REAPPRAISING COMPUTER EDUCATION IN ANAMBRA STATE SECONDARY SCHOOLS FOR SELF-RELIANCE: ADMINISTRATIVE ISSUES AND CHALLENGES

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Abstract

The study reappraised Computer Education (CE) in secondary schools in Anambra state. The study, a descriptive survey research design was carried out in Awka and Onitsha Education Zones in the state. Two research questions and two null hypotheses guided the study. Sample consisted of 40 secondary schools, their 40 principals and 40 CE teachers. Questionnaire was used for data collection. Data was analyzed using simple percentages while One Way Analysis of Variance (ANOVA) was used to test the null hypotheses at 0.05 significant levels. The findings revealed that CE is relevant and is greatly accepted in the state although several administrative issues that hinder its effective implementation and consequent goal achievement border it. It was however, recommended among others that government should provide the basic infrastructures and training to enable effective CE programme implementation and sustenance towards making the secondary school graduate self-reliant and functional.

Introduction

The Federal Government of Nigeria (2004) refers to secondary education as the education children receive after primary education and before the tertiary stage. Among other things, the prominent goals of secondary education in all the states of the federation include preparation for useful living within the society, provision of technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development and to raise a generation of people who can think for themselves and live as good citizens. Pertinently, in other to achieve these goals, relevant subjects aimed at acquisition of necessary qualitative skills were incorporated in the curriculum. Computer Education (CE) was among such subjects. It was seen as one of the indispensable tools for achieving self-reliance and functionality.

CE serves numerous purposes. In this era of globalization, it helps the individual to become self-reliant. This is because it provides the individual with the opportunity of acquiring enough and relevant skills, have access to the relevant information/ knowledge about emergent global issues which enable the individual alleviate/ eradicate poverty, generate wealth and create jobs after school. Obviously, computer training and literacy have changed the nature of the work and types of skills needed in most fields and professions. It has created a wide array of new jobs, many of which did not exist ten years ago. No wonder Obayi (2007) posited that human training is a means of preparing people for the ultimate aim of making them good workers so as to be self-reliant in their own interest and that of the larger society. Therefore, the relevance of CE in preparing students for functionality and self-reliance cannot be undermined. This is because it is a programme that is in tune with the trend in the global economy, labour market and occupational situations.

Computer according to Roblyer (2003), is a set of devices designed to work together to accomplish input, processing and output functions in order to accomplish tasks desired by a user. Computer is the bedrock of modern development in this era of globalization. It is therefore not a wonder that the Federal Government of Nigeria (FGN) did not waste time before introducing CE in the educational system in 1988, based on the recommendation of the 32nd Ministerial Council Meeting of the National Council on Education in 1987 (Iyekekpolor, 2007).

Therefore, the FGN made CE one of the subjects to be offered by pupils/students in all Nigerian schools at the basic education level. This subject is to be offered as a compulsory core subject at the primary and junior secondary school levels of education (Federal Republic of Nigeria, 2007). According to Salau & Adebayo (2009), the aim of CE is to give the Nigeria youth early head start in acquiring basic computer skills, develop reasonable level of competence in Information and Communication Technology (ICT), and to make them self-reliant in later years. This is in consonance with the broad goals of National Economic Empowerment and Development Strategies (NEEDS). CE apparently, produces citizens that possess the required knowledge, skills and competences to take advantage of the benefits of ICT revolution in the context of global competitiveness.

By and large, introduction of CE to the Nigerian school system especially at the basic education level is understood, acceptable and praise worthy. This is because the world is fast becoming a global village as a result of the development of ICT. The key instrument in this globalization process is the computer (Salau and Adebayo, 2009). Also, with the introduction of CE in secondary schools, governments expects to bring about a computer literate society from this level of education as well as enable the school children appreciate the potentials and the ability to utilize the computer in various aspects of life and later occupation. It is a common knowledge that no nation in our modern world can lay claim on educational functionality in the absence of an effective computer education (Iyekekpolor, 2007).

