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FACTORS AFFECTING STUDENTS' ACHIEVEMENT IN COMPUTER EDUCATION IN SECONDARY SCHOOLS IN AGUATA LOCAL GOVERNMENT AREA OF ANAMBRA STATE

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ABSTRACT

The purpose of the study is to identify the factors that affect students' achievement in computer education in secondary schools in Aguata Local Government Area. Out of six hundred students that are offering computer education in Aguata Local Government Area, 200 students were selected using random sampling technique to serve as the sample for the study. Structured questionnaire was the instrument used for data collection. Mean and standard deviation were employed for data analysis. The major findings are that lack of computer system for teaching computer in school, in adequate training and experience of the teachers affect students achievement, government fund computer education adequately in secondary schools in Aguata Local Government Area. Based on the above findings the recommendation is that adequate training should be given to the computer teachers in secondary schools in Aguata Local Government Area and suggestion is that other researchers on this topic should endeavour to carry out this study to a greater number of local governments.

KEYWORDS

Factors, Students, Achievement, Computer Education.



Introduction

Background to the Study

The use of computer is influencing many fields of human endeavour including education. Education is defined as the leading knowledge based industry, (Ibudeh, 1999), in science experiments, as laboratory tools and information management. Computer education is very important component of this age information technology.

Atiya (2006), defined computer as an electronic system, which has high data (information) storage capacity and fast instruction execution on the database to yield the desired result. The 21st century has been rightly referred to as the information age, because according to Naisbit (2008), a high percentage of all jobs will involve information processing. Therefore, if our students must be prepared for work, then they must embrace the computer which is the powerful technology that enhances learning and also living.

Computer education plays a vital role in our national development. For instance, information about your transactions with a bank is usually stored in the computer; this information is posed to obtain your statement of account.

Computer education is a field virtually everybody needs to have knowledge of for personal application in writing, learning and entertainment. Therefore, teachers must prepare their students for the reality of computer education. The effect of computer education on society has permeated even the field of education. The effect to improve secondary school students' academic achievement in computer education has led educationist and psychologists to continue to search for personal environmental variables that could be manipulated in favour of academic gain. Factors affecting students' achievement in computer education involves unqualified computer teacher, laboratory assistant are the human resources needed for proper computer education. The method of teaching computer in our secondary schools has faced multiple problems that frustrate its proper teaching in schools. Since there are schools that have short supply of electricity, inadequate computer systems and also basic facilities for computer laboratory, the practical classes are overcrowded.

In view of dominant cultural importance of computer education in Nigeria were problems of availability of computer equipment encountered by computer resource persons in making effective use of computer laboratories and facilities in them.

It therefore becomes very necessary to find out the number of computer and material resources that are available which leads to poor achievement of students in Anambra State, in computer science education.

Statement of the Problem

In recent times, the standard of science is falling, there are serious crisis surrounding the role, functions, operations and efficiency of the secondary school system of education of education in the country with particular reference to computer. There are issues of crises of quality computer teachers in the school system, crisis in their retention, crisis of computer system and utilization of these resources. It is observed that many of the computer teachers may not have properly trained in laboratory activities; some of them may be seeing computer equipments and other laboratory items for the first time in their posted schools. Definitely such teachers could take the easier way of teaching only the theory aspect of computer. In schools where laboratory exists, there is no steady power

supply so that activities backing up certain theories may therefore be difficult to be carried out. Improvisation is another problem; many computers do not have creative minds, designing any alternative teaching media is always problem for such teachers. During computer practical, many teachers leave the supervision of practical activities to laboratory assistant and many teachers do not enforce laboratory rules and regulations.

Purpose of the Study

The purpose of this study is to identify the factors affecting the students' achievement in computer education in secondary schools in Aguata L.G.A of Anambra State. Specifically the study seeks to:

1. Identify the influence of instructional materials on students' achievement in computer education in secondary schools in Aguata Local Government Area.
2. Identify the influence of funding on students' achievement in computer education
3. Determine the influence of qualification of computer education teachers on students' achievement in computer education Aguata Local Government Area.

Significance of the Study

The findings of this research will serve as a very useful source of information to all those concerned with computer education generally. The findings of this study will help the state government to employ qualified teachers of computer education in schools. And also the influence of funding on students achievement in computer education.

This study will in no small measure help to determine if the time allocated for students offering computer practical is suitable or not. The study will also help the government to see the need of providing necessary instructional materials use in teaching computer and also the result of this study will help the government to know the necessity of funds in various secondary schools offering computer education.

