



# A COMPARATIVE ASSESSMENT OF SECONDARY SCHOOL STUDENTS' SATISFACTION WITH ICT STUDIES: IMPLICATIONS FOR MANAGING SECONDARY SCHOOL EDUCATION FOR GLOBAL COMPETITIVENESS IN POST COVID-19 ERA.

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## ABSTRACT

Technological advancement has ushered Computer studies which is also regarded as Information and Communication Technology (ICT) instruction into educational curriculum. The aim of ICT studies in secondary school system is to equip every student with the prerequisite skills and competence to function effectively in the contemporary society that is characterized by emerging technologies. Therefore, the main objective of this research was to assess students' satisfaction with ICT instruction in secondary schools in Calabar Metropolis, Cross River State, Nigeria. Three research hypotheses were formulated to give direction to the study. The study sample was 5245 students drawn from the population of Senior Secondary (SS) 2 and Senior Secondary (SS) 3 classes across public and private schools in 2019/2020 academic session. A survey research design was adopted for the study. The instrument for data collection was a questionnaire entitled "Secondary School Students' Satisfaction with Computer Studies Questionnaire (SSSCSQ)". The data collected were analyzed using population t-test and independent t-test. The major findings indicated that secondary school students' satisfaction with ICT instruction was not significantly differ with respect to school ownership, gender and school location. It was recommended among others that the Government at various levels, Non-Governmental Organizations (NGOs) as well as Parents Teachers Association (PTA) should improve in their efforts towards provision of both hardware and software ICT facilities to sustain blended pedagogy in Post Covid-19 era.

**KEYWORDS:** Computer Studies, Global Competitiveness, ICT, Post-Covid-19 Pandemic, Managing Secondary Education, Secondary School and Students' Satisfaction.

## INTRODUCTION

No doubt, Covid-19 pandemic was pervasive round the globe and as such social, economic and educational programmes and activities were put on hold. Nwokeocha (2021) stated that at the

peak of the pandemic, schools were shut in most parts of the world and as such teaching and learning were halted. The situation was such that management of all levels of education in general and secondary education in particular confronted with unprecedented challenges of school lock

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down, unequal access to educational opportunities due to inadequate online teaching and learning facilities among others. In spite of the alternative measures in terms of online teaching and learning adopted to ensure sustainable pedagogy in educational system in the face of the pandemic, many learners had little or no reasonable competence to cope with online education. A question arises. "Are secondary school students not satisfied with computer studies?"

The introduction of computer studies into the curriculum of secondary education just as it is obtainable in other levels of education is informed by the revolutionary changes in modern technology across the globe. In this context, computer studies and Information and Communication Technology (ICT) instruction are used interchangeably. Advances in information technology result in what is popularly called Information and Communication Technology (ICT) which has been a global issue in the contemporary age. Thus, its inclusion in curriculum and implementation in terms of computer studies and in general school management to meet global demands and competitions has since become imperative. Information and Communication Technology (ICT) in educational system has become a crucial component to be given considerable attention.

Ekpoh & Asuquo (2017) opined that utilization of ICT in teaching and learning and in the general school management is directed towards achievement of educational goals and objectives in terms of provision of trained manpower in information and communication technology. ICT is an important tool in educational management as it adds value to teaching and learning processes and equally helps in organizing and managing educational institutions in developing countries (Ogunlade, 2008). Dibbon and Pollock (2007) reported that the rapid growth and expansion in ICT has made it necessary for schools to be innovative in their approach to preparing students for success in a modern world. Similarly, Onuma (2007) observed that ICT contributes to the development of students' knowledge and skills acquisition in various subjects. Anumnu (2008) opined that ICT provides students and teachers with practical and functional knowledge of computer, the internet and other associated areas of ICT. Corroborating this, Amenyedzi, Lartey and Dzomeku (2011) asserted that with the advent of ICT, students learn more quickly, demonstrate greater retention

and are better motivated when they work with computers.

