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**PERCEIVED SENIOR SECONDARY STUDENTS' LEVEL OF COMPUTER ANXIETY AND COMPETENCES IN OYO EDUCATION ZONE OF OYO STATE, NIGERIA**

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**Abstract**

*The Nigerian government policy statement on design and development of innovative materials for effective teaching in Nigerian schools is yet to be fully realized because it depends on students' competency in computer and associated technologies. Therefore, this study investigated perceived senior secondary students' level of computer anxiety and competences in Oyo Education Zone of Oyo State, South-West, Nigeria. This baseline study adopted ex-post facto of survey type and purposively selected public secondary schools that are equipped with computer facilities. It involved one hundred and sixty (160) senior secondary schools, one student from four schools including one private school in Iseyin and Itesiwaju Local Government Areas of Oyo Education zone in Oyo State, South-West, Nigeria. Four research questions guided the study with the use of two instruments namely i.e. Students' Computer Anxiety Questionnaire (SCAQ)  $r=0.86$  and Students' Computer Competence Questionnaire (SCCQ)  $r=0.87$ . Findings from the study indicated that majority of the participants perceived themselves of having positive disposition to computers, thereby having no computer anxiety. Also, majority perceived that they are skillful in general Window skills, Word processing and presentation software respectively. Therefore, the study recommends exposure of students to practical computer activities during computer studies lessons and effective use of computer facilities where there are provisions. It also recommends adequate provision through the involvement of the parent-teacher association and non-governmental organisations as well as public spirited individuals, where such facilities are lacking.*

**Key Words:** Perception, Computer Anxiety, Computer Competences, Computer studies, Word processing, Presentation software.

**Introduction**

Techniques and methods of practices among humans throughout the whole world are constantly changing because modern technology is

taking over many human daily routines and activities. Educational institutions from the elementary to tertiary are also taking advantage of the information and communication media and technology tools including devices to enrich their teaching, training and course delivery systems such that, students learning activities are not restricted to the four walls of the classroom. Thus, recent and emerging developments in computers and communication technologies are pointers to the need for drastic review and upgrade of hitherto educational goals of many nations. Globally, the use of computer in teaching and learning has become widespread in educational institutions because computer is becoming tools and devices that could assist both teachers and learners in the teaching and learning processes respectively. Therefore, the roles of the schools are not restricted to giving instructions to equip the learners and students with the basic knowledge of computing, but also to develop in them skills that could make them to be competent in computer technology, enhance their self-development and continuous learning.

Successive government in Nigeria, through relevant ministries and agencies have accorded due recognition to the importance of computer technology in the teaching and learning processes. The Nigerian government's effort is yielding positive results through the introduction of computer education into the Nigerian secondary school curriculum. Thus, the Federal Government of Nigeria (FGN) through the Federal Ministry of Education (FME) launched the implementation of the National Policy on Computer Education at all levels of education in i.e. primary, secondary and tertiary levels of education in the year 2009. The objectives of the National policy on computer education and literacy in secondary school include need to:

- bring about a computer literacy in each student in Nigeria;
- develop the use of computer as teaching tool in all subject areas and to familiarise students with the use of computer technology;
- enable the present generation of school children at the secondary school level appreciate the potentials of the computer and be able to utilize the computer in various aspects of life and later occupation; and
- expose the teachers and the students to the latest scientific knowledge and skills. (FME, 2009)

The efforts put in place by the Nigerian government is in line with the reforms going on in the global educational systems, because government and people around the world are under ever-increasing pressure to

adjust to the use and integration of new digital media provided by Information and Communication Technologies (ICTs) so as to bring changes to classroom interactions. Moreover, trend in education is geared towards lifelong-learning such that, every individual is a learner within and outside the classroom engaging in one form of training, learning and instructions nearly at every moment in their lives. Further, the development in science and technology has brought into the limelight the indispensable roles of computers in all area of human learning through the use of information technology. Computer technology and the associated devices are virtually changing approaches and strategies in all fields of human endeavours in one way or the other.

Therefore, it has become necessary for nearly everyone to become literate in computer skills and utilization irrespective of one's profession or career. Anigbogu (2003) noted that other areas of computer application in the society include: simulation, national planning, revenue allocation, linear programming, decision making, industrial instrumentation, education, manufacturing, health care delivery (medicine), private practitioners, operation research, statistics, e.t.c. There are proven evidences that one's level of computer literacy, no doubt, would exert some influence on one's quality of life and career prospect. According to Ajibade (2006) computer literacy could mean 'ability to read, write and speak the language of the computer. While Obiadazie (2014) simply defines computer education to involve computer literacy, computer assisted instruction and computer appreciation. The author stresses that computer education is the effort or the ability to make citizen to become computer literate. Computers play a significant role in one's personal and professional life. Virtually all careers including schooling demand skillful knowledge of computer for one to succeed at one's business.

