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**Computer self-efficacy and computer attitude as correlates of internet use of secondary school students' in Nigeria****Information Impact:**Journal of Information and Knowledge Management  
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ISSN: 2360 – 994X (e-version)**Fadekemi O. Oyewusi***University of Ibadan, Nigeria***Abiola Abosede Sokoya***Yaba College of Technology, Nigeria***Kolawole Akinjide, Aramide***University of Ibadan, Nigeria.***Abstract**

The Internet as a useful tool that supports teaching and learning is not in full use in most secondary schools in Nigeria hence limiting the students from maximizing the potentials of Internet in advancing their academic pursuits. This study, therefore, examined the extent to which computer self-efficacy and computer attitude influence Internet use among senior secondary school students (SS1 and SS11) in public secondary schools in Lagos State, Nigeria. This study utilized the descriptive survey research design of the ex-post-facto type. Instruments used to collect data were Computer Self-Efficacy (CSE) ( $r=0.73$ ), Computer Attitude (CATT) ( $r=0.85$ ), and Internet Use (IU) ( $r=0.78$ ) scales. Data were analyzed using descriptive statistics, Pearson's Product Moment Correlation and Multiple regressions at 0.8 level of significance. The relative contributions of the independent measures of Internet use were: CSE ( $\beta= .319$ ,  $t=7.712$ ), and ATC ( $\beta=-.099$ ,  $t=3.085$ ). The Computer Self-Efficacy, and Computer Attitude of senior secondary school students significantly influenced Internet use ( $F_{(3,559)} = 60.064$ ) respectively.

**Keywords:** Computer Self-efficacy, computer attitude, secondary school students, internet use

**Introduction**

Digital technologies, such as computers, Internet tools, and applications have become enmeshed in young people's lives. The use of the Internet has increased significantly in educational platforms; learning, teaching, research thereby making the importance of the Internet integration to continue to rise in educational institutions.

The revolution in Information and Communication Technology (ICT) and the Internet, in particular, is exerting profound effects on education because of the vast information resources available to support teaching, learning, training and research. The Internet has the ability to facilitate communication and collaboration among teachers and students thereby having a

resultant effect on education. The Internet as an educational tool has numerous potentials that may be used to replace the traditional classroom teaching or supplement traditional instructional methods. Jung (2009) stated that the Internet is a powerful tool for learning if used correctly by students, while Nwokedi (2011) observed that some students still lack the skill of searching the Internet, which could be attributed to their low self-efficacy, anxiety or negative attitude to the use of a computer.

The use of the Internet is gaining ground in developed countries of the world and rapidly too in developing countries like Nigeria. Most importantly educational institutions including secondary schools are adopting the use of Internet facilities for teaching and learning. However, in Nigeria, observations revealed that secondary school students have not been able to maximize the potential of Internet resources in the learning process due to some personality traits. Lack of competence and personal confidence in the use of a computer may result in low Internet use which could be due to low self-efficacy; where high computer self-efficacy is required for effective use of Internet.

In addition, low self-efficacy often times result from the level of attitude exhibited by students which also determine the kind of attitude that would be demonstrated towards Internet use. For a Nigerian secondary school student to use the Internet effectively, he or she must have high self-efficacy and positive attitude towards the computer. Reasons for use and non-use of Internet resources by secondary school students should be investigated

because studies have shown that students' level of computer self-efficacy and attitude is necessary before the implementation of any information communication technology in any educational system. Therefore, this study investigated the extent to which computer self-efficacy and attitude towards computer correlate Internet use among secondary school students in Lagos State, Nigeria.

### **Objectives of the study**

The broad objective of this study is to investigate the extent to which computer self-efficacy and computer attitude correlate Internet use among secondary school students in Lagos State. The specific objectives of the study are to find out;

- the effect of computer self-efficacy on Internet use among senior secondary school students in Lagos State;
- whether attitude towards computer has an effect on Internet use among senior secondary school students in Lagos State;
- to find out whether computer self-efficacy and computer attitude correlates Internet use among senior secondary school students in Lagos State;
- the pattern of use of Internet among senior secondary school students in Lagos State

### **Research questions**

The following research questions were answered in this study

- To what extent does computer self-efficacy affect Internet use among senior secondary school students in Lagos state?
- To what extent does attitude towards computer affect Internet use among senior secondary school students in Lagos State?
- What is the joint influence of computer self-efficacy and attitude on Internet use among senior secondary school students in Lagos State?
- For what purpose do senior secondary school students in Lagos State use the Internet?

