

RELATIONSHIP BETWEEN SELF-EFFICACY, FACILITATING CONDITIONS AND ACCEPTANCE OF E-RESOURCES FOR LEARNING AMONG STUDENTS OF NATIONAL OPEN UNIVERSITY IN NORTH-EAST, NIGERIA

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Abstract

This study investigated the influence of some factors that are affecting the utilization of e-resources, specifically this study tried to find out the influence of self-efficacy, facilitating conditions on acceptance to use e-resources for learning among students of National Open University of Nigeria North East. Descriptive research survey was used for this study. The research sample used for the study was 300 students. Purposive sampling method was used to select the sample. Questionnaire (SSEEFCAE) was the instrument used to collect data from the respondents and, the response rate of the survey was 80%. The instrument was validated for face and contents validity by experts. The instrument was also subjected to pilot test in order to ascertain its reliability using Cronbach Alpha, and found to be reliable with (0.78). The study came-up with three research questions and three corresponding hypothesis, and the results were analysed using statistical tools. Correlation analysis was used to answer. Based on these findings, the following recommendations were made; The use of e-resources by students in our universities should be encourage to improve learning process. Government should provide more internet facilities in our universities to encourage students make full use of e-resources. Parents should provide communication gadgets like laptops, smartphones and iPods to enable students harness e-resources opportunities. Universities administrators should also help by organizing seminars and workshops on the use of e-resources for learning.

Keywords: Relationship, Self-efficacy, Facilitating, Acceptance, E-Resources, Learning

Introduction

The introduction and expansion of information and communication technologies (ICT), has produced an unstoppable revolution into education especially in the field of teaching and learning. The internet and the web have further elevated the revolutionary tempo particularly through the advancement of e-resources. The digital resources also called (electronic resources) play a major role in facilitating access to the needed information to the user in a convenient manner (Ajadi, Salawu & Adeoye, 2008).

Growth in computer application in the past few years have introduced radical changes in the way and manner in which information is gathered, stored, organized, accessed, retrieved, and consumed. Many products and services have been introduced as a result of computer application. The internet and web are always influencing the development of new modes of scholarly communication, their potentials delivery goods is quiet vast, as they overcome successfully the geographical limitations associated with the print media. Further, the distribution time between product publication and its delivery has been drastically reduced (Amidu, 2016).

Electronic resources are one of the emerging information and communication in the present competitive world. Electronic resources usually cover the following categories-books, e-journals, e-magazines, e-newspapers, e-article, CD ROM, e-thesis, databases, e-research report, e-bibliography, e-mails, e-maps. Whatever the categorization, some resources fall

into more than one category and with the invention of new e-resources products the boundaries of these categories have become obscure. Amidu (2016) defines electronic resources as programs encoded for manipulation by a computerized device. This material may require the use of peripheral directly connected to a computerized device (e.g. CD-ROM driver) or a connection to a computer network (the internet), however this definition does not include electronic resources that do not require the use of computer for example compact discs and video discs.

E- resources area concept covers a variety of application, process and learning methods. E-learning can also be seen as the utilization of information and communication technology to facilitate the access to online learning/teaching resources and to provide students with collaborative environment and instruments provided by web 2.0 application which offer a set of instruments and utilities that affect communication and its social impacts (Rossi, 2009).The importance of electronic resources is gaining more ground for the academic community (Kumar & Kumar, 2008).E-.resources, one of the tools surfaced from the development of ICT, has helped users in retrieving accurate, relevant, and timely information when needed for their learning, teaching and research demands (Millawithanachchiu & Jayasundara, 2010).

These e-resources are likely going to be the alternative to the print media; it is worth knowing that the familiarity and the use of electronic resources in information and communication are necessary and important. The rapid expansion of the internet as a potential course delivery platform has developed digital resources for online education (Volery & Lord, 2000). According to Dadzie (2005), the advantages of electronic resources are invaluable; they complement the print-based resources in a traditional learning setting. The advantages of e-resources include access to information that might be restricted to the user due to geographical location or finances, access to more current information and provision of extensive links to additional resources of related contents. The issue of e-resources uses in higher education and the factors influencing its adoption in Nigeria have not received the desired attention and has not been extensively investigated. The growth of information technology is putting pressure on universities in Nigeria to adopt e- resources utilization. Adeniran (2013) added to this pressure and stated that the use of electronic resources had tremendous positive impact on the academic performance of the undergraduate students.