Consequentially, for students to effectively use computers in learning, students must first obtain general computer knowledge of how to use the keyboard, give commands and instructions through the use of computer hardware and must be familiar with relevant software applications. Further, students must learn how to navigate the mouse by practicing or playing games on the computer to develop keyboard skills alongside peripheral devices. In line with this assertion, Gee (2005a; 2005b) from two successive studies observes that playing and mastering a digital game is an important aspect of learning and the author suggests the use and integration of digital games as academic learning tools. Groff, Haas,

Klopfer, and Osterweil (2009) conducted a case study and research review which reveals that teacher strategies for the successful use of games in the classroom include: explore the games, partner with a colleague and find additional supports. The authors advocated new practices and approaches for teachers which should include using game-based learning and social media in their classrooms.

However, for students to actively learn using computers, they must understand the concepts of digital learning objects, digital materials and study how the concepts in the computer instructions fit together because, computers have capacity to provide instruction, manage instruction and evaluate performance. Students must also combine the information in their own minds, apply the information in a useful way, receive feedback and act on the feedback. Oni and Adebisi (2011) observed that computer is becoming a means of finding solutions to the education needs of today's learners because of computers' wide and variety applications in different spheres of teaching and instruction. Thus, computer education which simply means gaining knowledge and skill on the know-how of basic concepts that is related to a computer and its operations. Learning about the computer basics followed by a practical experience of using a computer is the key to computer education. As computers are widely used today, acquiring computer education is the need of the modern times because only computer education can facilitate the use of computers for purposes of learning and instruction. According to Adomi and Anie (2006) organizations are finding it very necessary to train and re-train their employees to establish or increase their knowledge of computers and other ICT facilities. Thus, Adomi and Kpangban (2010) advocated for early acquisition of computer and ICT skills by students. The authors are of the opinion that introducing computers early in education lays the foundation of most of the major competitive careers. The ability to use computers effectively has become an essential part of everyone's education (Adomi and Kpangban, 2010).

Reffell and Whiteworth (2002) cited by Adomi and Kpangban (2010) observed that skills such as bookkeeping, clerical and administrative work, stock taking and so forth, now constitute a set of computerized practices that form the core IT skills and packages i.e. spreadsheets, word processors, and databases. Thus, computer education is a must in this world that runs virtually on computers. To this end, computer education is becoming absolutely vital for everyone who belongs to this modern-day society and computer literacy which is the ability to tell the computer

what you want it to do and understand what the computer says is very vital to a modern man. The Nigerian National Policy on Information Technology was launched much later in Nigeria and the policy was formulated with the main goal to equip all learners with computer literacy at all levels. Some of the objectives, requirements and activities for computer education and literacy program were specified such that learners are exposed to:

1. knowledge of computer and their use in every life.
2. use of computer facilities to enhance their learning process.
3. acquire and develop rudimentary skills in data processing, word processing, record keeping and financial analysis. (FRN, 2004)

The computer education curriculum was generally designed and planned to improve the quality of teaching in schools, promote technological and socio-economic development of the nation. Coupled with the fact that most industries in Nigeria have incorporated the idea of using computer and as such, the advancement of computer education in the Nigerian society cannot be over emphasized. Fisusi (2000) stated the importance of computer education as follows:

1. It helps to develop competence in the basic skills and understanding of dealing with computers.
2. It helps to develop the habit of analytical data base concept.
3. It helps to effectively utilize the computer in solving problems.
4. It helps to develop necessary background in computer science to enhance further education.
5. It helps to create a technological based education at the secondary school level.

Within the last one and half decades, several studies in Nigeria had reported problems associated with students' accessibility to use computers as part of their learning experiences; for instance, Adeoye (2004) noted that the cost of computer system is high and considering the present state of the Nigerian economy many parents could not afford to buy computers for the use of their children at home. This fosters in the students the notion that computer is a magic box which can only be talked about or draw on paper but not easily accessible. About a decade later, Suberu (2013) clearly stated that the majority of the secondary school students do not have access to the use of personal computer which is also attributed to the socio-economic background of the learners. This constitutes some of the reasons why computer studies lesson in most secondary schools are taught without computers. Even though, every

computer lesson is supposed to be a practical-oriented. But the direct opposite is what obtains in most of the secondary schools in Nigeria with exception of a few schools that have benefitted from some intervention projects between 1999 to date, such as the School Access Programme (SAP) and School Net Nigeria (SNNG) among several other programmes (Amoo & Adewale, 2010).