Scope of the Study

The study will be carried out in Aguata L.G.A of Anambra State and focused on junior students offering computer education. The study concentrates in investigating the factors affecting students' achievement in computer education in secondary in Aguata L.G.A of Anambra State.

Research Questions

The following research questions guided the study.

1. To what extent do instructional materials affect the achievement of students in computer education in Aguata L.G.A of Anambra State?
2. What is the influence of funding on the achievement of students in computer education in Aguata L.G.A of Anambra State?
3. To what extent do teachers that handle the teaching of computer education influence the achievement of students in Aguata L.G.A of Anambra State?

Research Design

The design adopted in this study was a survey research design. According to Abonyi, Okereke, Omebe and Anugwo (2006), survey design in which a group of people or items are studied by collecting and analyzing data from only a few people or items said to be representing or

representative of the entire group or population. It is a survey method of research because no variable was manipulated.

Population of the Study

The population comprises of all computer education students in the secondary schools that offer computer education in Aguata Local Government Area of Anambra State. There are 600 students that are offering computer education.

Sample and Sampling Techniques

There are 25 government owed secondary schools in Aguata Local Government Area. Out of the 25 secondary schools in Aguata Local Government Area of Anambra State, only 4 schools were offering computer education, two boys' secondary schools and 2 girls secondary schools. The four schools will be used, in each of the secondary schools one class from Jss 3 students will be selected through random sampling (ballot method). This implies that on the whole schools used for the study four classes were selected, which consist of 200 students. Jss 3 students were used for the study because the researcher knew they are fit to fill the questionnaire appropriately than Jss 1 and Jss 2 students.

Instrument for Data Collection

The only instrument used for data collection is structured questionnaire. The questionnaires were constructed using the research questions as a guide. The questionnaire items comprise of 12 questions, which was designed in likert format.

Strongly Agree (SA) = 4

Agree (A) = 3

Disagree (D) = 2

Strongly Disagree (SA) = 1

The respondents were expected to tick the above scales as it appeal to the students.

Method of Data Collection

Questionnaire was used as an instrument for data collection in this study. The questionnaire was administered on the respondents through the help of the class teachers in each school. The teachers are expected to distribute the questionnaire and collect it back from the students.

Method of Data Analysis

The data collected was analyzed using mean and standard deviation. The data obtained was analyzed to determine the number of the people that responded and their mean. Further data collected was presented under six main columns; Strongly Agree, Agree, Disagree, Strongly Disagree, Mean and Standard deviation.

PRESENTATION AND ANALYSIS OF DATA

The result is presented in line with the research questions posed and were tabulated as shown below; mean and standard deviation were used to analyze the data collected.

Research question 1

To what extent does instructional material affect the achievement of students in computer education in Aguata Local Government Area of Anambra State.

Data collected with items 1-4 were analyzed using mean and standard deviation. Summary of result is shown below:

Table I: Influence of instructional materials on students' achievement in computer education.

S/N	Description of Items	SA	A	D	SD	Mean	Standard deviation
1.	Teaching of computer education without the use of instructional materials affect the achievement of students in Aguata L.G.A of Anambra State.	440	90	80	20	3.15	0.6389
2	Lack of instructional materials affects students achievement in computer education in Aguata L.G.A of Anambra State.	280	150	40	60	2.65	0.1151
3	Most teachers do not know how to use instructional materials necessary for teaching computer education and this affect students' achievement in Aguata L.G.A of Anambra State.	300	180	70	30	2.9	0.1204
4	Computer science classrooms contains a lot of materials, pictures, charts and models necessary for teaching education in Aguata.	200	30	200	40	2.2	0.1048

In table 1, the result of item 1 agrees that teaching of computer education without the use of instructional materials affect the achievement of students.

In table 1, the result of item 2 agrees that lack of instructional materials affect students' achievement.

In table 1, the result of item 3 agrees that most teachers do not know how to use instructional materials necessary for teaching computer education.

While in item 4 the result disagree that computer science classrooms contains a lot of materials, pictures, charts and models necessary for teaching computer education.

Research Question 2

Influence of funding on the achievement of students in computer education in Aguata L.G.A of Anambra State.

