into the school curriculum so that it can be taught at different levels in logical and procedural sequence.

Introduction

The present Nigerian educational system is at its low ebb trying to implement computer education courses into its curriculum which is still a struggle for most government owned schools. The purpose of ICT in the educational curriculum is enhancing the learning process through the interaction of resources materials and the mature minds of the teachers and the course contents of the curriculum. According to Nwite (2007), Advance and developed countries have attested to the fact that ICT is a central focus of educational policies for use and integration in the school curriculum.Oxford advanced learmners dictionary of contemporary englih language defines communication asd the activity or process of expressing ideas or feelings while information and communication technology (ICT) is defined as the use of electronic equipment especially computers for the storing,analyzing and sending out of information(Hornby,2001).

Wheeler (1967) defines curriculum as planned experience offered to the learner under the guidance of the school. The curriculum is practically designed to contain the relevance of the course, major objectives, list of courses, and duration of each course. As rightly supported by Eya (1999), the curriculum is a vehicle through which educational objectives are achieved.

Introducing the use of ICT facilities in the classroom environment of pupils and students of the UBE programme will enhance their curriculum: in the area of

- binary, graph interpretation, and logarithm will enhance their assimilation of the mathematical knowledge.
- Poetry reading, article comprehension and literature genres
- economics and accounts principles of demand and supply, profit and loss account and demographic dispersal of the population.
- Archiving and retrieval of chronicle events, archeological facts will promote interest in history

The use of ICT products in teaching conventional subjects in the classroom will promote efficient interaction, as Nwite (2007) rightly stated that in a

classroom situation communication process influences learners' behaviours through interaction.

Problem Statement

Inspite of the accompanying gains and the clarion call for the provision and utilization of ICT facilities in our school system, there are still serious inhibiting factors encountered in the implementation of the policy at institutional and classroom levels (Nwite, 2007). In the attempt to revolutionalize the Nigerian educational sector by introducing ICT into the school curriculum, many ills were also introduced along side. The current educational situation in Nigeria only portrays ICT in computer science and science related subject and therefore not beneficial to other educational units. The problem of this study therefore is to find out how the restructuring of ICT could be used to develop education in the new Nine years UBE curriculum in Anambra State.

Purpose of the Study

In spite of the accompanying gains and the clarion call for the provision of ICT facilities in the UBE curriculum, there are still serious inhibiting factors encountered in the implementation of the policy at institutional and classroom levels(Nwite,2007). In the attempt to revolutionalize the Nigerian educational sector by introducing ICT knowledge into the school curriculum, many ills were also introduced alongside the current educational situation in Nigeria only portrays ICT knowledge as a subject that has to be taught to students in theory and it is not considered to use relevant to utilize ICT tools like slide projectors, micro-computers and other electronic learning AIDS TO teach other subjects. The problem of this study therefore, is to find out how using   ICT knowledge and facilities could help to develop education in the new nine years curriculum Anambra state

Research Questions

This research survey employed the use of four research questions to conduct the study, and they are itemized as follows;

1. What is the position of ICT in the school curriculum?
2. What is the degree of utilization of ICT in the curriculum?
3. What subjects would ICT enhance learning in?
4. What is the level of ICT compliance in school curriculum?

Methodology

This type of study intends to collect data from a sample of Science Teachers and Non-Science teachers in Private Primary and government owned junior secondary schools in Anambra State, therefore the research design used for this research was the descriptive survey method.

The sample of the population sued for this research survey is made up of 1374 science teachers (551 from private primary and 823 from public junior secondary schools), and 1674 non-science teachers (731 private and 943 from public junior secondary school), bringing the total to 3048 science and non-science teachers from the six different educational zones in Anambra State of Nigeria.

The instrument used in collecting data for this research survey was achieved using a questionnaire which was titled "Restructuring ICT Courses for Effective Implementation of the New UBE Curriculum" or Restructuring ICT (RICTC), consisting of 24 items based upon the 4 point Likert Scale of Strongly Agree (4 points), Agree (3 points), Disagree (2 points), Strongly Disagree (1 point). The research instrument was labeled valid after much, deliberations and scrutiny by the following educators and scholars;

1. Two experts in Measurement and Evaluation (both from Nwafor Orizu College of Education, Nsugbe Anambra State)
2. One Professors in Measurement and Evaluation (Delta State University, Abraka Delta State)

The researcher was finally given the go-ahead to administer the questionnaire. The reliability of the instrument was determined by the Cronbach alpha procedural model which was used in establishing the consistency of the reliability of the research instrument used in conducting the survey.