### **Statement of the Problem**

The National Policy on Computer Education and Literacy in Nigeria was formulated to benefit the Nigerian children who are of the school ages especially from the primary to the secondary school level. Further, one of the objectives of the National Policy on Computer Education at the secondary school level in Nigeria is to develop in students' skills and techniques in the use of computer as a teaching tool in all subject areas and to familiarize students with the use of computer technology. However, studies have revealed that majority of the students lack the requisite knowledge and skills to effectively use computers and the associated devices and accessories due to non-accessibility to the required facilities and in some situations anxiety in use of computers. Therefore, this study was designed to access perceived senior secondary students' level of computer anxiety and competences in windows applications skills, desktop publishing and presentation software among selected senior secondary schools in Oyo Education zone of Oyo State, South-West, Nigeria.

### **Research Questions**

The study answered the following four research questions:

1. To what extent do senior secondary school students develop computer anxiety?
2. What is the level of students' computer competency in general window skills?
3. What is the level of students' computer competency in Word Processing?
4. What is the level of students' computer competency in Presentation software?

### **Methodology**

The study adopted ex-post facto research design of survey type to access perceived computer anxiety and level of computer competencies among students in the selected secondary schools in Oyo Educational zone of Oyo State, South-West Nigeria. The Population of this study comprised all

the senior secondary year one (SS1) Computer Studies students in the Oyo educational zone of Oyo State. Purposive sampling technique was employed to select four co-educational secondary schools from Iseyin and Itesiwaju Local Government Areas (LGAs) under Oyo Education Zone, where computer equipment and accessories were provided for teaching computer studies. The two (LGAs) are located about one-hundred kilometres from Ibadan the capital city of Oyo State. Simple random sampling was employed in selecting 40 students in each of the schools totalling 160 Senior Secondary School Students that constituted the sample for the study.

Two (2) instruments were developed and validated by the researchers and were used for data collection. They are: (a) Students' Computer Anxiety Questionnaire (SCAQ) and (b) Students Computer Competence Questionnaire (SCCQ):

The first instrument was used to generate information about the students' computer anxiety. The instrument contains two (2) sections A & B: Section A covers the background information of the respondents, section B contains 20 items with four points Likert type scale denoting: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The instrument was subjected to scrutiny for face and content validity to ensure non-technical flaws in the items and that the test actually measured what it was intended to measure. Necessary corrections were made based on the suggestions and comments which necessitated the restructuring of some items, addition of new items and the removal of ambiguities and irrelevancies associated with the items. The final version of the instrument was trial tested to a sample of 100 students, who were not part of the sample of the study. The reliability coefficient of 0.86 was obtained using Cronbach Alpha ( $\alpha$ ).

The second instrument was used to generate information about the students' computer competence. The instrument contains two (2) sections A & B: Section A covers the background information of the respondents; section B contains 20 items with four points Likert Scale ranging from; 0 = No Skills at all; 1 = Beginner Skills; 2 = Average Skills; 3 = Very Skilled). The instrument was subjected to scrutiny for face and content validity to ensure non-technical flaws in the items and that the test actually measured what it was intended to measure. Necessary corrections were made based on the suggestions and comments which necessitated the restructuring of some items, addition of new items and

the removal of ambiguities and irrelevancies associated with the items. The final version of the instrument was pilot tested to establish the internal consistency of the instruments; Cronbach Alpha  $\alpha$  of the entire items yielded a value of 0.87 reliability co-efficient.

The two duly validated instruments were used to gather data from the respondents captured in the study and which were analysed using descriptive statistics of percentages, mean and standard deviation.