Undeniably, the national policy document on education succinctly stated that the success of any system of education is hinged on proper planning, efficient administration and adequate financing. Administration is a function of organization and structure, proprietorship and

control, inspection and supervision (FGN, 2004). In order words, successful implementation of CE would appear to depend on proper and efficient planning and administration of the available CE resources (human and materials) such as availability of academically competent, professionally trained and enduring committed school administrators and teachers, provision of well equipped computer laboratories, adequate and functional facilities for teaching and learning and well trained computer technicians and laboratory personnel, effective power supply, proper security etc.

Although the state government and individuals are making efforts to effectively integrate CE in schools, students' performance does not complement these efforts. This is because personal observation/ interactions with the teachers and students in the studied schools revealed that certain administrative issues challenge its implementation. They are as follows; not all the classes are taught computer studies; teaching of computer studies where done, is mostly theoretical with little or no practical/practice; there is acute lack of qualified computer teachers; inadequate number of functional computer sets; poor power supply; insecurity, high cost of procuring computer sets among other challenges.

The author therefore concluded that awareness has been created in the schools and all without exception are aware of the prominent role of CE in advancing knowledge, but she may not be wrong to attribute the poor state of CE in the state since 2004, barely six years after the national policy incorporated it as a prevocational and vocational elective subjects respectively in order to provide trained man power and to prepare individuals who shall be self-reliant economically (FGN, 2004) to deficient implementation plan and administration. Improper planning would invariably, distort efficient administration and

consequently would adversely affect the attainment of predetermined goals. On this point, Nwaka (2009) opined that effective school administration would be very important in achieving these developmental goals.

As the entire world is marching towards globalization which is intended to improve functionality and boast self reliance, a study like the present one is timely and therefore imperative in order to think again about the nature of CE being implemented in the secondary schools in the state with a view to reassess its relevance; identify administrative challenges and recommend strategies to refocus and make it more efficient towards realizing its goal of making graduates functional and self-reliant.

Statement of the Problem

In spite of the government of Anambra State efforts and provision of computer sets to secondary schools, the public is not satisfied with the students' performance as evidenced in massive unemployment of school leavers and their inability to operate a computer. It may have constituted a source of worry that perhaps the schools are not practicing and studying computer skills and are not producing/turning out the caliber of secondary education graduates which the education policy expected. In other words, it is expected that adequate measures should be in place to guarantee effective implementation of CE in order to produce a kind of graduates that would be economically self-reliant and functional.

Presently, there are indications that some principals and teachers do not see CE as relevant based on the fact that computer studies have not been included even in the Junior Secondary School Certificate Examinations (JSSCE) nor the enormous administrative issues challenging its implementation in the state ameliorated. If these administrative challenges persist then effective integration of CE in the state would not be possible. This study therefore, is poised to investigate the relevance of CE in secondary schools in Anambra State as well as whether there are any administrative issues challenging its implementation and the strategies for the way forward.

Purpose of the Study

The purposes of the study was to examine perceptions of the principals and teachers on the relevance of CE in the state, the extent administrative issues challenge its effective implementation and recommend sustaining strategies.

Research Questions

The following research questions guided the study:

i. To what extent do principals and teachers perceive CE as relevant in Anambra State?
ii. Are there administrative issues challenging effective implementation of CE in Anambra State?

Null Hypothesis

i. There is no statistically significant difference between the reactions of principals and teachers on the relevance of CE in Anambra State.
ii. There is no statistically significant difference between the responses of principals and teachers on the administrative issues that challenge CE.

Methodology

The study was a descriptive survey research design conducted in Anambra state. The study covered all the public junior secondary schools (upper basic education level) in Awka and Onitsha Education Zones of Anambra State. Awka has 64 schools and Onitsha has 32 schools. The target population comprised of the principals of the 96 schools

and the 180 computer studies teachers, that is, those teachers that teach CE in the schools, whether qualified/trained or not. Simple random sampling was used to select 40 schools from the two zones. The 40 schools were deliberately selected based on 20 female and 20 male principals. From the 40 schools, 20 male computer teachers and 20 female computer teachers were selected. Thus, the study was carried out using a total sample of 80 respondents representing 20 male principals, 20 female principals, 20 male computer teachers and 20 female computer teachers.

