

EVALUATION OF THE LEVEL OF IMPLEMENTATION OF THE CONTENTS OF THE NATIONAL COMPUTER EDUCATION CORE CURRICULUM FOR PRIMARY SCHOOLS IN NIGERIA

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Abstract

This was a study carried out to evaluate the level of implementation of the contents of the national computer core curriculum for primary schools in Nigeria. This is hinged on the indisputable importance of the primary education. The purpose of the study was to find out the level to which the contents of the computer education taught at the primary schools in Ebonyi State correspond with the specifications of the National Computer Education Core Curriculum. The hypothesis tested was that the level of correspondence of the contents of computer science education taught in Ebonyi State primary schools compared with the specifications of the National computer education core curriculum does not

depend significantly on school ownership. The study geared to find out the extent of implementation of this program because most of the time good programs are foiled at the implementation stage. Hence the study was carried out in Ebonyi State of Nigeria. 204 teachers were randomly selected from the three zones of Ebony State for the study from 36 primary schools. 9 private and 25 public owned schools. The instrument for data collection was the computer education implementation evaluation checklist (CICIEC) developed by the researchers. It covered all the computer content areas stipulated in the core curriculum from primary 1-6. CECIEC was face validated by computer subject specialists and experts in Measurement and Evaluation. Their corrections were duly effected.. Reliability of CECIEC was established through Kendal's coefficient of Concordance of 0.69 indicating an agreement among the raters. Results showed a perfect implementation of some of the content areas. Many have high correspondence with the national computer core curriculum but not perfect. While one was not thought at all, others have low percentage of correspondence. Recommendations were made by the study to cushion the effects of the problems identified by the researchers.

KEY WORDS: Evaluation, Implementation, Core Curriculum, Computer Education and Primary Education.

Introduction

Throughout the World, education at the primary school level is believed to be the most essential, as well as most patronized by the citizens of any country. It is the education offered to children within the ages of six to eleven (6-11) years and above, in a formal setting. It constitutes the foundation upon which subsequent education of the child depends. The reason for this is because every other level of education is anchored to it. As opined by Anugwo (2011: 281) “prior experiences form a foundation for the building of upcoming knowledge”. It is this level of education that offers the citizenry the opportunity of knowing the act of reading

and writing. It equally helps them to understand themselves and the world around them. The non attendance of primary school makes it impossible for anybody to move further to any other level of education hence, the success of the educational system depends on the way this primary or basic education is managed. This foundational step is very important and should be given adequate attention. Popoola, Bello & Attanda (2009), said that in view of the significance of education at the primary school level, governments should make special emphasis regarding primary education and make it the centre piece of all their enlightening policies.

In a nutshell, a well conceived, cross checked and thoroughly executed primary education system forms the rallying end for national advancement and solid economic development. It is therefore very vital to formulate the curriculum which encompasses all the rudiments of primary education especially in relation to the issue of subject matters or content areas aspect of the primary school curriculum.

According to Ebere and Soinyo (2017) curriculum is a systematic body of materials and an organized plan put together to modify the behavior of an individual in his/her environment. Body of materials here includes the objectives and the knowledge to be acquired while the plan includes the instructional

activities, contents of the curriculum and resources designed to affect the materials. The curriculum itself requires planned efforts, technical and articulated reasoning. The importance of the Curriculum can never be over emphasized even to the extent that no subject is complete without a well conceived and articulated curriculum.

Computer science is one of the subjects done in the primary school and hence part of the curriculum. It is one of the subjects also done in secondary and tertiary schools due to its relevance to national development. A lot of research reports on academic and economic worth of computer, especially as it concerns the developed nations revealed that computer is very important to educational development of any country (Yusuf, 2005). The uses of computer has gone beyond data processing abilities and are now affecting organizations of different sizes as well as types in bringing changes in the organizational objectives, aims, goals, dealings and mode of functioning. However, at this moment, computer technology/information and communication technologies (ICTs) are now major instrument in education and had a modernizing influence on how we understand the world and the way we live in it (Tayo, Ajibade and Ojedokun, 2009). Computer studies have therefore become so fundamental in the advancement of any country that no country expects to improve in the absence of computer studies/technology (Haruna, 2014). It was in the recognition of the important

roles of computer technology in all aspect of human endeavor that the Nigerian Federal Ministry of Education in the educational reform of 1987 introduced Computer Literacy at all the levels of the country's educational sector with the following broad aims;

- to use the computer to change the educational sector positively,
- to embrace the amplified union linking the computer technologies and communication technologies and
- to furnish the learners with complete knowledge of computer to enable them shape into the upcoming generation (Federal Republic of Nigeria 2008).