## Results and Discussion

**Research Question One:** To what extent do Senior Secondary School Students develop computer anxiety?

**Table 1a: Senior Secondary Students' Perceive Level of Computer Anxiety (N=160)**

ITEMS	SA	A	D	SD	$\bar{X}$	S.D.
I feel insecure about my ability to make a computer printout	49 (28.5%)	43 (25%)	13 (7.6)	55 (32%)	2.5 4	1.24 8
I look forward to using a computer during my computer classes	51 (29.7%)	49 (28.5%)	12 (7%)	48 (27.9)	2.6 4	1.21 5
I do not think I would be able to learn a computer application software	26 (15.1%)	49 (23.8%)	29 (16.9%)	63 (36.6%)	2.1 8	1.14 1
The challenge of learning about computer is exciting	40 (23.3%)	46 (26.7%)	57 (33.1%)	17 (9.9%)	2.6 8	.967
I am confident that I can learn computer skills during our computer studies classes	81 (47.1%)	51 (29.7%)	17 (9.9%)	10 (5.8%)	3.2 6	.927
Anyone can learn how to use a computer if they are patient and motivated	42 (53.5%)	40 (23.3%)	20 (11.6%)	6 (3.5%)	3.3 4	.924
Learning to operate computers is like learning any skill, the more you practice, the better you become	68 (39.5%)	68 (39.5%)	19 (11%)	5 (2.9%)	3.2 4	.783
I am afraid that if I begin to use computer more, I will become more dependent upon them and lose some of	34 (19.8%)	45 (26.2%)	23 (13.4%)	57 (33.1%)	2.3 4	1.18 6



my reasoning skills							
I am sure that with time and practice, I will be as comfortable working on my computers studies assignment	60 (34.9%)	77 (44.8%)	15 (18.7%)	8 (4.7%)	3.1 8	.800	
I feel that I will be able to keep up with the requirements of computer studies	40 (23.3%)	91 (52.9%)	24 (14%)	5 (2.9%)	3.0 4	.72 6	

**Table 1b: Senior Secondary Students' Perceived Level of Computer Anxiety (N=160)**

ITEMS	SA	A	D	SD	$\bar{X}$	S.D.
I would dislike practicing with computer application difficult to use	20 (11.6%)	35 (20.3%)	79 (45.9%)	26 (15.1%)	2.3 1	.890
I feel apprehensive about using computers for my computer studies assignment	35 (20.3%)	50 (29.1%)	19 (11%)	56 (32.6%)	2.4 0	1.177
I have difficulty in understanding the practical aspects of computer studies	25 (14.5%)	48 (27.9%)	23 (13.4%)	64 (37.2%)	2.2 1	1.135
I am scared to the extent that I could cause the computer to destroy a large amount of information by pressing the wrong key	39 (22.7%)	78 (45.3%)	19 (11%)	23 (13.4%)	2.8 2	.983
I hesitate to use a computer for fear of making mistakes that I cannot correct	34 (19.8%)	42 (24.3%)	23 (13.4%)	60 (34.9%)	2.3 0	1.196
One must be a genius to understand all the special keys contained on most computer terminals	35 (20.3%)	48 (27.9%)	62 (36.0%)	14 (18.1%)	2.6 4	.942
If given the opportunity, I would like to learn more about and use computers outside the school	44 (25.6%)	88 (51.2%)	18 (10.5%)	10 (5.8%)	3.0 4	.800

environment						
I have avoided computer studies classes because it is unfamiliar and to me somewhat intimidating	32 (18.6 %)	27 (15.7 %)	39 (22.7 %)	60 (34.9 %)	2.1 7	1.172
I feel computers are necessary tools in both educational and commercial setting.	91 (52.9 %)	37 (21.5 %)	23 (13.4 %)	9 (5.2%)	3.3 1	.919
My mind goes blank when I am in front of a computer during our computer studies	21 (12.2 %)	38 (22.1 %)	74 (43.0 %)	25 (14.5 %)	2.3 2	.934

The results from the study presented in Table 1a and Table 1b show the extent to which senior Secondary School Students develop computer anxiety. Findings revealed that 55 representing 32% of students did not have ability to make a computer printout. However, 63 representing 36.6% of the students believed could not learn computer application software. Interestingly, 136 representing 79% of the students were of the opinion that learning computer is like learning any skill and with practice learners could operate computers. In the same vein, 131 representing 76.2% of the students had conviction that they could keep with the requirements of computer studies.

Again, 73 (42.4%) of the sample had difficulty in understanding the practical aspects of computer studies while 132 representing 76.8% of the respondents agreed that if given the opportunity, they would learn more about the use of computers outside the school environment. 109 representing 57% of the students were of the opinion that their minds never get blank when operating computers during computer studies.

Conclusively, majority of the students perceived themselves as having no anxiety towards computer use. The finding is not surprising since students gain access to the use computers in the school during computer practical.