As an important part of curriculum content and administrative tool, computer studies has become pervasive in every educational organization. It has brought pedagogical innovations to classroom teaching. The need to make Nigerian secondary school students beneficiaries in this regard becomes imperative (Akomolafe, 2008). According to Akpan (2016), ICT is a process of creating, processing, storing, retrieving and disseminating information and data using computers and telecommunication. Johnson (2007) opined that ICT entails a combination of technologies for collecting, storing, processing, communicating and delivering of information related to teaching and learning. Therefore, ICT or computer studies as a component of curriculum is designed to enable students use computer effectively to facilitate their various academic activities and programmes.

Aristovnik (2012) carried out a study on the impact of ICT on educational performance and its efficiency in selected European Union (EU) and Organization for Economic Cooperation and Development (OECD) countries. The study found evidence that most of the countries under consideration hold great potential for increased efficiency in ICT and for improving their educational outputs. Kulik (as cited in Youssef, 2008) found out in a meta-analysis study, that students who used ICT-based instruction scored higher than students without computers. Furthermore, the students learned more in less time and appreciated their classes more when ICT -based instruction was used. By implication, students' satisfaction with ICT instruction (teaching and learning) is a function of effective school management directed towards the provision, utilization, and maintenance of the necessary facilities to facilitate knowledge development and training of manpower in information and communication technology at secondary school level for global competitiveness. In another study, Owan & Asuquo (2021) found out that age, gender, parents' income level, students' education level and school location do not significantly influence students' satisfaction with the study of ICT in secondary schools respectively. From the result of the study, it was concluded that socio-demographic factors of students did not influence students' satisfaction with the study of ICT in secondary schools. However, previous studies were not comparative in nature in terms of school

location and school ownership as they influence students' satisfaction with ICT.

In recognizing the role of ICT in knowledge advancement and development of skills necessary for effective functioning in a knowledge based-world, the Federal Republic of Nigeria (FGN, 2014) stated that government shall provide adequate infrastructure and develop capacity for effective utilization of information technology. In spite of this declaration by the Federal Government, Finani (2012) opined that full implementation of computer studies in schools is yet to be really seen and felt. Although ICT is being embraced gradually in all levels of education in Nigeria, its actual implementation in public secondary schools has been very slow (Owan & Asuquo, 2021). Aluko (2012) opined that educational institutions still remain ill-equipped with modern ICT facilities. Again, Akomolafe (2008) noted that ICT resources in secondary schools are still grossly inadequate. The author further stressed that ICT in secondary school is still at the initial stage and the school system still faces a lot of challenges as far as infrastructural resources are concerned. The challenges ranged from financial constraints, inadequate electricity, inadequate technical experts to handle the maintenance of ICT resources and teachers' incompetence in the use of ICT tools to enhance teaching and learning at the secondary school level.

Secondary education is that level of education that is aimed at producing graduates for higher education as well as equipping the students with sustained ICT skill needed to function effectively in this era of emerging technological advancement. Among other objectives, the FRN (2014:14) stressed that secondary education has to provide trained manpower in the applied science, technology and commerce at sub-professional grades. The introduction of ICT into secondary education in particular becomes apt because the world as a global village is technological inclined. Ekpoh & Asuquo (2018) stressed that, utilization of ICT in the school management for teaching and learning, students' personnel management, communication and decision making has become inevitable in the school system because of its global application in running modern organizations. ICT instruction is a major part of secondary education academic programmes which is directed towards sound teaching and learning to enhance and develop students' skills and ability to compete with their counterparts globally. Akomolafe (2008) observed that the use of ICT in education is

receiving more attention globally and creating access to information, thereby enhancing greater ability to learn. Using ICT in a school give lesson high status, makes students and teachers to become proud of their work, increases students' motivation and makes actively involved in their own learning and programmes (Anumnu, 2008). Based on the foregoing, a comparative study of secondary school students' satisfaction with ICT Studies with implications for managing secondary education for Global competitiveness in Post Covid-19 era becomes imperative. This is because the extent to which students are satisfied with ICT studies is a pointer to effective computer/ICT studies in the schools. Advancement in technology makes the world a global village. Therefore, every students need to be satisfied with ICT instruction in schools to enable them function and compete globally. Joshua (2018) stated that, the world has become a global village, thus any development devoid of technology is bound to fail and would not meet the test of time. The author further stated that, this is the era where local product should be comparable with foreign ones for a healthy competition. Our secondary school products need technological skills for global competition because our immediate contemporary society and the world at large need able hands that are trained by educational institutions that are ICT based. The extent to which the achievement of the aims of ICT education has been actualized is manifested in the level of students' ICT skills acquisition and their readiness for global competition.