The instrument used to collect data in the study was a researcher developed questionnaire titled Reappraisal of Computer Education in Anambra state (RECEDAS) to elicit information from the respondents. The items of the instrument drew copiously from relevant experiences and literature. The questionnaire was structured on a five point Likert Scale type of Very High Extent (VHE) 5points, High Extent (HE) 4points, Low Extent (LE) 3points, Very Low Extent (VLE) 2points and No Opinion (NO) I point.

Two lecturers from Nwafor Orizu College of Education, Nsugbe who are experts in item construction and one expert lecturer in Computer Science Department validated the instrument. The reliability of the instrument was established using Cronbach Alpha Method and was found to be 0.87.

Face-to-face administration of the instrument was conducted with the help of three trained research assistants. Data collected were analyzed through the application of simple percentages. One Way Analysis of Variance (ANOVA) was used to test the two null hypotheses at 0.05 levels of significance. The purpose of using ANOVA was to determine whether there are statistically significance differences between the views of categories of persons studied.

Results
Research Question One

To what extent do principals and teachers perceive CE as relevant in Anambra State?

Research question one investigated the extent principals and teachers perceive CE as relevant in Anambra State. 100% of each of the groups strongly agreed that CE is relevant. From the responses it was evident that there was no significant difference in the opinion of the groups studied. To be clearly certain of this position, the ANOVA statistics was administered to the data as obtained based on the first null hypothesis that there is no significant difference between the reactions of the principals and teachers on the relevance of CE in Anambra State.

Table 1
The ANOVA summary of scores obtained from the responses of the principals and teachers on the relevance of CE.

Source of variation	Sum of squares	df	Mean squares	calculated F	Table F	Decision
Between groups	377	3	125.66	1.20	2.73	Ho_1
Within Groups	7929	76	104.3			Accepted
Total Variation	8304	79				At P>0.05

Data on table 1 showed that F-ratio calculated was 1.20 as against the table F-ratio that was 2.73. The F-ratio tabulated was not significant at 0.05 levels of significance. Therefore, the null hypothesis was accepted. This is an indication that there was no significant difference between the responses of the respondents on the relevance of CE.

Research Question Two

To what extent do administrative issues challenge effective CE implementation in Anambra State?

For the questionnaire items based on the administrative issues prevalent in most of the schools and discussed in the introductory part of this study, the respondents were expected to indicate the extent they think such administrative condition/issues challenge effective C E implementation in the state. The 80 respondents reacted to the administrative issues. Their responses were put together and it showed that 75 persons or 93.75% of the respondents (both teachers and principals) strongly agreed that those issues challenge effective CE implementation in the state while five persons or 6.25% merely responded on the level of agree. There were no responses at the other levels. The author therefore, asserts that the respondents unanimously agreed that CE implementation is challenged. But in order to determine statistically any variation in the reactions of the principals and teachers, ANOVA was applied and presented on Table 2 below. This is based on the second null hypothesis that there is no significant difference statistically between the principals and the teachers on the administrative issues that challenge effective CE implementation in the state.

Table 2: The ANOVA on the scores of the principals and teachers on the CE challenges

Source of variance	Sum of squares	df	Mean of squares	F-calculated	F-critical	Result
Between groups	953	3	317.70	0.27	2.73	Ho₂
Within Groups	107247.70	76	1411.15			Accepted
Total	108200.80	79				

Table 2 shows $p > 0.05$; F-calculated of 0.22 and F-critical of 2.73. Thus, the $H0_2$ was upheld. This is because the calculated F is less than the critical F. This is in indication that the principals and teachers are not significantly different in their mean ratings measured at 0.05 statistical levels of significance.

Summary of Findings

The study revealed as follows:

i. That the principals and teachers of secondary schools in Anambra state in their opinions strongly agreed that computer education is relevant and acceptable to them.

ii. That some prevalent administrative issues challenge CE implementation in the state.

