



UNIVERSITI PUTRA MALAYSIA

***FACTORS INFLUENCING THE USE OF ICT IN TEACHING
AMONG SECONDARY SCHOOL TEACHERS IN ABA NORTH
DISTRICT, NIGERIA***

NWOSU AUGUSTINE

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By

NWOSU AUGUSTINE

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfillment of the Requirements for the Degree of
Master of Science**

October 2018

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DEDICATION

I dedicate this thesis to my wife, mother, child and siblings.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chairman : Shaffe Mohd Daud, PhD
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This study examined the factors influencing the use of ICT in teaching among secondary school teachers in aba north district, Nigeria. Using TAM as the research model, this study examined the ICT competency, accessibility of ICT, perceive usefulness, perceived ease of use, attitude toward ICT, behavioral intention to use ICT and teachers' use of ICT in teaching in Aba north secondary schools. Questionnaires were used to collect data from a sample of 234 teachers, randomly selected from 20 secondary schools in Aba north district. Result showed that the overall mean for ICT competency construct of teachers in Aba north district is (M=2.87), which is considered moderate, indicating that teachers in Aba north secondary schools have average ICT competency. The overall mean scores of teachers' perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT were found to be high at M=3.54, 3.52, 3.57 and 3.55 respectively. This shows that teachers in Aba north secondary schools perceived the use of ICT to be easy and usefulness. It also shows that they have positive attitude towards ICT and good behavioral intention to use ICT in teaching. Accessibility of ICT and teachers' use of ICT in teaching were found to be low with overall mean scores of (M= 1.69 and 1.57) respectively, indicating that teachers do not have access to ICT when needed and did not use ICT in teaching. Correlation analysis found that teachers' perceived ease of use, perceived usefulness and behavioral intention to use ICT have weak relationships with their use of ICT while ICT competency and attitude towards ICT do not have significant relationship with use of ICT. It was found that accessibility of ICT and use of ICT have a moderately strong significant relationship ($r_s=.414$). The strength of this relationship shows that these two variables can predict each other. It can be said that accessibility of ICT predicts the use of ICT in teaching among teachers in Aba north district secondary schools. Even though teachers had moderate ICT competency, perceived ICT easy to use, useful,

had good attitude towards it and good behavioral intention to use it, they still had low use of ICT in teaching probably because of low accessibility of ICT in Aba north secondary schools.



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Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**FAKTOR-FAKTOR YANG MEMPENGARUHI PENGGUNAAN ICT
DALAM PENGAJARAAN GURU SEKOLAH MENENGAH DAERAH
ABA UTARA, NIGERI**

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Kajian ini mengkaji faktor-faktor yang mempengaruhi penggunaan ICT dalam pengajaran di kalangan guru sekolah menengah di daerah aba utara, Nigeria. Dengan menggunakan TAM sebagai model penyelidikan, kajian ini mengkaji kecekapan ICT, kebolehcapaian ICT, memahami kegunaan, dirasakan kemudahan penggunaan, sikap terhadap ICT, niat tingkah laku untuk menggunakan ICT dan penggunaan ICT dalam mengajar di sekolah menengah Aba utara. Soal selidik digunakan untuk mengumpul data daripada sampel 234 guru, secara rawak dipilih dari 20 sekolah menengah di Aba utara daerah. Keputusan menunjukkan bahawa min keseluruhan untuk membina kecekapan ICT guru di daerah Aba utara adalah ($M = 2.87$), yang dianggap sederhana, menunjukkan bahawa guru-guru di sekolah menengah Aba utara mempunyai kecekapan ICT purata. Purata min keseluruhan guru yang dipandang mudah digunakan, dilihat penggunaan, sikap terhadap ICT dan niat tingkah laku untuk menggunakan ICT didapati tinggi pada $M = 3.54, 3.52, 3.57$ dan 3.55 . Ini menunjukkan bahawa guru-guru di sekolah menengah Aba Utara merasakan penggunaan ICT menjadi mudah dan berguna. Ia juga menunjukkan bahawa mereka mempunyai sikap positif terhadap ICT dan niat tingkah laku yang baik untuk menggunakan ICT dalam pengajaran. Aksesibiliti ICT dan penggunaan ICT dalam pengajaran didapati rendah dengan skor min keseluruhan ($M = 1.69$ dan 1.57), menunjukkan bahawa guru tidak mempunyai akses kepada ICT apabila diperlukan dan tidak menggunakan ICT dalam pengajaran. Analisis korelasi mendapati bahawa kemudahan penggunaan guru, kegunaan dan keinginan tingkah laku guru menggunakan ICT mempunyai hubungan yang lemah dengan penggunaan ICT mereka sementara kecekapan ICT dan sikap terhadap ICT tidak mempunyai hubungan yang signifikan dengan penggunaan ICT. Telah didapati bahawa kebolehcapaian ICT dan penggunaan ICT mempunyai hubungan ketara yang sangat kuat ($r_s = .414$). Kekuatan hubungan ini menunjukkan bahawa kedua-dua