This study focused on the extent to which computer self-efficacy and computer attitude correlate Internet use by secondary school students in Government owned public schools in the six education districts in Lagos State. It is expected that this category of students would have adequate knowledge about the use of the Internet. Attitude, in this study, focused on the disposition of senior secondary school students towards computer use. In all, the study focused on the effect and extent at which the dependent variables (computer self-efficacy and computer attitude) determine the extent of Internet use among senior secondary school students in government-owned public senior secondary schools in Lagos state.

This study derives its relevance from the growing literature on Internet use, computer self-efficacy and computer attitude in relation to educational institutions especially

secondary schools. The results of the study could provide information on the computer self-efficacy level, and computer attitude of senior secondary school students towards computer use thereby enabling the school management to make informed decisions on how to maximize the potentials of the students in relation to these factors to improve on Internet use for educational purposes.

There are studies on the extent to which self-efficacy, anxiety to computer predict utilization of the Internet in Nigerian education sector especially in tertiary institutions, however, there is a general dearth of studies on factors influencing Internet utilization among secondary school students in Nigeria. The study is, therefore, significant in that it contribute to knowledge in the area of computer attitude as influencing Internet use among secondary school students in Nigeria.

### **Literature review**

The Internet has reduced the world to a global village connecting people and organizations through the connection of computer networks that spans the globe. Adogbji and Ukporhonor (2005) opined that the Internet connects private individuals, communities as well as educational institutions to a wide range of computer services and information resources. In addition, there is a growing interest in the integration of the Internet and other related facilities into classrooms which in turn offers a wider spectrum of valuable benefits for teaching and learning (Zhao & Cziko 2001). It enhances students' skills and

capabilities through its successful integration into educational institutions. The ability to use the Internet and having the intention to reuse it reflects students' perceptions as they enjoy connecting with peers on the Internet and being able to complete school assignment with available educational resources on the Internet. The Internet provides access to large amount of information resources, Kamara, (2010) supports the fact that the Internet is exposing both teachers and students to current trends and resources in their field of studies.

The influence of the Internet which had been previously confined to communication and resources sharing has gradually developed into a new dimension in the teaching-learning process that students and teachers are gaining more trust and confidence in it as a good educational tool. Thus, with the rapid growth of the Internet and the advantages, educational institutions have embraced the use of the Internet as a new medium that is sure to assist productivity in teaching, learning, research and many other activities such as making learning available to students who prefer its usage outside the classroom. Achima and Al Kassim, (2010) observed that despite Government huge expense on the computer, computer laboratories and Internet facilities in public secondary schools, students are not maximizing the use of a computer to the fullest.

Nwokedi (2011) observed that the level of students' use of the Internet could be attributed to their low self-efficacy, negative attitude to the use of computer. Jung (2009) stated that the Internet is a powerful tool for

learning if used correctly by students. This observation could be an expression of students' personal perception, usefulness, and ease of use of computer and its facilities like the Internet.

However, to benefit from the huge resources on the Internet, students must have a positive attitude towards the use of computer and also have personal confidence that would assist them educationally to enable them to have potentials to alter the traditional ways in which education is being delivered in Nigerian secondary schools. Thus, students' efficacy in the use of a computer to access the Internet is of great importance for better academic performance. As developed by Bandura (1986, 1991, 1997), self-efficacy is the belief in one's capability to organise and execute course of action that is required to carry out specific exercise that has influence over events that affect one's life; self-efficacy is a personal belief in one's capability to organise and execute the course of action that is required to successfully complete a task in order to accomplish set goal.

The concept of self-efficacy is context based on personal judgment of one's capability where one values self as being able to carry out specific action regardless of being professionally skilled. The concept of self-efficacy is more of the personal judgment of self-capability with determination to carry out a specific action. Thus, a strong sense of self-efficacy will facilitate cognitive process among secondary school students to select an action in a specific situation such as the use of a computer.

Therefore, computer self-efficacy has been identified as a specific efficacy which is an important determinant of computer-related tasks such as computer and Internet usage (Robertson & Al-Zahrani, 2012). Johnston, (2005) observed that computer self-efficacy has been shown to play a significant role in an individual's decision to use computers and related technologies. A personal decision to use a computer effectively will determine how long one can go in making use of computer related technologies in any giving situation. However, an individual whose personal thinking is influenced by other people's negative experience on the use of the computer will likely have a little low level of self-efficacy in their ability to use a computer. This also involves how confident learners are in performing assigned learning tasks in technology-related environments. Therefore students' computer self-efficacy may be influenced by their level of computer attitude to use.