In the context of this work, global competitiveness entails students' ability to strive, fit in, and perform creditably, irrespective of any work environment, academic challenges they are confronted with and the part of the globe they find themselves. Their ability to meet up with international standard due to their competencies in ICT as opposed to only local demands depicts a favourable competitiveness. With effective ICT instruction, students acquire ICT knowledge, skills and competencies (Owan & Asuquo (2021). There is no doubt that effective ICT instruction makes students to respond positively and fit into global development as well as standard and the needs of various countries. Effective ICT training at secondary education level gives priority to educational needs, interest, skills, competencies and requirements that exist in other countries round the globe. Every educational curriculum is designed in line with the demands of the society and to satisfy the needs of the learners to enable

them contribute their quotas towards socio-political, technological, economical, educational and national development.

Sinclair (as cited in Eliane, 2015) defined student's satisfaction as the sum of a student's behavioral beliefs and attitudes that result from aggregating all the benefits that a student receives from using the blended system. According to Astin (as cited in Avgerinou, 2010) Student satisfaction is the perceived value of the learner with educational experiences in an educational setting. Eliane (2015), identified students' satisfaction as being dependent on infrastructure (computer laboratory, computer system, internet connections, video conference equipment, electricity), e-learning delivery (sound, image, course content, instructors' performance) and ICT facilities (own/personal computer, school computer, software, modem).

Owan & Asuquo (2021) viewed students' satisfaction as a state of being emotionally and artistically fulfilled by what they are being taught in an educational system. In this case, students' satisfaction is viewed as their contentment arising from fulfilled teaching and learning expectation.

However, computer studies as a tool for advancement and development faces some challenges in diverse forms ranging from inappropriate support from educational and non educational organizations, poor encouragement of students by teachers/parents to be ICT compliant, poor ICT capacity building for teachers, school administrators' conservative attitudes of maintaining the traditional methods of teaching and learning, financial constraint, inadequate power supply, poor facility maintenance culture. These challenges are inexhaustible. Corroborating this, Ogunlade (2008) identifies high cost of ICT tools, lack of support from private organizations, conservative attitudes of people, lack of basic education and computing skills among others as problems militating against ICT instruction. In addition to this, Ekpoh, Edet and Ekpenyong (2013) observed lack of facilities, low internet connectivity, irregular power supply, poor network among others as challenges of ICT in the Nigerian education system.

#### **STATEMENT OF THE PROBLEM**

In addition to changing the traditional teaching and learning approaches to blended approach in the school system, the introduction of Information and Communication Technology (ICT) as a subject into the curriculum of secondary school was to ensure that students understand the

working and the use of computers in this information age. As teaching, learning, communication, information storage and retrieval, as well as job creation tools by graduates, educational system continues to stress on the importance of ICT in the school curriculum. There is no doubt that ICT is also meant to improve digital literacy of every student for global competitiveness.

These researchers have however observed that many secondary school graduates are not equipped with the necessary skills of ICT required of every graduate. This is evidence in a good number secondary school graduates who upon graduation, still look for computer training centres to learn the basic skills in computer and internet operations. Such skills include; computer operation/effective use of computer for typing and editing of information, storing of information, communication, learning, internet application to access online information among others. Ideally, these skills needed to have been acquired by the students before and upon graduation. It is in the observation of the researchers that in most cases, secondary school students later acquire the aforementioned skills after graduation. This scenario portrays that all seem not to be well with respect to secondary students' satisfaction with ICT. Therefore, this study was conducted to analyze students' satisfaction with ICT with implication for managing secondary school education for global competitiveness in Post Covid-19 Era.

#### **PURPOSE OF THE STUDY**

This study was conducted to assess, in a comparative form, secondary students' satisfaction with ICT instruction. The study specifically sought to find out;

1. Whether secondary school students' satisfaction with ICT instruction differ with respect to school ownership.
2. Whether secondary school students' satisfaction with ICT instruction differ with respect to gender.
3. Whether secondary school students' satisfaction with ICT instruction differ with respect to school location.