pembolehubah ini boleh meramal antara satu sama lain. Boleh dikatakan bahawa kebolehcapaian ICT meramalkan penggunaan ICT dalam pengajaran di kalangan guru-guru di sekolah menengah Aba utara sekolah menengah. Walaupun guru mempunyai kecekapan ICT sederhana, ICT dilihat mudah digunakan, berguna, mempunyai sikap yang baik terhadapnya dan niat tingkah laku yang baik untuk menggunakannya, mereka masih mempunyai penggunaan ICT yang rendah dalam pengajaran mungkin kerana akses ICT yang rendah di sekolah menengah Aba utara.



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CHAPTER 1

INTRODUCTION

1.1 Background of Study

The origin of Information and Communication Technology (ICT) has created favorable opportunities that will enable the demands of globalization and economic development to be met. Provision of education by the government to the citizens of a country is one of the requirements for social and economic growth. In addition to the assurance for social and economic development which ICT offers, another good aspect of ICT is its capability in supporting every aspect of teaching and learning process (Fu, 2013).

ICT has been given many definitions. Sharndama and Ijemofwu (2013) defined it as a term that comprises of diverse technologies such as computers, cellular phones, radio, video, television, satellite systems and tools that enhance communication. According to Hamilton-Ekeke and Mbachu (2015) ICT is a set of numerous technological materials such as computer, internet, radio, television and other tools that are used for communication, spreading, storing, sharing and managing information.

ICT is becoming increasingly necessary in education and most aspect of our daily lives. In this 21st century, there are pressures on educational systems around the world to integrate ICT in teaching and learning (Omwenga, 2006). The advancement of ICT in this era has presented many choices and opportunities to people. In education, it has changed the way teachers teach and the learning pattern of students (Coutts, Simpson and Drinkwater, 2001).

In spite of the benefits of ICT in education, teachers in many Nigerian schools barely make use of it rather they make use of the face to face traditional mode of lesson delivery (Onwuagboke, Singh and Fook, 2015). They seem to be insensitive to the fact that using ICT in education improves teachers' instructional process and students' learning process (Yunus, Nordin, Salehi, Sun and Embi, 2013). The attempts made towards implementing the use of ICT in Nigerian secondary school system have not had ample effect (Eme, Emmanuel and Onwe, 2015).

A successful introduction of ICT use in Nigerian education system will have a good impact on both teaching and learning process because it improves educational standards (Livingstone, 2012), enable students to search for information on their own (Bingimlas, 2009), encourages cooperative learning, communication through websites, blogs and social networks, and enhances teaching - learning process (Yunus et al, 2013). Also ICT is known to improve students' self -learning,

opportunity for student-student communication and collaboration, and access to updated information for teaching (Brown, 2002).

According to Bingimlas (2009) any educational institution that does not integrate the use of ICT in teaching cannot claim to equip students with the knowledge required to enable them function well in the society, be productive and prepared for the challenges of this modern era. However, it is important to note that ICT phenomenon has not relatively taken root in developing countries. Literature showed that majority of developing countries such as Nigeria lag behind in the use of ICT in education (Adomi and Kpangban, 2010). Not surprisingly, the quest for adoption of ICT in educational has been problematic. It will require new attention on the factors that may influence the use of ICT in teaching among teachers in Nigerian secondary schools. This study will examine ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness of ICT, attitude toward ICT, behavioral intention to use ICT and use of ICT in teaching among teachers in Aba secondary schools. It will also examine the relationships between the mentioned variables and the use of ICT.