Discussion of Findings

In relation to research question one, both the principals and teachers to a very high extent agreed that CE is relevant and greatly cherished in the state. This observation represents a positive omen for CE in the state. It is also heart warming because the principals and teachers seem ready to enhance actualization of the goals of CE. Actually, they are aware of its prominent role in advancing knowledge and skills necessary for effective functioning in the modern world but government has not been able to provide the basic infrastructures and training. This finding compliments earlier studies by Avis (2002), Moor and Zaskis (2002), Faber and Trkman (2003), Okwoche (2005), Okani(2005) and Achimugu (2009) who noted that CE is relevant and contribute in so many ways such as dissemination of information, helping students to learn more productively, gain knowledge and concepts that could be applied to solve real life problems and contribute to achieving our educational goals.

Research question two ascertained perception of both teachers and principals on such administrative issues like availability of competent, professionally trained enduring and

committed CE teachers, CE curriculum compliant textbooks, well equipped CE laboratory, adequate and functional facility for effective teaching and learning such as pod casts, well trained computer technicians and laboratory personnel, financial resources, security and environmental concerns etc. Analysis of their reactions altogether revealed that 93:75% of the respondents strongly agreed that these issues are currently bordering on CE in the state while 6.25% merely agreed. Invariably, all the 80 respondents greatly cherished CE, but are worried that it has not been well integrated into the system due to the above listed challenges. This may be traced to its hasty implementation without proper planning and provision of the basic human and material resources. It is disheartening that in most of the schools where CE is done at all, the subject is being handled by poorly/ill motivated and unqualified teachers who merely give attention to the theoretical aspects and neglect the practical aspects. It is needless to say that this situation poses serious threat to effective realization of the goals of CE in the state because it has been noted that no education can rise above the quality of its teachers (FGN, 2004). In the same vein, because the CE is mostly done in theory instead of practical, the students simply 'cram' the text materials for the sake of passing their exams without having the opportunity to acquire the practical skills and knowledge (Usiade, 2009). The expectation is that CE should be implemented practically, but, this will be possible where infrastructures are in place and are operated by the right calibers of teachers and technicians.

Implication of the Findings

The basic implication of this study is that both teachers and principals in the state appreciates the relevance of CE for life-coping skills. On the bordering administrative issues, there is a serious danger. The implication is that relevant goals of CE may simply be a waste of valuable efforts if the provision of adequate human and material resources is not given due consideration.

The teachers and the principals whose duty it is to implement CE must be trained and well groomed in CE skills to effectively impart the right knowledge and skills on the students. This is because nobody gives what he does not have or else CE would become 'garbage in garbage out' – a disastrous effort.

Conclusion

An attempt has being made to reappraise CE in secondary schools in Anambra State. Despite the small size of the sample, the result of the study offers a basis for generalising conclusively that CE is relevant and acceptable. However, regrettably, CE is characterized by such administrative issues like unavailability of both human material resources, which challenge its effective implementation. In fact, there is still hope because if government should provide the basic infrastructures and training and enforce implementation of the below highlighted recommendations, CE in the state would yield the functionality and self-reliance expected of it.

Recommendation

In reappraising the implementation of CE for self reliance and functionality, the following recommendations were made:

1. Government should urgently provide the basic infrastructure and training for the realization of the goals of CE.

2. CE should be implemented practically, with exploratory and experimental methods rather than in theory. To this effect, CE facilitators/teachers should emphasize functionality; that is the ability to apply something already learnt in another given situation.

3. Government should infuse CE in the NCE programmes and ensure that adequate

qualified teachers are employed to handle the students and not any teacher.

4. Government should introduce computer education as a compulsory senior secondary school subject in the least. This will enhance the realization of national policy intention because learners equipped with the computer literacy skills, will be functional and self-reliant in the modern society.

5. Feasibility programmes should be to train and sustain available CE teachers as well as retain them with adequate remuneration packages.

6. Government should train and support teachers to meet the challenges of CE.

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