**Research Question Two:** What is the level of students' computer competency in general window skills?

**Table 2a: Students' Level of Competency in General Window Skills (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can locate document in a computer folder	17 (10.6%)	36 (21.9%)	67 (41.9%)	41 (25.6%)	1.83	.935
I can save document into a folder	17 (10.6%)	23 (14.4%)	30 (18.8%)	90 (56.3%)	2.21	1.047
I can print my document from computer	25 (15.6%)	31 (19.4%)	29 (18.1%)	75 (46.9%)	1.96	1.138
I can recover deleted document from a computer	26 (16.3%)	67 (41.9%)	31 (19.4%)	36 (22.5%)	1.48	1.015
I'm competent to save files into my folder	11 (16.9%)	26 (16.3%)	25 (15.6%)	98 (57%)	2.31	.979
I can move files from one place to another	25 (15.6%)	27 (16.9%)	34 (21.3%)	74 (46.3%)	1.98	1.124
I can copy files within a folder	23 (14.4%)	37 (23.1%)	70 (43.8%)	30 (18.8%)	1.67	.943
I can rename files	16 (10%)	27 (16.9%)	24 (15%)	93 (58.1%)	2.21	1.054
I can search for a file within the computer storage system	21 (13.1%)	27 (16.9%)	36 (22.5%)	75 (46.9%)	2.05	1.092
I can create a shortcut on the desktop	31 (19.4%)	57 (35.6%)	42 (26.3%)	30 (18.8%)	1.44	1.008
I can use disk clean-up tool	58 (36.3%)	42 (26.3%)	29 (18.1%)	31 (19.4%)	1.21	1.133
I can run scandisk	43 (26.9%)	57 (35.6%)	34 (21.3%)	26 (16.3%)	1.27	1.032
I can handle disk defragmentation	49 (30.6%)	50 (31.3%)	33 (20.6%)	28 (17.5%)	1.25	1.076
I can switch between application	18 (11.3%)	31 (19.4%)	59 (36.9%)	52 (32.5%)	1.91	.983
I can minimize windows	15 (9.4%)	34 (21.3%)	22 (13.8%)	89 (55.6%)	2.16	1.061

**Table 2b: Students' Level of Competency in General Window Skills (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can maximize windows	20 (12.5%)	23 (14.4%)	27 (16.9%)	90 (56.3%)	2.17	1.089
I can resize windows	27 (16.9%)	26 (16.3%)	34 (21.3%)	73 (45.6%)	1.96	1.140
I can cut texts within documents	24 (15%)	48 (30%)	55 (34.4%)	33 (20.6%)	1.61	.978
I can cut and paste texts within the same document	22 (13.8%)	31 (19.4%)	58 (36.3%)	49 (30.6%)	1.84	1.015
I can copy text within document	19 (11.9%)	30 (18.8%)	34 (21.3%)	77 (48.1%)	2.06	1.011
I can paste text within documents	19 (11.9%)	33 (20.6%)	36 (22.5%)	12 (45%)	2.01	1.067
I can use windows help	22 (13.8%)	58 (36.3%)	45 (28.1%)	35 (21.9%)	1.58	.981
I can set up a new screensaver	20 (12.5%)	33 (20.6%)	45 (26.2%)	62 (38.8%)	1.93	1.047
I can back up my document to flash disk	72 (45%)	39 (24.4%)	22 (13.8%)	27 (16.9%)	1.03	1.127
I can back up my document to CD/DVD	30 (18.8%)	59 (36.9%)	35 (21.9%)	36 (22.5%)	1.48	1.040
I can back up my document to memory card	26 (16.3%)	30 (18.8%)	33 (20.6%)	71 (44.4%)	1.93	1.133
I can back-up my documents to external storage	20 (12.5%)	24 (15%)	95 (59.4%)	21 (13.1%)	1.73	.845
I can update my anti-virus	37 (23.1%)	32 (20%)	16 (10%)	75 (46.9%)	1.81	1.251
I know how to shut down my PC	18 (11.3%)	23 (14.4%)	34 (21.3%)	85 (53.1%)	2.16	1.051
I can cool boot a computer	23 (14.4%)	30 (18.8%)	23 (14.4%)	84 (52.5%)	2.05	1.137

Results from the study as presented in Table 2a and Table 2b show the level of students' computer competency in general window skills. Which reveals that 108 representing 67.5% of the students could skillfully locate

saved document in a computer folder, while 17 representing 10.6% could not? In the same vein, 120 representing 75.1% of the entire students considered for the study were skillful in saving document into a folder against 17 representing 10.6% could not save document into a folder. 67 representing 41.9% of students have basic skill in recovering deleted document from a computer while 26 which represent 16.3% of the students could not do it.