1.1.1 ICT Competency and the Use of ICT in Teaching

Because of the origination of ICT and its use in our everyday lives, the need for competency in the use of ICT should be taken as a thing of priority. This need for ICT competency also applies in education. Teachers need to be ICT competent. According to Chai (2010) teachers who are not competent in the use of ICT tend to be uninterested in the integration of ICT in their teaching activities.

Marcial and Rendal (2014) defined ICT competency as high ICT knowledge, skills, mastery and ability to use ICT effectively and efficiently. According to Sheng, Chang, Teo and Lin (2013) ICT competency is the measure of skills and knowledge needed for the operation of ICT.

Using ICT in education includes browsing of internet in search of information for lesson preparation, emailing to communicate with students and fellow teachers, downloading and storing of data for educational purposes, using PowerPoint to prepare presentation, using interactive whiteboards and performing educational tasks using ICT (Moila and Makgato, 2014). Without ICT competency, teachers' use of ICT in education will be difficult. According to Pelgrum (2001) ICT competency influences the adoption of ICT among teachers in developing countries and has a significant relationship with the use of ICT (Afshari, Bakar, Luan, Samah and Foori, 2009). Therefore, for a successful integration of ICT into education in Aba north secondary schools to be achieved, the need for teachers' ICT competency and its relationship with use of ICT should be examined because it is among the factors that hinders the use of ICT according to Bingimlas (2009).

1.1.2 Accessibility and the Use of ICT

In Africa and most developing countries like Nigeria, studies have mentioned many factors that influence the use of ICT in teaching. Hennessy, Harrison and Wamakote (2010) included accessibility of ICT in the list of these factors. Bingimlas, (2009) also stated that accessibility of ICT is one of the major factors that influence teachers' integration of ICT in education

According to Akinjide, Sunday and Adebayo (2015) accessibility of ICT means the degree at which a particular user is easily able to find ICT.

Accessibility of ICT is a school-level factor, which hinders teachers from using ICT in teaching (Al Mulhim 2014). It is a determinant of teachers' ICT utilization (Akinjide et al, 2015). According to Gilakjani, Sabouri and Zabihniaemran (2015) accessibility of ICT which is among the hindrances that hinder teachers from using ICT has a significant relationship with use of ICT. Teachers who had access to ICT were keen in adopting and using ICT in their classroom while those who did not have access to ICT showed no interest in using ICT in their classrooms (Jude and Dankaro, 2012).

In summary, studies have stated that accessibility of ICT is a factor that determines use of ICT and that it has a relationship with use of ICT. Teachers' accessibility of ICT in Aba north secondary schools needs to be examined. The use of ICT in teaching will only be possible if there is accessibility of ICT.

1.1.3 Perceived ease of use and use of ICT

Perceived ease of use (PEOU) is an important element that needs to be considered when talking about the use of ICT. It is obvious that teachers will shy away from the use of ICT if they perceive it difficult to use. According to Saadé and Bahli (2005) individuals are more likely to use a new technology if they perceive it easy to use.

Perceived ease of use is the extent at which a person believes that using a technology would be effortless (Venkatesh, 2000). It is the extent at which users perceive using a particular system to be devoid of effort (Davis, 1989).

Perceived ease of use is one of the important factors that explain system use (Davis, 1989). According to Gefen and Straub (2000) it is known to contribute to the use of ICT in any sector and can be said to influence the use of ICT. Examining the relationship between perceived ease of use and use of ICT will be good, as some studies such as (Ma and Liu, 2004); (Gupta, Dasgupta and Gupta, 2008) have stated that a relationship exist between perceived ease of use and use of ICT.

In conclusion, further examination needs to be performed to determine the role of perceived ease of use in Aba north secondary schools' teachers' use of ICT and the relationship between perceived ease of use and use of ICT.

1.1.4 Perceived usefulness of ICT and use of ICT

Perceived usefulness (PU) is the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context (Davis, Bagozzi and Warshaw, 1989). According to Venkatesh and Bala (2008) it is the extent to which a person believes that using ICT will enhance his or her job performance.