This National programme on computer literacy/ education launched by the Federal Ministry of Education was welcomed with open arms and adjudged to be an era of modernization in the Nigerian educational institutions of learning. Computer education/ studies were regarded as a new educational direction that was formulated to enhance the standard of learning, to assist in the technological and socio-economic advancement of the country (Tayo, Ajibade, & Ojedokun , 2009). This was followed by the formulation of the first ever computer education curriculum for primary school pupils by the Nigerian Educational Research and Development Council (NERDC) in the year 2002 (NERDC, 2007). Ajagun (2008),

observed that the curriculum was prearranged to form the basis for the computer education in Junior and Senior Secondary Schools.

The content of the computer education core curriculum was written thematically, it is child-centered and prearranged within two essential ICTs concepts namely: components of the computer, functional and application. Application is made up of six sub themes which will be studied from primary one to six. The curriculum made provision for all the content areas that will be taught to the pupils in their various classes. This was the first planned effort nationally in providing direction for primary school teachers. It includes what to teach (topic), the expected outcomes of the teacher-pupils' interactions (Performance Objectives), the activities of both teachers and pupils, the teaching and learning materials associated for each content area and the evaluation guide.

Real changes in education come with the content. It is the amalgamation of all the knowledge, potentials, competencies and skills the pupils are expected to have at the end of each stage of their education. What is taught to the children reflect what they turn out to be at the end of their program. Content motivates the pupils and hence, it is the key to education. When the content of the core curriculum is adequately implemented and inculcated to the pupils in every

school, the disparity among these pupils in terms of knowledge will be drastically reduced. Content at the primary level of education is even more crucial and when it is haphazardly exposed to the pupils, they are not fully developed. Some of them are half baked and a menace to the society, as opined by Anugwo (2012), we do not want incompetents to operate on us, teach us, build the bridges we drive over, administer treatments to us when we are sick, repair our cars and even becoming our parents. This, therefore draws us to the need for proper implementation any program.

Most nations of the world have produced time tested content standards for her pupils but foil it at the implementation stage making the impact of such contents quite inactive. The success of a program depends to a large extent on the level of implementation of such a program. Hence the saying that the process of curriculum making/development can never be said to be completed unless it is implemented (Kolawole, 2006). Implementation is the art of moving from an idea to reality. This is why Mkpa (2007) observed curriculum implementation as the art of changing that which was documented as a curriculum into functionality via the collective hard work of the learners, teachers as well as other involved agents. It has to do with building process instead of designing process. Implementation is the process that must follow any prelude thinking in order for something to really

come to pass. In view of the above, curriculum is meaningless without implementation. Computer education is carried out in both the private owned and public owned schools. It has not been ascertained whether what is being taught in these schools is as stipulated in national computer core curriculum. This study therefore determines as its purpose:

- *the level to which the contents of computer education taught at the primary schools in Ebonyi State correspond with the specifications of the National Computer Education Core Curriculum*
- *The hypothesis tested was: The level of correspondence of the contents of computer science education taught in Ebonyi State primary schools with the specifications of the National computer education core curriculum does not depend significantly on school ownership.*

Methodology

The design of the study was the program evaluation research design, to evaluate whether the implementation of the content program of the computer core curriculum is functional and yielding fruit. The study was conducted in Ebonyi state of Nigeria. All the 6031 computer education teachers in both private and

public owned primary schools in the three educational zones of the state (Abakaliki, Onueke and Afikpo) formed the population of the study. 1060 approved public primary schools and 100 approved private primary schools are in Ebonyi State. Source : Ochudocracy Magazine 2014. 204 computer education teachers were simple randomly sampled. 25 public primary schools and 9 private primary schools were also randomly sampled; making it a total of 34 schools. The instrument for data collection was the computer education implementation evaluation checklist (CECIEC) designed by the researchers. It covered all the content areas stipulated for the lower basic one to middle basic six (primary 1-6) in the computer education core curriculum approved by the Federal Ministry of Education. The checklist is divided into sections. Section A, has preliminary information such as the type of ownership (public and private), teacher's educational qualification, course studied and the educational zone of the teacher's teaching operation. Section B contained all the curriculum contents as stipulated in the core curriculum. The teacher responds to the checklist in terms of the level of his/her content coverage in relation to the benchmark stipulated in the curriculum. The instrument was face validated by computer subject and measurement and evaluation experts based on the contents stipulated in the curriculum. All corrections by these experts were effected. The reliability of