Data collected with items 5-8 were analyzed using mean and standard deviation. Summary of result is shown below:

Table II: Influence of funding on students achievement in computer education

S/N	Description of Items	SA	A	D	SD	Mean	Standard deviation
5	Enough allowance are not paid to the qualified teachers that teach computer education in Aguata.	60	138	160	60	1.775	0.0866
6	Non-provision of financial incentive for computer education students and teachers in secondary schools affect teaching of computer	56	66	28	146	1.48	0.09

	education in Aguata L.G.A						
7	Inadequate fund to secondary schools in Aguata L.G.A for computer machine effects students performance in Aguata L.G.A of Anambra State.	420	180	28	21	3.245	0.0877
8	Does the government fund the schools in Aguata L.G.A for provision of computer laboratory in secondary schools in Aguata L.G.A of Anambra State.	278	165	90	32	2.825	0.0707

In table 2, the result of item 5 disagree that enough allowance are not paid by the qualified teachers that teach computer education in Aguata L.G.A of Anambra State.

In table 2, item 6 disagrees that non-provision of financial incentive for computer education students and teachers in Aguata affect students achievement in computer education.

In table 2, item 7 agrees that inadequate fund for computer machine to secondary schools in Aguata affects students' achievement in computer education.

While the result in item 8, table 2 agrees that government fund for provision of computer laboratory in secondary schools in Aguata affects the achievement of students in computer education.

Research Question 3

To what extent does the teacher that handles the teaching of computer education affects the achievement of students in computer education in Aguata L.G.A of Anambra State.

Data collected with items 9-12 were analyzed using mean and standard deviation. Summary of result is shown below:

Table III: Influence of teachers factor on students achievement in computer education

S/N	Description of Items	SA	A	D	SD	Mean	Standard deviation
9	Lack of computer education teachers in Aguata L.G.A affects students achievement in computer education in Aguata.	260	120	150	17	2.735	0.1169
10	Unqualified computer education teachers affect students achievement in computer education in Aguata L.G.A	196	204	94	36	2.65	0.1151
11	Most computer teachers do not have a deep and extensive knowledge of the subject matter and this effects student achievement in Aguata L.G.A	92	297	82	37	2.54	0.11269
12	Inadequate training and experience of the teachers affects students achievement in computer education in Aguata L.G.A of Anambra State.	282	87	48	93	2.55	0.1129

In table III, all the students agreed that, the teachers that handle the teaching of computer education affect the achievement of student in computer education. This is evident from the table.

Summary of the Findings

1. The results in table 1, agree that instructional materials influence students achievement in computer education.
2. From table 2, the result disagree that funding influences student achievement in computer education.
3. The result in table 3 agrees that teachers factor influence the achievement of students in computer education.

Discussion of the Result

Influence of instructional materials on students achievement in computer education

In research question 1, the mean is greater than 2.5, therefore items 1,2,3 are positive respond that influence of instructional materials on students achievement in computer education affects students achievement in Aguata L.G.A of Anambra State.

This agreed with Okeke (2005) that "the use of instructional materials in the teaching and learning situations arouse interest in students and make them physically present in the classroom and bring their sense into play. Regarding item 4, the mean is below 2.5, hence the response negative.

Influence of Funding on Students Achievement in Computer Education

From table 2, the mean is up to 2.5 in items 7 and 8 which indicate that items 7 and 8 are positive response that inadequate fund to secondary schools in Aguata L.G.A of Anambra State for computer affects students achievement in computer education. This agree with Maduabuna (2004) that, appropriate fund to schools for computer machine is very important because it provides opportunity to promote scientific method of thought. While item 5 and 6 gives a negative response to the question.

Influence of Teachers on the Achievement of Students in Computer Education

From table 3, it is shown that all the items are positive, that inadequate training and experience of the teachers affects students' achievement. This agreed with the work of one laws (1987) who states that "appropriate academic qualification and professional training are desirable for teachers who not only have to teach their subject effectively but also has the responsibility of safe conducting practical in the schools.

Conclusion

Based on the discussion of the result of the study, the following conclusions were made;

1. Inadequate training and experience of teachers affect students' achievement. To be effective in teaching computer education, every computer education teacher must have deep and extensive knowledge of the subject.
2. The laboratory facilities in most schools are not adequate in terms of quality for teaching of computer education, inadequate supply and use of computer in schools contributes towards the poor achievement of students in the subject.
3. There are inadequate instructional materials for teaching computer education in most schools. The teachers do not make use of instructional materials because they are expensive, so they avoid teaching the topics that require the use of instructional materials.

Recommendations

The following recommendations were made:

1. Adequate training should be given to the computer education teachers in secondary schools in Aguata L.G.A of Anambra State.
2. Government should fund computer education adequately in secondary schools in Aguata L.G.A of Anambra State.
3. The school authority should allocate enough time for computer education during practical.

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