Obviously, users will use an innovation if they believe that it will be beneficial to them. According to Davis (1989) perceived usefulness determines the use of ICT and has a significant relationship with it. Perceived usefulness of ICT is among the direct determinants of use of ICT among teachers (Gyamfi, 2016). It is among the notable factors that affect the use of ICT in teaching and learning (Essel and Wilson, 2017).

Also study by Gupta, Dasgupta and Gupta (2008) reported that perceived usefulness of ICT has a strong significant positive relationship with use of ICT. Another study by Ma and Liu (2004) also stated that a strong significant positive relationship exists between perceived usefulness and use of ICT.

There is a need to examine the perceived usefulness of ICT among teachers in Aba north secondary schools and the relationship between perceived usefulness of ICT and teachers' use of ICT in teaching.

1.1.5 Teachers' Attitudes Towards the Use of ICT in Teaching

According to Sánchez, Marcos and GuanLin (2012) teachers' attitude means teachers' beliefs and emotions towards ICT. Attitude towards ICT refers to the perceptions, beliefs, feelings, and behavioral tendencies of teachers towards ICT (Capan, 2012).

Research studies have mentioned so many factors that influence the use of ICT among teachers. Attitude towards ICT is among the factors that influence the use of ICT (Şahin-Kizil, 2011). According to Agbo (2015) attitude towards ICT contributes more in the explanation of teachers' use of ICT in teaching. It has a significant positive relationship with use of ICT and stands as one of the factors that determine the implementation of ICT (Al-Zaidiyeen, Mei and Fook, 2010). Teachers' attitude towards ICT foretells how teachers react to the use of ICT, the extent of its use in the classroom and acceptance or rejection of it (Sabzian and Gilakjani, 2013).

Teachers with negative attitudes toward ICT normally shy away from the use of ICT in teaching while those with positive attitudes towards it make use of it (Cubukcuoglu (2013). It can be said that positive attitude brings about teachers' use of ICT.

In summary, teachers' attitude needs not to be left out when discussing any subject that involves the implementation of ICT in teaching. It needs to be examined to know the role it plays in the use of ICT in teaching among teachers in Aba north district secondary schools, Nigeria.

1.1.6 Behavioral intention to use and use of ICT

Behavioral intention (B1) is a measure of the strength of one's intention to perform a specified behavior (Davis, Bagozzi and Warshaw, 1989). According to Ajzen (1991) behavioral intention to use is the indication of the degree or extent at which people are willing to perform the action of using a particular system.

Before a user engages in the actual action of using a particular system, there will be a plan or behavioral tendency of that particular user (Aytes and Connolly, 2004). This indicates that there must be an intention to use a system before the actual usage. Behavioral intention to use ICT affects the use of ICT (Nysveen, Pedersen and Thorbjørnsen, 2005). It influences the use of ICT in teaching and learning (Fathali and Okada, 2018). According to Dastjerdi (2016) there is a significant relationship between behavioral intention to use and use of ICT. A study by Davis, Bagozzi and Warshaw (1989) also stated that a significant positive relationship between exists between behavioral intention to use and use of ICT.

In summary, to confirm the effect of behavioral intention to the use of ICT in Nigeria, there is a need to further examine it to determine its role in the use of ICT in teaching and its relationship with use of ICT in teaching among teachers in Aba north secondary schools.

1.1.7 Use of ICT in teaching

Ndibalema (2014) defined the use of ICT in education as the process of making use of ICT in teaching and learning with the intention of improving education. In this study, using ICT in teaching, involves the use of interactive white boards, computers, internet, and all ICT tools that can be used for educational purposes. In education, ICT is becoming popular. Many teachers now use multimedia projectors, computers, PowerPoint and interactive whiteboards to enhance education. Using ICT in the classroom is something that should be considered a paramount because of its great benefits.

Studies done on the use of ICT in education have shown that it facilitates teaching and enable students to learn better. Teachers' major benefits of the use of ICT in teaching, includes better management, storage, and maintenance of work. ICT helps students and teachers in teaching-learning processes (Fu 2013). According to Yunus, Salehi and Chenzi (2012) using ICT to teach and learn, gives aid to teachers and learners. Another study by Yunus et al (2013) also stated that the use of ICT encourages cooperative learning, helps students with special needs, and enhances communication though websites, blogs and social networks.