Another factor that could influence people's behavior is an attitude; it's one of the determinant factors that affects what people are doing and reflects what they are. Kutluca, (2011) belief that attitude determines people's behavior. Attitude is the overall pattern of individual behavior towards something; such as the way an individual will behave or respond in a situation like using a computer. Therefore people's attitude can be predicted from the individual behavioral pattern.

Student's attitude towards the use of a computer could affect such a student's use of the Internet. Computer attitude reflects

feelings and response of favourableness or unfavourableness toward using a computer. Students' attitude toward Internet has been identified as one of the major factors that predict their internet use. Attitude determines whether a person is willing to try a new innovation or not (Kutlucer, 2011). According to Batlor and Ritchie (2002), the success of Internet use in educational settings largely depends on students' attitude toward internet use. Taiwo (1998) described attitude as inclinations and feelings, prejudices, or bias, preconceived notions, ideas, fears, and conventions about any specific topic, having a relationship with mental and neural" state of readiness organized through experience.

Attitude guides behavior which, in turn, would reflect in the way an individual responds to and is disposed towards an object which may be positive or negative (Ajzen & Fishbein, 2005). Bolandifar, Nordin, and Babashami (2013) study corroborated this as it established that Malaysian high school students showed generally positive attitudes towards integrating the Internet into learning. Computer self-efficacy is also a behavioral construct that explains an individual's capability to use a computer and related resources (Aremu and Fasan, 2011). Positive attitude towards computer could draw a student to the use of computer more and also computer related task will not be such a barrier to the use of Internet, while negative attitude could draw the students away from Internet use. In other words, attitudes, whether positive or negative affect how

students react to use a computer which in turn could affect the use of Internet in a teaching and learning (education) environment.

### **Methodology**

This study adopted the ex-post-facto type of survey design method in studying behavior to have an understanding of the perceptions and opinions of randomly selected respondents from a larger group in order to ascertain the nature of the use of Internet by secondary school students in the sampled schools in particular and Nigeria in general. This method is considered appropriate in obtaining reliable information about computer self-efficacy and computer attitude as influencing Internet use by senior secondary school students in Lagos state. The population of the study comprised all the senior secondary school in SS1 and 11 students in public senior secondary schools in Lagos State. The total number of senior secondary school students in Lagos is two hundred and fifty-seven thousand, six hundred and eighty (257,680) and these students spread across the three hundred and eight (308) senior secondary schools in the six education districts in Lagos State as at February 2015. These students are important to this study as they are the ones who can offer valuable information for the needed data on students' Internet use in regard to the variables in this study.

The multi-stage sampling technique was adopted in selecting the sample population for the study. The administration of secondary school education in Lagos State is designed along six education districts. This

is to ensure that all districts are represented in the study; simple random sampling method using balloting system was adopted in selecting two zones from each of the districts. Therefore schools selected from the zones were schools with functional Computer Internet facilities within and around the school compound such that the students could have ease of access to available facilities were selected for the study.

### **Findings and discussion**

The demographic information on the age of the respondents reveals that there are more students within the age range of 12-16 years (60 %) among the respondents than those within the age range of 17 years and above (40 %). This implies that majority of the senior secondary school students in Lagos State are within the age range of 12-16 years which is regarded as the senior secondary school years in Nigeria.

**Research question 1: To what extent does computer self-efficacy influence internet use of senior secondary school students in Lagos State?** The study reveals that computer self-efficacy has a significant positive influence on Internet use ( $r = .452^{**}$ ,  $N = 560$ ,  $P < .01$ ) which suggests that the higher the computer self-efficacy of senior secondary school students, the more they would make use of the Internet. The inference to be drawn from this is that computer self-efficacy of senior secondary school students in Lagos State has significance positive influence on the student's Internet use.