CECIEC was established by its administration to 30 computer education teachers in Enugu state. The scorer reliability of CECIEC was 0.69 established using the Kendal 's Coefficient of Concordance, W. Research assistants were trained and used in the administration of the instrument. The teachers specified what was taught in computer education collaborated with the ones in the pupils' notes. The instrument was administered on the spot after getting due permission from the school authorities in each zone. The data collected was analyzed by matching the contents taught in the schools and calculating the percentage correspondence with the ones in the core curriculum was.

Results

What is the level of correspondence of the contents of computer education taught in primary schools in Ebonyi State with the specifications of the core computer education curriculum?

Table 1: The level of correspondence of the contents of computer science education taught in primary schools in Ebonyi State with the specifications of the core computer education curriculum.

TOPICS	Contents Specified in Core Curriculum	Contents taught in Ebonyi State schools	Percentage Correspondence
Primary 1			
Parts of Computer	3	2	66.7%
Uses of Computers	1	1	100%
Common IT devices	2	2	100%
Primary 2			

Features of Computer parts	1	1	100%
IT Devices	3	2	66.7%
Primary 3			
History of Computer	3	2	66.7%
Input and Output Devices	3	2	66.7%
The Unit system	5	4	80%
Storage devices	5	3	60%
Primary 4			
Computer Hardware	2	2	100%
Computer Software	2	2	100%
TOPICS	Contents Specified in Core Curriculum	Contents taught in Ebonyi State schools	Percentage Correspondence
Start up the computer	3	2	66.7%
Data and information	3	2	66.7%
Common IT Gadgets	1	1	100%
Primary 5			
Computer games	1	0	0.00%
Care & protection of computers	3	2	66.7%
Internet 1	7	3	42.9%
Primary 6			
Learning word processing with the computer	4	3	75%
Drawing the computer	3	2	66.7%
Precaution in the use of computers	3	2	66.7%

Classification, uses of IT Gadgets	3	2	66.7%
Internet II	5	2	60%
IT and the Society	2	2	100%

Summary of result in Table 1 reveals that from primary 1 – 6, out of the twenty three topics specified in the core curriculum, a 100% correspondence was observed in only seven topics in terms of topics being taught in Primary Schools in Ebonyi State. The Table also revealed that computer games as a topic in computer studies is completely omitted in the topics being taught in primary schools in the State. Internet as a topic ranked below pass mark

HO₁: *The extent of correspondence of the contents of computer science education taught in Ebonyi State primary schools with the specifications of the core computer education curriculum do not depend significantly on school ownership.*

Table 2: Chi-Square test of significance of correspondence of the contents of computer science education taught in Ebonyi State primary schools with specifications in the core computer education curriculum based on school ownership.

TOPICS	Content distribution for school categories		X ² cal	Alpha	X ² -crit	Inference
	Public	Private				
Primary 1						
Parts of Computer	2 (3)	2 (3)				Uphold
Uses of Computers	1 (1)	1 (1)				
Common IT devices	2 (2)	2 (2)				
Primary 2						
Features of Computer parts	1 (1)	1 (1)	16.70	0.05	33.92	Null Hypothesis

IT Devices	0 (3)	2 (3)
Primary 3		
History of Computer	2 (3)	2 (3)
Input and Output Devices	2 (3)	2 (3)
The Unit system	4 (5)	4 (5)
Storage devices	3 (5)	3 (5)
Primary 4		
Computer Hardware	2 (2)	2 (2)
Computer Software	2 (2)	2 (2)
Start up the computer	2 (3)	2 (3)
Data and information	2(3)	2 (3)
Common IT Gadgets	1 (1)	1 (1)
Primary 5		
Computer games	0 (1)	0 (1)
Care & protection of computers	2 (3)	2 (3)
Internet 1	3 (7)	3 (7)
Primary 6		
Learning word processing with the computer	3 (4)	3 (4)
Drawing the computer	2 (3)	2 (3)
Precaution in the use of computers	2 (3)	3 (3)
Classification, uses of IT Gadgets	2 (3)	2 (3)
Internet II	2 (5)	2 (5)
IT and the Society	2 (2)	2 (2)