1.2 Problem Statement

There is a need for the adoption of ICT as the method of lesson delivery in Nigerian secondary schools because of its capability in improving Nigeria's education system, through the enhancement of teachers' instructional effectiveness (Asubiojo and Ajayi, 2017). Though, attempts have been made to implement the use of ICT in Nigerian secondary school system, but these attempts have not had ample effects (Eme et al, 2015).

According to a past study, the method of lesson delivery mostly used in Nigeria is the face to face traditional mode of lesson delivery which has been seen as ineffective in meeting the demands of learning in this technology driven generation (Onwuagboke et al, 2015). This face to face traditional mode of lesson delivery is blamed for the nonproductive nature of teachers and low academic performances of Nigerian secondary schools' students in both local and standardized examinations (Olayinka, 2016).

According to Bingimlas (2009) identifying the possible obstacles to the integration of ICT in schools would be an important step in improving the use of ICT in teaching. But there has been a research gap.

A number of studies have been conducted in Nigeria on the use of ICT in education, but mostly in higher education, such as use of ICT in Universities (Ajegbelen, 2016); ICT integration in Nigerian colleges of education (Adeoye, Oluwole and Blessing, 2013) and use of ICT in ICT distance education (Garba, Singh, Yusuf and Ziden, 2013). Little attention has been given to the use of ICT in teaching among secondary schools' teachers in Nigeria.

Studies by Oye, Iahad and Rahim (2012): Ibrahim, Salleh, Gujbawu and Khoshrouzadeh (2018) used UTAUT model, to investigate Nigerian teachers' use of ICT, but this study is using TAM to investigate the use of ICT in teaching among teachers in Nigeria, thereby reducing the theoretical gap between the previous studies done on use of ICT and this present study.

There is a need to know the use of ICT in teaching among teachers in Aba north secondary schools. Teachers seem to acknowledge the value of ICT in schools, still difficulties are encountered during the processes of adopting it (Balanskat, Blamire and Kefala, 2006). There are needs also to examine the ICT competency of teachers, their accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT. These elements mentioned need to be examined because they have been stated to be among the factors that either hinder or influence the use of ICT (Agbo 2015; Aworanti 2016; Aramide et al, 2015; Teo, 2011; Adomi and Kpangban, 2010).

Therefore, investigating these mentioned factors will be a good step that will add up in giving clearer reasons the previous implementation of the use of ICT in Nigerian secondary schools have not been utterly successful.

In conclusion, there are reasons for the unsuccessful implementation of the use of ICT in teaching in Nigerian secondary schools. The reasons cannot be known without investigation. Therefore, the use of ICT in teaching, ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT among teachers in Aba north secondary school teachers, need to be examined. The relationships between use of ICT with ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT in teaching among teachers in Aba north secondary schools, need to be examined too.

1.3 Objective

The aim of this study is to determine the relationship between use of ICT with ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT in teaching among teachers in Aba north district secondary schools Nigeria.

Accordingly, the specific objectives outlined are as follows:

- 1.3.1** To determine the mean ratings of teachers' responses on their ICT competency, accessibility of ICT, perceived usefulness of ICT, perceived ease of use ICT, attitudes towards ICT, behavioral intention to use ICT and the use of ICT in Aba North secondary schools, Nigeria.
- 1.3.2** To determine the relationship between use of ICT with ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT in teaching among teachers in Aba North secondary schools.

1.4 Research Question

- 1.4.1 What is the mean rating of the responses of teachers in Aba North secondary schools on their ICT competency?
- 1.4.2 What is the mean rating of the responses of teachers in Aba North secondary schools on their accessibility of ICT?
- 1.4.3 What is the mean rating of the responses of teachers in Aba North secondary schools on their perceived ease of use of ICT?
- 1.4.4 What is the mean rating of the responses of teachers in Aba North secondary schools on their perceived usefulness of ICT?
- 1.4.5 What is the mean rating of the responses of teachers in Aba North secondary schools on their attitude towards ICT?
- 1.4.6 What is the mean rating of the responses of teachers in Aba North secondary schools on their behavioral intention to use ICT?
- 1.4.7 What is the mean rating of the responses of teachers in Aba North secondary schools on their use of ICT in teaching?