The data was administered and retrieved within a period of about 28 weeks, this was due to the distance between schools and geographical terrain involved which was done with the help of colleagues of the same field of study. However, a total of three thousand five hundred (4100) copies were sent out and four hundred and fifty two (452) could not be retrieved during the time frame involved.

The analysis of the data in this survey was done with the aid of an arithmetic mean based on a 4-point scale. A classification of the mean was set for an

average of 2.50 mean mark, which was set to represent mean rating of 2.50 and above for agree, and mean rating below the 2.50 mark was used to represent the bias (disagree) opinion of teachers.

Presentation of Results

Research Question 1: What is the position of ICT in the school curriculum?
Analyzing the opinion poll respondents in Table 1, science and non science teachers agreed that increased classroom performance of students, generated High scores in tests and examination, motivation of student interest in subjects being taught, Improvement of students study habits, and Improvement of the curriculum content and the course materials used in the teaching and learning processes were the regarded as the position of ICT in the school curriculum because items (1, 2, 3, 4, 6) scored a mean mark above 2.50. While item number 5 revealed that non-science teachers did not agree that the position of ICT in the school curriculum increased the technological interest of students and teachers due to its mean score of 1.55 (less than 2.50). Contrasting this information, the science teachers agreed to this fact scoring (3.21) above the 2.50 mean mark.

Research question 2: What is the degree of utilization of ICT in the curriculum?
Table 2 shows the mean of all the items on the table scoring below the 2.50 mean mark, signifying that both science and non-science teachers responses that the degree of utilization of ICT in the curriculum is in the negative, indicating that ICT is not being effectively utilized in the curriculum.

Research Question 3: What subjects would ICT enhance learning in?
From the teacher's responses in Table 3, it could be concluded that ICT is necessary in enhancing the teaching and the learning of virtually all subjects. This is due to the fact that all items in the table scored above the mean range of 2.50, indicating that both science and non-science teachers agree that ICT is a necessary prerequisite in Education and therefore its inculcation into the curriculum would enhance teaching and learning methods.

Research Question 4: What is the level of ICT compliance in school curriculum?
The Table 4 revealed that all items on the table (19 – 24) scored below the mean mark of 2.50, thereby revealing that the schools do not use computers and computer accessories to teach live classroom sessions. And that the

schools did not provide Internet and network facilities in schools, IT Technical / Supporting staff for maintenance of ICT facilities. It was also noted that the schools did not provide In house computer literacy training for teachers, well equipped and conducive classrooms computer usage, and there were no computer aided science laboratories and e-library systems.

Discussion of Findings
In discussing the findings of this research based on the responses of science and non-science teachers to research questions, it was discovered that Research Question 1, revealed that the position of ICT in the school curriculum in private primary and government owned junior secondary schools would increase classroom performance, improve students' scores in tests and examination, increase student interest in the subjects being taught, improve students study habits, and increase the wealth of the curriculum content and the course materials used in the teaching. However it also revealed that non-science teachers did not agree that the introduction of ICT into the school curriculum increased the technological interest of students and teachers. Contrasting the information given by the non-science teachers, the science teachers agreed to that the introduction of ICT into the school curriculum increased the technological interest of students and teachers.

The Findings in Research question 2, revealed that both science and non science teachers responded that the degree of utilization of ICT in the curriculum is in the negative, indicating that ICT is not being effectively used in the studying of science related subjects like mathematics, studying of English and Literary studies, studying of History and Religious studies, studying of Social science subjects e.g economics, commerce, in Laboratory Experiments, and in Libraries studies.

The research question 3, unveiled the fact that ICT is necessary in enhancing the teaching and the learning of virtually all subjects. This is due to the responses of the science and non-science based teachers who agreed to the fact that ICT is a necessity in Education and therefore its inclusion into the curriculum would not only enhance teaching and learning methods, but would produce competent workforce when released into the labour market.

Finally the research Question 4 reveals that the schools sampled do not use computers and computer accessories to teach live classroom sessions as at the time this survey was carried out. And that the schools did not have Internet

and network facilities and IT Technical / Supporting staff to maintenance the ICT facilities. It was also discovered that the schools did not provide any form of computer literacy training for teachers, and well equipped and conducive classrooms computer usage did not exist. Also there were no computer aided science laboratories and functional library systems.

Summary and Conclusion

In implementing the new nine years Universal Basic Education Curriculum, there is a need to synchronize ICT courses and the use of ICT facilities with the existing curriculum so as to enhance the learning process of students, thereby producing students that can compete with other students in the global world. Nwite (2007) opines that in a class room situation, ICT is utilized to enhance teaching effectiveness. It is therefore hoped that the when ICT courses are restructured to integrate into the school curriculum, it would help to accelerate students basic skill development in school subjects like reading, sciences practical courses and mathematics, students would be challenged to learn independently and in groups trough interactive processes offered by ICT interfaces, update students academic knowledge and learning practices, provides teachers with efficient and effective tools to take care of students individual learning differences and it is hoped that it would resolve the problem of inadequate teaching personnel(Gbadamosi,2006).