The world today is considered to be a global village due to the nature of the internet which is connected to many government, universities, and private computers together, and making infrastructure available for the use of e-mails, bulletin board, file archive, hypertext documents, database, and other computational resources. E-resources are the fastest and most effective way of communications compared to the traditional way of communication, internet-based communication may provide information in either synchronous or asynchronous ways (Abbit & Klett, 2015).

The internet is also seen as a group of computer network which form and act as a single large network for the transportation of data and messages across distance which can be anywhere from the same office to anywhere in the world (Adeniran, 2013). Richard and Haya (2009) stated that the internet is one of the most important means that provide learning resources for the students to share and obtain information. According to Prensky (2001), students of present generation can be considered to be "digital natives" which implies users who have grown up using technologies such as computers, cell phones, and the internet. These are the backbone of e-resources that could be utilize. The internet is

seen as an important component that can offer assistance to the students of National Open University (Ajadi, et. Al., 2008).

The National Open university of Nigeria (NOUN) which is an open and distance learning university was established in 1983, As far back as 1977, the idea of an open university has already reflected in the National Policy on Education (NPE) which stated that "maximum effort will be made to enable those who can benefit from higher education to be given access to it. Such access may be through universities or correspondence courses, or open universities, or part time or work study program" (FRN, 1977 p.6). It was this policy statement that necessitated the establishment of National Open University of Nigeria (NOUN).

As a distinct mode of imparting education, NOUN depends heavily on print materials and face to face tutorial services as a means of service delivery. The use of these techniques helps NOUN to take its academic programmes to the doorstep of her students far and wide. It makes room for in-house education. Considering the quick proliferation of ICT's in the country, NOUN has initiated plan on the introduction of more electronic resources (e-resources) like CD-ROM, e-mail, interactive e-learning which make use of the internet facilities for its course delivery (Ajadi et.al, 2008).

The theory of Self-efficacy was propounded by Albert Bandura (1994) which emphasizes the role of observational learning, social experience, and reciprocal determination in the development of personality. Bandura went on to say, a person's attitude, abilities, and cognitive skills made up what is known as a system. This system plays a major role in how we perceive situations and how we respond to different situations. Self-efficacy therefore plays an important role in any given self-system. Self-efficacy is the belief in one's capabilities to organize and carry out the course of action needed to manage prospective situation. In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation. Bandura (1994), describe these beliefs as determinants of how people think. Virtually all people can identify goals they want to accomplish, things they would like change and things they would like to achieve. However most people also realize that putting these plans into action is not quite so simple, Bandura and others have found that an individual's self-efficacy plays a major role in how goals, task, and challenges are approached.

Facilitating condition is a construct that measure user perceptions of their technology environment. However, the consistent underlying focus is to investigate how an operationalized set of environmental factors facilitates or impedes the use of some technology such as the e-resources. A relationship has been found between facilitating conditions and the intention to participate in the virtual communities (Heilman et.al. 2009) Facilitating condition is defined as the amount of support available for the use of computers (Thompson et, al 1994). This study intends to broaden the understanding of the impact of facilitating conditions on the acceptance of e-resources use in National Open University of Nigeria (NOUN) by looking at the relationship between students perception of computer related facilitating conditions with a view to evaluate its influence on students computer usage.

The internal variables are the perceived usefulness which is defined as the ability to perform a given task with in a system without much effort and, the perceived ease of use defined as the degree to which a person believe that using a particular system is characterized by the ease of use (Davis, 1989). While the external variables facilitating conditions and self-efficacy directly or indirectly affect the internal variables. Hailman et.al (2009) noted that perceived