1.5 Research Hypothesis

- H₀₁ There is no significant relationship between ICT competency and use of ICT in teaching among teachers in Aba north secondary schools.
- H₀₂ There is no significant relationship between accessibility of ICT and use of ICT in teaching among teachers in Aba north secondary schools.
- H₀₃. There is no significant relationship between perceived ease of use of ICT and use of ICT in teaching among teachers in Aba north secondary schools.
- H₀₄. There is no significant relationship between perceived usefulness and use of ICT in teaching among teachers in Aba north secondary schools.
- H₀₅ There is no significant relationship between attitude towards ICT and use of ICT in teaching among teachers in Aba north secondary schools.
- H₀₆. There is no significant relationship between behavioral intention to use and use of ICT in teaching among teachers in Aba north secondary schools.

1.6 Significance of Study

In the development of any country's economy, secondary school education is a crucial part of the education system (Jidamva, 2012). The finding of this study will enlighten the Nigerian government on the current use of ICT in teaching, ICT competency, accessibility of ICT, perceived ease of use of ICT, perceived usefulness of ICT, attitude towards ICT and behavioral intention to use ICT in teaching among

teachers in Aba north secondary schools. From the findings, the government will know what to do in order to improve the use of ICT in teaching among teachers in Aba north secondary schools which will eventually improve teaching and learning.

The significance of this study extends to the teachers. From the findings that will be generated by the analyses in this study, teachers will have additional knowledge of the possible factors that may have hindered them from using ICT in teaching. As a result, they will know what to do to enhance the use of ICT in teaching.

Theoretically, the findings derived from the analyses done in this study will add to the body of the existing literature by providing useful information on the use of ICT among teachers in Nigerian secondary schools and the relationships between use of ICT with ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT in teaching.

1.7 Limitation of the Study

This research study has limitations. The population of this study is limited to teachers in Aba north district secondary schools, Abia state, Nigeria. It will only examine teachers' use of ICT, accessibility, ICT competency, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT. Also the relationships between the teachers' use of ICT and the mentioned variables will be examined. Students will be left out.

In this study, the data are collected through questionnaire which relies on the perceptions of Aba north secondary schools' teachers. This study will not be able to assume that the answers of the respondents are accurate. However, it would be assumed that the respondents would answer truthfully based on their understanding of the items in the questionnaires.

The result of this study will only be generalized to secondary school teachers in Aba North district because the data collected are only from secondary schools' teachers. Students, primary schools' teachers and lecturers in the universities are not included.

1.8 Definition of Terms

1.8.1 Information and Communication Technology (ICT)

According to Sharndama and Ijemofwu (2013) Information and Communication Technology is a term, which includes diverse technologies such as cellular phones, radio, video, television, computers and satellite systems, which are used in facilitating communication. Hamilton-Ekeke and Mbachu (2015) defined

Information and Communication Technology (ICT) as a set of different technologies and technological tools used to communicate, spread, store and manage information.

In this study, ICT means computers, internet, interactive white boards and computer-based programs that are used in teaching and learning in Aba north secondary schools.

1.8.2 ICT Competency

Marcial and Rendal (2014) defined ICT competency as high ICT knowledge, skills, mastery and ability to use ICT effectively and efficiently. Sheng, Chang, Teo and Lin (2013) defined ICT competency as the extent of skills and knowledge needed for the operation of ICT. In this study, ICT competency is the knowledge, skills and ability of teachers in Aba North secondary schools to use ICT effectively and efficiently in teaching.

ICT competency among teachers in Aba north secondary schools is measured in section C of the questionnaire using 20 items adapted from Marcial and Rendal (2014).

1.8.3 Accessibility of ICT

According to Akinjide, Sunday and Adebayo (2015) accessibility of ICT means the degree at which a particular user is able to easily find ICT for his or her own use. Park (2009) defined ICT accessibility as the extent of ease at which a person can get reach to ICT and use it. In this study, accessibility of ICT is the measure of the rate at which ICT is available and reachable to Aba north district secondary schools' teachers when needed for educational purposes.

Accessibility of ICT among teachers in Aba north secondary schools is measured in section D of the questionnaire using 10 items adapted from Akinjide, Sunday and Adebayo (2015).