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**Table 1: Summary of relationship between computer self-efficacy and internet use of secondary school students in Lagos State**

Variable	Mean	Std. Dev.	N	R	R <sup>2</sup>	P	Remark
Computer Self-Efficacy	49.4214	7.2453	560	.452**	.204	.000	Sig.
Internet Use	41.8286	9.2502					

\*\* Sig. at .01 level

**Research question 2: To what extent does attitude towards computer influence internet use by senior secondary school students in Lagos State?**

The study revealed that attitude towards computer has a significant positive influence on Internet use ( $r = .360^{**}$ ,  $N = 560$ ,  $P <$

$.01$ ). Thus, attitude towards computer has a significant positive influence on Internet use by senior secondary school students in Lagos State. Also that attitude towards computer has significant positive influence on Internet use by senior secondary school students in Lagos State, Nigeria.

**Table 2: Summary of relationship between computer attitude and internet use by secondary school students in Lagos State**

Variable	Mean	Std. Dev.	N	R	R <sup>2</sup>	P	Remark
Attitude of Students	51.4732	8.2659	560	.360**	.130	.000	Sig.
Use of Internet	41.8286	9.2502					

\*\* Sig. at .01 level

**Research question 3: What is the frequency of internet use among senior secondary school students in Lagos State?**

The students affirmed the regular use of Internet for online shopping only (343, 61.2%) in addition to their occasional use of Internet for solving class and home assignments (287, 51.3%) and downloading information for solving school work (288, 51.2%) only. Using the overall weighted

Mean of 3.48 as benchmark, use of Internet for solving class and home assignments ( $\chi = 3.94$ ), for chatting (Mean=3.84), for social media network facilities to connect people around the world (Mean=3.78) and for e-mail for communication purposes (Mean=3.71) ranked highest among the purposes for which senior secondary school students in Lagos make use the Internet.

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**Table 3: Frequency of internet use among senior secondary school students in Lagos State**

S/N	Statements	Daily	Weekly	Once in 2 weeks	Monthly	Never	Mean	S.D.
1	I use Internet for solving sch. Work	22 3.9%	44 7.9%	84 15.0%	203 36.3%	207 37.0%	3.94	1.09
2	I use social media to connect with people	61 10.9%	36 6.4%	85 15.2%	159 28.4%	219 39.1%	3.78	1.32
3	I use e-mail for e-communication	72 12.9%	51 9.1%	81 14.5%	120 21.4%	236 42.1%	3.71	1.42
4	I use the Internet for carrying out school project	55 9.8%	89 15.9%	120 21.4%	172 30.7%	124 22.1%	3.39	1.26
<b>Overall Weighted Mean</b>							<b>3.48</b>	

*Key: Daily and Weekly = Regular Use; Twice a Week and Monthly = Occasionally*

**Research question 4: For what purpose do senior secondary school students in Lagos State use the Internet?**

Respondents were asked to indicate the purpose for which they use the Internet; information gathered from the table shows

that senior secondary school students make use of Internet mainly for academic, information and entertainment purposes ranked above the overall weighted mean of 2.94 as indicated as the purpose for which they use the Internet.

**Table 4: purpose of internet use by senior secondary school students in Lagos**

S/N	Statements	SD	D	A	SA	Mean	S.D.
1	Surfing to solve assignments	19 3.4%	32 5.7%	215 38.4%	294 52.5%	3.40	.75
2	Downloading learning resources to do assignments	23 4.1%	46 8.2%	205 36.6%	286 51.1%	3.35	.80
3	Use for Social Media	44 7.9%	17 8.4%	187 33.4%	282 50.4%	3.26	1.26
4	Reading book online	44 7.9%	57 10.2%	221 39.5%	238 42.5%	3.17	.90
<b>Grand Mean</b>						<b>2.94</b>	



### Conclusion and recommendations

Considering the findings of the study, it can be concluded that computer self-efficacy, computer, and computer attitude have a positive influence on Internet use. Computer self-efficacy was found to be the most influencing factor of Internet use by senior secondary school students in Lagos State. Thus it suffices to say that computer self-efficacy as a factor contributed more towards Internet use as investigated in the study. However, it can be concluded based on findings from the study that computer self-efficacy and attitude towards computer are major factors that significantly influenced Internet use. It suffices to say that senior secondary school students with high computer self-efficacy and positive computer attitude would be satisfied with Internet facilities and resources than those with low computer self-efficacy and negative attitude.

This is because students with high computer self-efficacy and positive attitude would be interested and drawn towards using the Internet because they would tend to be more comfortable with the Internet. Computer self-efficacy and attitude towards computer are necessary ingredients in the determination of Internet use among secondary school students.

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