In conclusion, it was discovered that the present Nigerian Educational system did not teach ICT courses alongside conventional courses and did not use ICT facilities to teach non science related subjects. It was also discovered that the ICT courses found on most curriculum did not specify the topics or subjects of ICT to be learnt by students and at what educational stage or level.

Recommendation

- Educational administrators should restructure ICT courses in the new nine years UBE curriculum to focus on the economic empowerment and self reliance of the students, inline with the objectives of NEEDS.
- Educational budgetary allocation should be assigned for the ICT requirement and the number of public schools in the state
- Foreign investors should be invited to invest in ICT educational joint venture

- The Ministry of Education should inaugurate an ICT interim committee to monitor, implement and synthesize ICT in the school curriculum
- Government should provide in-house ICT training for teachers.
- ICT courses should be structure into the curriculum so that it can be taught at different levels in logical and procedural sequence
- Finally, it is highly recommended that teachers should not teach ICT independently portraying its scientific nature but alongside other conventional subjects taught in schools, which will promote the use of ICT facilities.

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Table 1 Mean rate of teacher's response to position of ICT in the school curriculum

Items		Science Teachers		Non-Science Teachers	
		$\overline{x}$	Decision	$\overline{x}$	Decision
1.	Increased classroom performance of students	3.59	Strongly Agree	2.80	Agree
2.	High scores in tests and examination	3.88	Strongly Agree	3.29	Agree
3.	Creates student interest in subjects being taught	2.95	Strongly Agree	3.14	Agree
4.	Improves students study habits	2.99	Agree	3.40	Agree
5.	Increases technological interest of students and teachers	3.21	Agree	1.55	Disagree
6.	Improves the curriculum content and the course materials used in the teaching and learning processes	3.92	Strongly Agree	2.57	Agree

Table 2 mean rate of teacher's response to the degree of utilization and effectiveness of ICT in the curriculum

Items		Science Teachers		Non-Science Teachers	
		$\overline{x}$	Decision	$\overline{x}$	Decision
7.	Utilization of ICT in studying of science related subjects like mathematics	2.22	Disagree	1.88	Disagree
8.	Utilization of ICT in studying of English and Literary studies	1.29	Disagree	2.48	Disagree
9.	Utilization of ICT in studying of History and Religious studies	2.11	Disagree	1.77	Disagree
10.	Utilization of ICT in studying of Social science subjects e.g economics, commerce etc	2.04	Disagree	2.37	Disagree
11.	Utilization Of ICT in Laboratory Experiments	2.26	Disagree	2.15	Disagree
12.	Utilization of ICT in Libraries studies	1.92	Disagree	2.39	Disagree

Table 3 Mean rate of teachers' response to the subjects that ICT would enhance in

Items		Science Teachers		Non-Science Teachers	
		$\overline{x}$	Decision	$\overline{x}$	Decision
13.	Sciences (Mathematics, Physics, Chemistry)	3.59	Strongly Agree	2.73	Agree
14.	English and Literary studies	2.56	Agree	3.82	Strongly Agree
15.	Social Science (Economics, Commerce, Government)	3.29	Agree	3.33	Agree
16.	History (sociology, Archeology)	2.72	Agree	3.39	Agree
17.	Linguistics (French, German studies)	2.53	Agree	3.01	Agree
18.	Religious studies	2.98	Agree	3.08	Agree

Table 4 Mean rate of teacher's response to the level of ICT compliance in school curriculum

Items		Science Teachers		Non-Science Teachers	
		$\overline{x}$	Decision	$\overline{x}$	Decision
19.	Utilization of computers and computer accessories to teach live classroom sessions	1.50	Disagree	0.93	Strongly Disagree
20.	Provision of Internet and network facilities in schools	2.04	Disagree	2.32	Disagree
21.	Provision of IT Technical / Supporting staff for maintenance of ICT facilities	0.79	Strongly Disagree	1.35	Strongly Disagree
22.	Provision of In house computer literacy training for teachers	2.38	Disagree	1.09	Strongly Disagree
23.	Provision of well equipped classrooms conducive for the use of computer and computer accessories	0.95	Strongly Disagree	1.22	Strongly Disagree
24.	Provision of computer aided science laboratories / e-library systems	2.22	Disagree	1.89	Disagree