1.8.4 Perceived Ease of Use of ICT (PEOU)

Perceived ease of use of ICT (PEOU) is the extent at which users perceive using a particular system to be devoid of effort (Davis, 1989). Venkatesh (2000) gave a similar definition by stating that perceived ease of use is the extent at which a person believes that using a technology would be effortless. In this study, perceived ease of use is the degree at which teachers in Aba north secondary schools believe that using ICT in their teaching will be effortless.

Perceived ease of use of ICT in teaching among teachers in Aba north secondary schools is measured in section G of the questionnaire using 6 items adapted from Lorenzo-Romero, Alarcón-del-Amo and Constantinides (2014).

1.8.5 Perceived Usefulness of ICT (PU)

Perceived usefulness is defined as the prospective user's subjective probability that using ICT will increase his or her job performance within an organizational context (Davis, Bagozzi and Warshaw, 1989). Venkatesh and Bala (2008) also defined perceived usefulness of ICT as the extent at which a person believes that using ICT will enhance his or her job performance.

In this study, perceived usefulness of ICT is the degree at which teachers in Aba north secondary schools believe that ICT will improve their teaching activities and be beneficial to them.

Perceived usefulness of ICT among teachers in Aba north secondary schools is measured in section F using 6 items, adapted from Lorenzo-Romero, Alarcón-del-Amo and Constantinides (2014).

1.8.6 Attitude towards ICT

Sánchez, Marcos and GuanLin (2012) defined attitude as beliefs and emotions towards ICT. Attitude towards ICT refers to the perceptions, beliefs, feelings, and behavioral tendencies of teachers towards ICT (Capan, 2012). In this study, attitude towards ICT is the perceptions and beliefs of teachers towards the use of ICT in teaching in Aba North secondary schools.

Attitude towards ICT among teachers in Aba north secondary schools is measured in section B of the questionnaire using 13 items adapted from Sanchez, Marcos, Gonzalez and Guanlin (2012) and Ndibalema (2014). 8 items were adapted from Sanchez, Marcos, Gonzalez and Guanlin (2012) while 5 items were adapted from Ndibalema (2014).

1.8.7 Behavioral Intention to Use

Behavioral intention (B1) is a measure of the strength of one's intention to perform a specified behavior (Davis, Bagozzi and Warshaw, 1989). According to Ajzen (1991) behavioral intention to use ICT is the indication of the degree or extent at which people are willing to perform the action of using ICT. In this study, behavioral intention to use ICT means the behavioral tendency of teachers in Aba north secondary schools to use ICT in teaching.

Behavioral intention to use ICT in teaching among teachers in Aba north secondary schools is measured in section H of the questionnaire using 4 items adapted from Lorenzo-Romero, Alarcón-del-Amo and Constantinides (2014).

1.8.8 Use of ICT

Ndibalema (2014) defined the use of ICT as the process of making use of ICT in teaching and learning in order to improve education. Agbo (2015) defined it as the application of ICT for educational purposes. In this study, use of ICT means the use of interactive white boards, computers, internet and all ICT in teaching among teachers in Aba north secondary schools.

The use of ICT in teaching among teachers in Aba north secondary schools is measured in section E of the questionnaire using 10 items adapted from Ndibalema (2014).

1.9 Summary

This chapter illustrated the background of this study which focused on current literatures that support the use of ICT in education, the use of ICT in teaching and its benefit in education. It included a brief discussion about use of ICT in Nigeria and highlighted factors that are able to influence teachers' use of ICT in teaching, namely accessibility of ICT, ICT competency, perceived ease of use, perceived usefulness, attitude toward ICT and behavioral intent to use ICT and their relationships with use of ICT.

This chapter also highlighted the research problem of this study and stated the seven objectives designed to achieve the purpose of the study, which are to determine the relationships between the use of ICT in teaching with ICT competency, accessibility of ICT, perceived ease of use, perceived usefulness, attitude towards ICT and behavioral intention to use ICT among teachers in Aba north secondary schools. Eight research questions and six hypotheses that will be tested.

Finally, this chapter discussed the significant of the study and the possible limitation. At the end of the chapter, the important terms used were defined conceptually and operationally in order to give a comprehensive direction of this study. The following chapter will discuss the literature.

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