To give direction to this study, the following hypotheses were generated.

1. Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to school ownership.
2. Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to gender.

3. Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to school location.

## METHODOLOGY

This study adopted a survey research design to obtain data from students regarding their satisfaction with ICT instruction in secondary schools in Calabar Metropolis, Cross River State, Nigeria. Calabar Metropolis is made up of Calabar South Local Government Area and Calabar Municipality. The population of this study comprised Senior Secondary (SS) 2 and Senior secondary (SS) 3 students in both public and private secondary schools of 2018/2019 academic session. Since the target population was not ascertained, the researchers adopted a convenience sampling technique in selecting a sample of 5245 from Senior Secondary (SS) 2 and Senior secondary (SS) 3 students as the sample of the study. The instrument for data collection was the researchers' designed questionnaire. The questionnaire was designed in sections A and B. Section A obtained demographic information of the respondents as well as school ownership and location (in terms of Local Government Area). Section B was designed to obtain information with respect to students' satisfaction with ICT instruction. Section B had 16 items with such options as Highly Satisfied (HS), Satisfied (S), Dissatisfied (D) and

Highly Dissatisfied (HD). Highly Satisfied (HS) and Satisfied (S) responses were treated as Satisfied (S). On the other hand, Dissatisfied (D) and Highly Dissatisfied (HD) responses were considered as Dissatisfied (D). The instrument was subjected to face and content validity from experts (three from Educational Management and three from Measurement and Evaluation all from the University of Calabar, Calabar). Cronbach Alpha was used in establishing the reliability of the instrument with an index of 0.81 which made the instrument suitable for data collection. In order to collect the necessary data, the researchers with the help of some assistants distributed copies of the questionnaire to the respondents. Out of five thousand three hundred and forty-five (5345) copies of the questionnaire, 5245 copies were retrieved indicating 98% rate of return. One hundred copies that were not collected 2% rate of attrition. The data collected and coded were analyzed using independent t-test.

## RESULT

### Hypothesis one

Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to school ownership.

The result of the analysis is presented in table 1

**TABLE 1**

Independent t-test analysis of the mean difference of the secondary school students' satisfaction with ICT instruction with respect to school ownership

School Ownership	N	$\bar{X}$	SD	Df	t-cal	t-critical
Public Secondary Schools	3521	3.32	0.97	5243	0.78	1.960
Private Secondary Schools	1724	3.02	0.84			

The analysis in Table 1 show that the calculated t-value of 0.78 at 5243 degrees of freedom and 0.05 level of significance is less than the critical t-value of 1.960. The result of this analysis indicates that secondary school students' satisfaction with ICT instruction did not significantly with respect to school ownership. Thus, the null hypothesis 1 was retained.

### Hypothesis Two

Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to gender.

The result of the analysis is presented in table 2

**TABLE 2**

Independent t-test analysis of the mean difference of secondary school students' satisfaction with ICT instruction with respect to gender.

Gender	N	$\bar{X}$	SD	Df	t-cal	t-critical
Male	2545	2.99	0.95	5243	0.88	1.960
Female	2700	3.11	0.84			

The analysis in Table 2 show that the calculated t-value of 0.88 at 5243 degrees of freedom and 0.05 level of significance is less than the critical t-value of 1.960. The result of this analysis indicates that secondary school students' satisfaction with ICT instruction did not significantly with respect to gender. Therefore,

hypothesis two above was retained.

#### **Hypothesis three**

Secondary school students' satisfaction with ICT instruction does not significantly differ with respect to school location.

The result of the analysis is presented in table 3

**TABLE 3**

Independent t-test analysis of the mean difference of secondary school students' satisfaction with ICT instruction with respect to school location.

School location	N	$\bar{X}$	SD	Df	t-cal	t-critical
Calabar Municipality	3521	3.02	0.97	5243	0.97	1.960
Calabar South L.G.A.	1724	2.95	0.84			

The analysis in Table 2 show that the calculated t-value of 0.97 at 5243 degrees of freedom and 0.05 level of significance is less than the critical t-value of 1.960. The result of this analysis indicates that secondary school students' satisfaction with ICT instruction did not significantly differ with respect to school location (Local Government Areas where Secondary Schools were located). Thus, the null hypothesis in this regard was retained.