However, 93 representing 58.1% of the students were very skillful in renaming files while 16 which represents 10% of the students have no skill in the renaming files. Conversely, 58 representing 36.3% have no skill in using disk clean up tools while 31 representing 19.4% could skillfully use disk clean up tools. 90 representing 56.3% of the students were very skillful in maximizing windows while 20 representing 12.5% of the students have no skill to maximize windows. Again, 111 students representing 69.4% could skillfully copy text within documents while a minority number of 19 students have no skill to copy text within documents. Again, 72 representing 45% of the entire students sample of the study have no skill in backing up document to flash disk while a mere 27 representing 16.9% could skillfully back up document to flash disk.

Furthermore, 91 representing 56.9% of the students could update antivirus while 37 which represents 23.1% of the students have no skill to update antivirus. 119 of the total sample of the study representing 74.4% could shut down PC while a mere 18 of the students could not shut down PC, while students representing 66.9% could cool boot a computer while 23 which represent 14.4% of the total students used for the study could not cool boot a computer.

In conclusion, majority of the students perceived themselves as very skillful in most of the computer activities list as general Window skills, more so that the students gain access to the use computer in the school.

**Research Question Three:** What is the level of students' computer competency in Word Processing?

**Table 3a: Students' Level of Computer Competency in Word Processing (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can format text e.g. size, bold and font	24 (15%)	31 (19.4%)	36 (22.5%)	69 (43.1%)	1.94	1.109
I can do spell check on a document	19 (11.9%)	25 (15.6%)	42 (26.3%)	74 (46.3%)	2.07	1.047
I can cut text	25 (15.6%)	25 (15.6%)	30 (18.8%)	80 (50%)	2.03	1.135
I can paste text	21 (13.1%)	32 (20%)	34 (21.3%)	73 (45.6%)	1.99	1.090
I can use undo command	25 (15.6%)	38 (23.8%)	69 (43.1%)	28 (17.5%)	1.63	.950
I can customize my toolbar	25 (15.6%)	50 (31.3%)	52 (32.5%)	33 (20.6%)	1.58	1.987
I can set margins	25 (15.6%)	37 (23.1%)	32 (20%)	66 (41.3%)	1.87	1.222
I can set page brake	39 (24.4%)	38 (23.8%)	52 (32.5%)	31 (19.4%)	1.47	1.064
I can indents	31 (19.4%)	35 (21.9%)	26 (16.3%)	68 (42.5%)	1.82	1.181
I can tab section breaks	23 (14.4%)	42 (26.3%)	62 (38.8%)	33 (20.6%)	1.66	.965
I can do partial format	21 (13.1%)	29 (18.1%)	54 (33.8%)	56 (35%)	1.91	1.027
I can create page numbers in document	25 (15.6%)	27 (16.9%)	36 (22.5%)	72 (45%)	1.97	1.118
I can do multi-level numbering	26 (16.3%)	41 (25.6%)	60 (37.5%)	33 (20.6%)	1.63	.989

**Table 3b: Students' Level of Computer Competency in Word Processing (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can set headers and footers	31 (19.4%)	64 (40%)	41 (26.1%)	24 (15%)	1.36	.961
I can use tables to present information	18 (11.3%)	37 (23.1%)	30 (18.8%)	75 (46.9%)	2.01	1.706
I can create charts to present information	24 (15%)	67 (41.9%)	35 (21.9%)	34 (21.3%)	1.49	.991
I can add borders to tables	26 (16.3%)	30 (18.8%)	34 (21.3%)	70 (43.8%)	1.93	1.130
I can add shade to tables	22 (13.8%)	25 (15.6%)	74 (46.3%)	39 (24.4%)	1.81	.959
I can add paragraphs to document	24 (15%)	23 (14.4%)	45 (28.1%)	68 (42.5%)	1.98	1.084
I can use templates for standard document	30 (18.8%)	31 (19.4%)	67 (41.9%)	32 (20%)	1.63	1.007
I can create labels	27 (16.9%)	33 (20.6%)	39 (24.4%)	61 (38.1%)	1.84	1.115
I can mail merge	30 (18.8%)	30 (18.8%)	66 (41.3%)	34 (21.3%)	1.65	1.017
I can use heading styles	23 (14.4%)	39 (24.4%)	73 (45.6%)	25 (15.6%)	1.63	.916
I can import images into my document	23 (14.4%)	61 (38.1%)	39 (24.4%)	37 (23.1%)	1.56	1.001
I can use zoom control to zoom the document	25 (15.6%)	27 (16.9%)	26 (16.3%)	82 (51.3%)	2.03	1.146

