



# **Factors Militating against Effective Teaching and Learning of Computer in Secondary Schools in Enugu State Nigeria**

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### **Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

The teaching and learning of computers in secondary schools is very beneficial for preparation of students for more challenging education in the University. However, many factors militate against the effective computer education in the schools. This study sought to assess these factors in Enugu State Nigeria. Specifically it sought to assess teachers-related factors; students-related factors; government-related factors and school administrative factors that militate against effective teaching and learning of computer in the State. The study adopted survey research method and hundred questionnaires were used for the study. Data were analysed with the use of descriptive statistics (mean) in SPSS. Respondents agreed that teachers based factors that contribute to ineffective teaching and learning of computers in secondary schools included that teachers of the subject were unqualified ( $\bar{x}=2.9$ ) and lack experience ( $\bar{x}=2.6$ ). Students based included absenteeism by students ( $\bar{x}=2.7$ ) and lack of interest by students ( $\bar{x}=2.7$ ). Government based factors included that government provide voluminous curriculum ( $\bar{x}=2.9$ ) and do not provide funds ( $\bar{x}=3.2$ ). School administration based factors were that mismanagement of procured instructional materials ( $\bar{x}=2.9$ ) and mis-use of provided funds ( $\bar{x}=2.9$ ). This study concludes that students, teachers, government and school administration have important roles to play for effective teaching

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and learning of computer in secondary schools. For a way forward, the study recommends that government and individuals should encourage in and out of school computer education by establishing learning centres in the State. Computer teachers should always be provided with on-the-job training or re-training programmes. Government and school administration should as a matter of priority provide computer systems and other lacking instructional materials in their schools. Students should attend to classes and improve their interest in computer education.

*Keywords: Teaching; Nigeria; computer.*

## 1. INTRODUCTION

The importance of computer skills and knowledge for teaching, learning and job performance in organizations especially secondary schools cannot be over emphasized. In the era of just-in-time technology, just-in-time training is now a critical part for success in organizations [1]. The secondary schools prepare students for university educations in Nigeria. It is a fundamental level of education that lays foundation for admission and choice of career options for students in Nigeria. Secondary school curriculum in Nigeria is designed to encourage all students to achieve their career, intellectual and social potential as well as to understand the relevance of learning in their daily lives [2]. The learning and teaching of computer in secondary schools is essential for promotion and adoption of the technological advancements and benefits of computer. In line with this, [3] stated that the increase use of computer by students and academics alike is an important measure of technological development. He further stated that the use of computer is now dominant in all areas of human endeavors more especially in academic institutions [3]. Computers enable students to manage and handle information and learning materials as well as processing or using information for writing with more speed and accuracy regardless of the time and distance. This is due to the capability of computers in providing dynamic and proactive teaching-learning environment [4]. It is essential that students should acquire computer trainings and skills in order to have to use the computers effectively. Integration of Information, Communication, and Technology (ICT) will assist teachers to the global requirement to replace traditional teaching methods with a technology-based teaching and learning tools and facilities [5]. Hence, effective teaching and learning of computers in secondary schools will promote their ability to successfully gain admissions and complete University education as well as work efficiently in organizations using computers.

Technology and computers have become the knowledge transfer highway in most countries [5] including African countries. [6] notes that remarkable improvements have taken place in all sphere of human activities in all societies since the advent of new technologies. The use of technology in education contributes a lot in the pedagogical aspects in which the application of computers will lead to effective learning with the help and supports from computer elements and components [7]. The state of computer learning and teaching in African countries, including Nigeria is minimal compared to other developed countries. In order to have computer training successfully implemented in Africa, there is a need to consider the cost, human capabilities and infrastructure among others [8]. Unfortunately, African countries especially Nigeria lacks the funding and capacity to effectively implement computer trainings in secondary schools. [3], noted that inadequate computer in the schools and lack of computer literacy and sponsorship to computers/IT training program are the major challenges encountered in Nigeria. Poor service caused by capacity constraints of the communication network, lack of infrastructure to support technology hardware and software, scarcity of financial resources, and an unreliable electric supply in Nigeria hinders computer usage in Nigeria [9,10,11]. For the case of Enugu State, [12], revealed that non availability and acute shortage of this new technological equipment impede their integration in teaching in the State.

Many researchers (including David, 2016; [12], [13]; have studied the importance, availability and use of computer in teaching and learning in Enugu the but have not examined the factors that militate against effective teaching and learning of computer in Secondary schools the State. While educational institutions are challenged to provide up-to-date equipment and software packages, educators must also recognize the need to keep abreast of pertinent instructional techniques and trends. In the context of integrating new technologies in schools, factors contributing on

either the teacher level or the school level are known to contribute to the use of ICT [14]. So far only a few studies aimed to examine the effect of school- and teacher-related factors on cross-curricular digital competencies of students such as computer and information literacy[14]. Hence, this study sought to assess the factors that militate against effective teaching and learning of computer in Enugu State. Specifically it sought to assess teachers-related factors; students-related factors; government-related factors and school administrative factors that militate against effective teaching and learning of computer in the State.