Summary of Chi-Square test in Table 2 reveals that the Chi-square calculated value is 16.70 while the critical value at 95% confidence level is 33.92. Since the calculated value is less than the critical value the researchers upheld the null hypothesis and conclude thus; the extent of correspondence of the contents of computer science education taught in Ebonyi State primary schools with specifications in the core computer education curriculum does not depend significantly on school ownership

Discussion of Results

This study found the level of correspondence of the contents of computer education curriculum taught in primary schools in Ebonyi State with the specifications of the Computer Education Core Curriculum. The analysis revealed that from primary 1-6, out of the twenty-three topics specified in the core curriculum, a 100% correspondence was observed in seven topics. This is a commendable development. The analysis further revealed that computer games as a topic in computer studies is completely omitted in the topics taught in primary schools in the state. For the topic 'internet', the level of correspondence to the computer core curriculum is only 42%. This implies that greater percentage of the content taught in Ebonyi State primary schools did not effectively correspond with the specifications of the core curriculum. This result is therefore

in tandem with Egeh (2014) who revealed that lack of adequate facilities to be used in teaching some topics in the National Computer Education Curriculum has made some states not to be teaching some contents of the National Computer Education Curriculum in their primary schools. This he believed would hamper the holistic implementation of the contents of the National Computer Education Curriculum. The hypothesis revealed that the extent of correspondence of the contents of computer science education taught in primary schools in Ebonyi State with specifications in the Core Computer Education Curriculum does not depend significantly on school ownership. By implication, there is no significant difference between what is obtainable in the public and private schools. The issue of teaching not in consonance with the stipulation of the core curriculum is the same in all the schools both public and private.

There is need for the evaluation of the implementation of programs designed by government for the people. To know whether it is still in line with the projection or objectives for which the program is designed. When teachers teach not in consonance with what is stipulated in the core curriculum, it implies that these teachers are teaching out of tune and this can be dangerous. Objectives should be harmonized at all levels for easy comparability and achievement of the same goals of education, which are borne out of the needs of the society.

This also affects test scores and inferences from them because the scores from these few content areas are generalized to the whole content areas in the core curriculum. As explained by Anugwo (2010), when tests cannot measure the whole domain of the necessary contents and objectives of a particular skill in correct proportion, the test is not valid and cannot yield the exact performance of students. Anugwo said that each subject has a representative domain of objectives, factual knowledge, and relevant aspects of behavior to be achieved by the students at the end of an instruction or program (as stipulated in the Computer studies Core Curriculum in this case). If these domains of objectives are not properly exposed to the students, according to her, test scores will not reflect the actual achievement. Hence inferences on them can do more harm than good. You see a student scoring excellently in a test whereas he was only exposed to a few content areas of the curriculum. Teachers are therefore advised to follow the implementation of the content standards as stipulated in the curriculum, in order to reflect the desired purpose.

Recommendations

Sequel to the findings of this study, the recommendations below are made:

1. The observed non-strict adherence to the contents of computer education taught in primary schools has to be effectively checked by the government and other consigned agents if the core Computer Science Education Curriculum will be effectively implemented.
2. The lack of strict adherence to the specifications of the core curriculum will affect the pupils' performance if they compete with their contemporaries in other states that strictly observed the contents of the curriculum in a context that is based on the contents of the curriculum. This implies that the pupils will be denied the opportunity of knowing what they are supposed to know. This does not augur well with the general purpose of education for these children.
3. Government should ensure that level of implementation of educational programs is evaluated from time to time to ensure that actual practice is in line with the objectives of the program.
4. Teachers should be retrained in seminars and workshops to acquaint them with the latest development on the ethics of their profession and proper implementation of programs.

Conclusion

The need to adhere to the stipulations of the core curriculum cannot be over emphasized. The core curriculum contents for all the subjects should be made available to all the teachers. School heads should ensure that it forms the basis

for the teachers teaching. Government should provide facilities for schools for effective implementation of programs and enhanced students' achievements. Students in turn will acquire the desired knowledge for daily living and are also relevant at work places. Implementation is an important aspect of any educational program.

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