The results of the study presented in Table 3a and Table 3b show the level of students' computer competency in Word processing. Findings revealed that 105 representing 65.6% of the sample students could format text while 24 which represents 15% could not format text. 110 and 107 students representing 68.8% and 66.9% could cut and paste text respectively while 25 and 21 representing 15.6% and 13.1% have no skill in cut and paste text respectively. In the same vein, 72 representing 45% of the students were very skillful in creating page numbers in document while 25 which represents 15.6% of the entire students have no skill to create page number in document.

Also, 105 of the students representing 65.7% could use table to present information while 18 which represents 11.3% have no skill to present information in a table. 113 representing 70.7% of the entire students that constituted the sample of the study could add shade to table while 22 which represents 13.8 could not. In the same vein, 100 representing 62.6% of the students could mail merge while 30 which represents 18.8% of the students could not mail merge. Finally, 108 of the entire students representing 67.6% could use zoom control to zoom the document.

In conclusion, majority of the students perceived themselves very skillful in word processing application, this is understandable based on the fact that majority of the students gain access to the use computer only during the computer laboratory periods.

**Research Question Four:** What is the level of students' computer competency in presentation software?

**Table 4a: Students' Level of Computer Competency in Presentation Software (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can create a new presentation	41 (25.6%)	23 (14.4%)	23 (14.4%)	73 (45.6%)	1.80	1.263
I can create bulleted list	26 (16.3%)	27 (16.9%)	35 (21.9%)	72 (45%)	1.96	1.129
I can add an image to a document	21 (13.1%)	26 (16.3%)	69 (43.1%)	44 (27.5%)	1.85	.973
I can add graphic to a document	22 (13.8%)	32 (20%)	70 (43.8%)	36 (22.5%)	1.75	.958
I can move slides around within the slide sorter view	28 (17.5%)	64 (40%)	33 (20.6%)	35 (21.9%)	1.47	1.021
I can add text to a blank layout	33 (20.6%)	43 (26.9%)	57 (35.6%)	27 (16.9%)	1.49	1.003
I can add images to a blank layout	24 (15%)	33 (20.6%)	74 (46.3%)	29 (18.1%)	1.68	.942
I can add colour to text	24 (15%)	30 (18.8%)	77 (48.1%)	29 (18.1%)	1.69	.938
I can create a master slide	21 (13.1%)	31 (19.4%)	42 (26.3%)	66 (41.3%)	1.96	1.066
I can use a master slide	23 (14.4%)	30 (18.8%)	77 (48.1%)	30 (18.8%)	1.71	.934
I can add shapes to slides	25 (15.6%)	20 (12.5%)	71 (44.4%)	44 (27.5%)	1.84	1.002



I can add lines to slides	23 (14.4%)	27 (16.9%)	76 (47.5%)	34 (21.3%)	1.76	.950
I can duplicate slides	23 (14.4%)	29 (18.1%)	73 (45.6%)	35 (21.9%)	1.75	.958
I can delete slides	24 (15%)	21 (13.1%)	84 (52.5%)	31 (19.4%)	1.76	.938
I can add notes to a slide	21 (13.1%)	37 (23.1%)	69 (43.1%)	33 (20.6%)	1.71	.941

**Table 4b: Students' Level of Computer Competency in Presentation Software (N=160)**

ITEMS	NS	BS	AS	VS	X	S.D.
I can create an organizational chart	23 (14.4%)	62 (38.8%)	39 (24.4%)	36 (22.5%)	1.55	.996
I can create a bar chart	22 (13.8%)	30 (18.8%)	83 (51.9%)	25 (15.6%)	1.69	.897
I can import objects from other files	19 (11.9%)	31 (19.4%)	73 (45.6%)	37 (23.1%)	1.80	.930
I can create transitional effects	23 (14.4%)	62 (38.8%)	40 (25%)	35 (21.9%)	1.54	.990
I can start a slide show	30 (18.8%)	26 (16.3%)	35 (21.9%)	69 (43.1%)	1.89	1.158
I can create table in slide	23 (14.4%)	25 (15.6%)	70 (43.8%)	42 (26.3%)	1.82	.983
I can apply them to slide	32 (20%)	26 (16.3%)	67 (41.9%)	35 (21.9%)	1.66	1.034
I can add animation effects to slide	62 (38.8%)	27 (16.9%)	41 (25.6%)	30 (18.8%)	1.24	1.159
I can display black screen during presentation	30 (18.8%)	23 (14.4%)	74 (46.3%)	33 (20.6%)	1.69	1.004
I can display white screen to write during presentation	28 (17.5%)	24 (15%)	37 (23.1%)	71 (44.4%)	1.94	1.140
I can add video to slide	67 (41.9%)	27 (15.7%)	32 (20%)	34 (21.3%)	1.21	1.198
I can add sound to slide	70 (44%)	24 (15.1%)	27 (17%)	38 (23.9%)	1.21	1.238