## 2. METHODOLOGY

The study was carried out in Enugu State, Nigeria with focus on Isi-Uzo Local government area (LGA) of the State. Enugu State is one of the 36 States in Nigeria, apart from the Federal Capital Territory. Located between latitudes 5°56' N and 7°55' E of the Greenwich meridian [15]. The State is bounded in the northeast by Ebonyi State, on the north by Benue and Kogi States and to the west by Anambra State from which it was carved out in 1991 and in the south it borders with Abia State [15]. Administratively, Enugu State is divided into 19 Local Government Areas including Isi-Uzo LGA.

Population of the study involved all the students in all the public secondary schools in the Isi-uzo LGA. Five secondary schools were purposively selected based on inclusion of computer education in their curriculum. The study adopted survey research method because it focus on opinions, attitude, motivation and perceptions. The questionnaire was constructed following thorough review of relevant literature and validation by pre-testing of the instrument and critics from specialist in the research area. Twenty questionnaires were administered to five teachers and 15 students of each school, hence hundred completed questionnaire were used for the study. The questionnaire was divided into four sections based on the objectives of the study. The instrument was used as a guide in the survey process and each question were clearly explained to respondents in person, in order to elicit their responses. To ascertain the factor militating against effective teaching and learning of computer in the area, possible teachers-related factors; students-related factors; government-related factors and school administrative factors were listed for the respondent to select on a four point Likert-type

scale of strongly agree, agree, disagree, strongly disagree. The responses of the teachers and students were not disaggregated since they are part of the school system and are well aware of the challenges. Data were analysed with the use of descriptive statistics (mean) in SPSS.

## 3. RESULTS AND DISCUSSION

### 3.1 Teachers-Related Factors that Militate against Effective Teaching and Learning of Computer

Data in Table 1 shows that the respondents agreed that teachers based factors that contribute to ineffective teaching and learning of computers in secondary schools were that teachers of the subject were unqualified ( $\bar{x}=2.9$ ), lack experience ( $\bar{x}=2.6$ ) and were not well paid ( $\bar{x}=2.6$ ).

The findings show that teachers have important roles to play in the teaching and learning of computer in secondary schools. This agrees with [5] that in conjunction with preparing students for the current digital era, teachers are seen as the key players in using computers in their daily classrooms. From this perspective, research shows that teachers in a variety of roles are crucial factors for the digital education in the 21st century [16]. Hence, teachers should be well trained and paid as well as put in much interest and expose themselves to works that will improve their experience in the use of computers for teaching and learning.

### 3.2 Student-Related Factors that Militate against Effective Teaching and Learning of Computer

Data in Table 2 shows that the respondents agreed that students based factors that contribute to ineffective teaching and learning of computers in secondary schools were absenteeism by students ( $\bar{x}=2.7$ ) and lack of interest by students ( $\bar{x}=2.7$ ).

This shows that student have to attend computer classes and put in great interest in the learning so that it can be effective. This agrees with [11] that most of the participants acknowledged the benefits on computers and Internet access whereas a few participants expressed no interest in computers or the Internet. Results from a multi-level analysis have shown that higher levels of mastery orientation and self-efficacy and the

students' family background were predictors of students' levels of digital competence [17]. Furthermore, it could be shown that students' ICT competency was affected by the level of ICT competency among the teachers and their

willingness to use ICT in their lessons [18]. Therefore, for effective teaching and learning of computers in secondary schools, students need to develop high interest and expose themselves to computer education.

**Table 1. Teachers-related factors that militate against effective teaching and learning of computer**

Teachers-related factors	Strongly agree	Agree	Disagree	Strongly disagree	Mean ( $\bar{x}$ )	Remark
The teachers of computer education are unqualified	30	37	28	5	2.9	Agreed
Teachers lack experience	21	26	45	10	2.6	Agreed
Teachers are using teaching aids effectively	15	29	30	26	2.3	Disagreed
Teachers are not well paid	25	25	34	16	2.6	Agreed
Teachers have full interest in their jobs	12	26	39	23	2.4	Disagreed
Teachers use up-to-date methods of teaching and current lesson presentation	11	10	33	46	1.9	Disagreed

**Table 2. Students-related factors militating effective teaching and learning of computer**

Students-related factors	Strongly agree	Agree	Disagree	Strongly disagree	Mean (x)	Remark
Student like the subject	29	14	19	38	2.3	Disagreed
Students are being motivated	19	29	39	17	2.4	Disagreed
The subject is being well understood by the students	16	29	40	15	2.4	Disagreed
Students react positively towards learning of computer	18	17	43	22	2.3	Disagreed
Irregular to classes/Absenteeism by students	22	41	20	17	2.7	Agreed
Lack of interest by students	31	34	25	10	2.7	Agreed