#### **DISCUSSION OF FINDINGS**

From the first hypothesis, it was found that secondary school students' satisfaction with ICT instruction did not significantly differ with respect to school ownership. This result may be attributed to inadequate facilities and manpower to enhance effective ICT instruction in both public and private secondary schools in Calabar Metropolis in Cross River State. The result is in consonant with Aluko (2012) that educational institutions still remain ill-equipped with modern ICT facilities. The result of this study explains that in both public and private secondary schools in the study area, enough is needed to be done to ensure that computer studies or ICT instruction meet the demand of the moment to enable the students acquire the prerequisite ICT skills for proper functioning in post covid-19 era.

The result of the second hypothesis indicated that secondary school students' satisfaction with ICT instruction did not significantly differ with respect to gender. The result appear the way it did because all males and females students in both public and private secondary schools in Calabar Metropolis were subjected to the same learning environment and thought by the same category of teachers. This finding is in tandem with Finani (2012) who opined that full implementation of ICT in schools is yet to be really seen and felt. Although computer studies is being embraced gradually in all levels of education in Nigeria, its actual implementation in secondary schools has been very slow.

The result of the third hypothesis indicates no significant different between the mean scores of students' satisfaction with ICT instruction in Calabar South and that of their counterparts in Calabar Municipality. The plausible explanation of this result is that the respondents in both Calabar South and Calabar Municipality may have been exposed to the same learning experience with regards to ICT instruction. Again, the level of inadequate facilities and human resources to facilitate computer studies must have been the same in both public and private secondary schools in Calabar Metropolis.

### **Implication for managing secondary education for global competitiveness in post Covid-19 Era.**

Management per se is the co-ordination of all the resources of an organization through the process of planning, organizing, directing and controlling in order to attain organizational objectives (Nwachukwu, 2004). As a process, managing secondary school for global competitiveness entails performance of specific functions (planning, organizing, staffing, directing, co-ordination, reporting and budgeting) directed towards preventing disruption in teaching and learning. It is also actions taken to ensure supportive physical and social environment that promote and sustain teaching and learning processes as well as directing available human and material resources for the purpose of achieving educational goals and objectives.

The results of this study have implications for managing secondary education for global competitiveness in post Covid-19 era. A comparative assessment of students' satisfaction with computer studies determines to a large extent how far public and private secondary school students in the study areas have gone in terms of gaining competence in ICT. The findings of this study indicated that all is not well as evidence in secondary school students' dissatisfaction with computer/ICT studies. These findings provide essential information to secondary school administrators, teachers, the community, Parents Teachers Association (PTA), Governmental Organizations (NGOs), Alumni Associations and the Governments on the areas of needs to be addressed in order ensure that computer/ICT studies is effective in secondary schools to enhance students' ability to function in world present dynamic and competitiveness world. The results of this study, may serve as a scoreboard that expedites actions on the part of stakeholders at the secondary school level to enhance continuous educational improvement particularly in area of ICT studies. This becomes imperative to equip students with the prerequisite ICT skills and competence for global competitiveness in the post Covid-19 era.

### **CONCLUSION**

This study concludes that secondary school students' satisfaction with computer studies /ICT instruction did not significantly differ with respect to school ownership, gender and school location. The results indicate that teaching and learning of computer or ICT instruction in both public and private secondary schools in Calabar Methropolis

is yet to produce intended result. Therefore, all hands must be on deck to ensure that computer studies in the secondary school is fully implementation for the benefit of the students to enable them function effectively in this age of ICT and in particular in post Covid-19 era.

### **RECOMMENDATIONS**

Following the findings and conclusions of this study, recommendations were made that:

1. The Government at various levels, Non-Governmental Organizations (NGOs) as well as Parents Teachers Association (PTA) should improve in their efforts towards provision of both hardware and software ICT facilities to sustain blended pedagogy in Post Covid-19 era.
2. Educational stakeholders should ensure that the lesson contents and learning experience in ICT that meet the global demands are offered to students at secondary school level.
3. Students should be effectively trained and well equipped with ICT skills before graduation.

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