I can insert picture to slide	69 (43.1%)	26 (16.3%)	28 (17.5%)	37 (23.1%)	1.21	1.224
I can add equations to slide	66 (41.3%)	23 (14.4%)	38 (23.7%)	33 (20.6%)	1.24	1.195
I can add date to slide	21 (12.2%)	24 (15%)	25 (15.6%)	89 (55.6%)	2.16	1.113

The results of the study presented in Table 4a and Table 4b above show the level of students' computer competency in Presentation. The findings revealed that 96 representing 60% of the students could create a new presentation while 41 which represents 25.6% of the students have no skill in creating a new presentation. 113 representing 70.6% of the students could add image to a document while 21 which represents 13.1% could not. 103 representing 64.4% of the sample of the study could add images to a blank layout while 24 which represents 15% have no skill to do it.

Again, 107 representing 66.2% of the students could use master slides while 23 which represent 14.4% of the students could not use master slide. 110 representing 68.7% of the students could import objects from other files while 19 which represent 11.9% have no skill to import objects. 112 representing 70.1% of the students could create table in slide while 23 which represent 14.4 of the students have no skill in creating table in slide. 107 representing 66.9% of the students could display black screen during presentation while 30 which is 18.8% have no skill to display black screen during presentation.

Further, 70 representing 44% of the entire students have no skill in adding sound to slide while only 38 which represent 23.9% were very skillful in adding sound to slide. Also, 66 students representing 41.3% of the entire students have no skill in adding equation to slide while only 33 representing 20.6 % of the total students were skillful in adding equation to slide. Interestingly, 114 representing 71.2% of the entire students sampled for the study were skillful in adding date to slide while 21 which represent 12.2% of the students used for the study have no skill in adding date to slide.

Conclusively, majority of the students perceived themselves not to be very skillful in presentation software, this finding is not surprising because majority of the students gain access to use computer only during the computer laboratory periods.

### **Summary of Findings**

Summary of findings are discussed along the four research questions earlier asked in the study. Finding from the study revealed that majority of the students do not develop anxiety for computer; rather they are confident that they could learn computer skills during their computer studies classes. Finding implies that majority of the students perceived that they had positive disposition towards computer use. Finding thus, corroborates Tsai and Tsai (2003) submission in a study on attitude and anxiety towards computer among seventy-five Taiwanese computer students and found a significant association between students' meta-cognitive skills, computer achievement and their level of computer anxiety.

Further, findings of the study also reveal that majority of the students have high level of computer competencies in general window skills, word processing and in presentation software which forms part of basic requirements for playing digital games as advocated by Gee (2005a; 2005b) from two successive studies which established that playing and mastering a digital game is an important aspect of learning and the author suggested use and integration of digital games as academic learning tools. However, it was noted that many of the students had no skills in adding sound and equation to slides but majority of them could add date to slide.

### **Conclusions**

Arising from the findings of this study, it has been established that students covered in the study perceived themselves as having no computer anxiety and perceived that they are highly competent in window skills, word processing and presentation software packages. Thus, it is perceived among the samples that students in public senior secondary schools in Oyo state are prepared for computer assisted instructions (CAI) or computer assisted learning (CAL), computer-mediated learning (CML) or any form of e-learning generally.

### **Recommendations**

Arising from the findings of this study, the following are our recommendations:

- In schools where computer laboratory facilities and equipment are provided, computer teachers should engage students in intensive use of the laboratory for teaching computer studies.

- Computer teachers should place emphasis on hand-on practical skills by engaging students in practice during computer studies practical classes.
- Head of schools/departments and Computer teachers should put computer facilities and equipment provided by the government, non-governmental organisations and public spirited individuals; into effective use rather than locking them up in the store or the principal's office or elsewhere.
- Parent-teachers-association (PTA) could be involved in providing assistance to the school especially, when it comes to provision and maintenance of computer facilities.

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