**Table 3. Government-related factors militating effective teaching and learning of computer**

Government-related factors	Strongly agree	Agree	Disagree	Strongly disagree	Mean (x)	Remark
Government provides voluminous curriculum	26	46	18	10	2.9	Agreed
Governments do not provide funds	45	33	15	7	3.2	Agreed
Educational policies are strict	23	47	17	13	2.8	Agreed
Teachers are inadequately trained	30	33	36	1	2.9	Agreed
Salaries are being appropriately paid	13	18	35	34	2.1	Disagreed
There insufficient power supply	34	37	12	17	2.9	Agreed

**Table 4. School administration factors**

School administration factors	Strongly agree	Agree	Disagree	Strongly disagree	Mean (x)	Remark
Mismanage procured instructional materials	17	65	13	5	2.9	Agreed
Provided funds are being mis-used by the school administrators	34	31	23	12	2.9	Agreed
Proper scheduling if time-tables	10	27	46	11	2.3	Disagreed
No available laboratories and facilities	31	36	13	12	2.8	Agreed
Administrators implement difficult policy	15	52	22	11	2.7	Agreed
Unqualified teachers are being recruited	29	34	23	14	2.8	Agreed

### 3.3 Government-Related Factors that Militate against Effective Teaching and Learning of Computer

Data in Table 3 shows that the respondents agreed that government based factors that contribute to ineffective teaching and learning of computers in secondary schools were that government provide voluminous curriculum ( $\bar{x}=2.9$ ), governments do not provide funds ( $\bar{x}=3.2$ ), educational policies are strict ( $\bar{x}=2.8$ ), teachers are inadequately trained ( $\bar{x}=2.9$ ), and there insufficient power supply ( $\bar{x}=2.9$ )

These findings show that for effective teaching and learning of computers in secondary schools, government have some roles to play. This agrees with [11] that the lack of adequate training on using a computer and Internet searching was a foremost issue that was persistent throughout responses to multiple interview questions. Similarly, it agrees with [10] that government should bring more opportunity for computer awareness training, expand existing infrastructures, wireless communication facilities, mobile telecommunication networks, and make computer and Internet use affordable. It further agrees with [11] that Nigerian government should embrace cultures and policies that will promote access and use of ICT. Government have to provide appropriated curriculum that will suit the learning at that level of education, provide adequate funding, educational policies, qualified teachers and improved power supply.

### 3.4 School Administration Factors that Militate Against Effective Teaching and Learning of Computer

Data in Table 4 shows that the respondents agreed that school administration based factors that contribute to ineffective teaching and learning of computers in secondary schools were that they mismanage procured instructional materials ( $\bar{x}=2.9$ ), the school administrators mis-used provided funds ( $\bar{x}=2.9$ ), there are no available laboratories and facilities ( $\bar{x}=2.8$ ), administrators implement difficult policy ( $\bar{x}=2.7$ ) and unqualified teachers are being recruited ( $\bar{x}=2.8$ ).

The findings show that school administration need to manage procured materials, funding and provide laboratory facilities among other necessities for effective teaching and learning of computer in the secondary schools. This agrees with [12] that new technological equipment available for teaching in institutions in Enugu State were available to a low extent. School administration ought to create environments on the school level to facilitate the teachers' integration of ICT by creating school visions and sharing goals [19]. Moreover the IT infrastructure in schools is a relevant factor regarding the use of ICT for learning purposes [14]. This shows that the secondary school administrators must endeavor to manage their funds and computer facilities in order to promote computer teaching and learning in the schools.

#### 4. CONCLUSION AND RECOMMENDATION

This study shows that students, teachers, government and school administration have important roles to play for effective teaching and learning of computer in secondary schools. The study show that students need to see reasons and be enlightened on why they should learn how to use computers and appropriately use and maintain the computer facilities they have. It shows that teachers need to understand and work on the areas of their weakness for improvement in their teaching of computer education in secondary schools. The study also shows that school administration needs to improve on their roles of making the teaching and learning effective by providing and managing funds and computers. The government needs to understand and appreciate the benefits of computers in the society and give the needed support for computer education.

For a way forward, the study recommends that governments and individuals should encourage in and out of school computer education by establishing learning centres in the State. Computer teachers should always be provided with on-the-job training or re-training programmes so that they can improve on the field. Government and school administration should as a matter of priority provide computer systems and other lacking instructional materials in their schools. Students should attend to classes and improve their interest in computer education.

#### COMPETING INTERESTS

Author has declared that no competing interests exist.

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