self-efficacy is also related to the perceived ease of use and perceived usefulness which is consistent with prior e. learning studies. Sharp (2006), examined the development, extension, and application of TAM for information system educators and, found that self-efficacy is a significant determinant of perceived ease of use. Shittu et.al (2017) revealed that technology preparedness does not statistically influence students behavioral intention towards e-resources for teaching, but perceived usefulness and perceived ease of use does Shittu et, al (2017) also stated that, significant difference existed between male and female pre-service teachers behavioral intention towards e-resources use for teaching. Part of the challenges facing NOUN today can be located in the resources that students use for learning. Bearing in mind the digital revolution and, its influence on distance education. There is no doubt about the need for e-resources use for teaching and learning in NOUN. It is in realization of this fact that this research set to examine, relationship between self-efficacy, facilitating conditions and acceptance of e-resources for learning among students of national open university in north-east, Nigeria these are very crucial in the mode of service delivery of the university thus, it is imperative to gain more insight to what may influence the use of e-resources since, available information shows that the mode of service delivery before now depend largely on print materials.

Statement of the Problem

The advancement of science and technology in the world especially in the developed countries has triggered tremendous interest in acquiring and using of technology for classroom instructions .Unfortunately It has been observed by Olukayode (2015) that most schools especially those in the developing countries are not using technology for teaching and learning in this period of technology advancement unfortunately, (Okebukola 1997). Though universities administration and the library are in the process of improving e-resources usage to a satisfactory level, it has not been achieved so far, as evidence by previous surveys (Wijayasundara, 2004). A number of factors are preventing the effort of these countries in acquiring and utilizing technology particularly the information and communication technology, these factors are: wide syllabus, negative attitude to use IT by the students, technophobia and, poorly equipped laboratories. It has been observed that computers are available in most schools, but students and, teachers are refusing to use them for teaching and learning. (Omotosho, et. al 2015), revealed that constrains such as erratic power supply, frequent breakdown of ICT facilities were some of the factors militating against the use of e-resources for distance learning. Similarly, research conducted by Adeniran, (2013), revealed that learners in Nigerian Universities are well prepared for utilization of e-resources as they have various types of mobile devices in their possession and demonstrated high level usage skills for successful implementation.

The National Open University of Nigeria is an institution where the use of technology especially the e-resources should be encouraged probably due to the fact that the institution operates through distance learning. But how ready are the students' to assess e-resources?. It has been observed by Olukayode (2015) that e-resources is a modern facility that the internet is providing and considering the nature of service delivery of NOUN which operates by open and distance learning it is imperative to investigate the acceptability of e-resources by the students. The study assessed the relationship between self-efficacy and facilitating condition on the acceptance of e-resources for learning among students of the institution.

Aim and Objectives

The aim of this study is to assess the influence of self-efficacy, facilitating condition on the acceptance of e-resources for learning among students of National Open University in north east Nigeria specifically, and the study attempt to find out whether:

- (i) Perceive ease of use would have positive relationship on the acceptance of e-resources for learning among students of NOUN North east Nigeria.
- (ii) Perceive ease of use would have positive relationship on the acceptance of e-resources for learning among students of NOUN North east Nigeria
- (iii) Self-efficacy would have positive relationship on the e-resources for learning among students of NOUN North East Nigeria
- (iv) Facilitating conditions would have positive relationship on the acceptance of e-resources for learning among students of NOUN North East Nigeria.

Research Questions

The following research questions were formulated to guide the study:

- (i) What is the relationship between perceive usefulness and the acceptance of e-resources for learning among students of Open University in the North-Eastern Nigeria?
- (ii) What is the relationship between perceive ease of use and the acceptance of e-resources for learning among students of Open University in North Eastern Nigeria?
- (iii) What is the relationship between computer self-efficacy and the acceptance of e-resources for learning among students of Open University in North Eastern Nigeria?
- (iv) What is the relationship between Facilitating conditions and the acceptance of e-resources for learning among students of NOUN North East Nigeria.

Research Hypotheses

The following alternate hypotheses are formulated to be tested in the study:

- H1:** Perceive usefulness will have significant relationship with acceptance of e-resources among students of NOUN North East Nigeria
- H2:** Perceive ease of use will have significant relationship with acceptance of e-resources among students of NOUN in North East Nigeria
- H3:** Self-efficacy will have significant relationship with acceptance of e-resources among students of NOUN in North East Nigeria
- H4:** Facilitating conditions will have significant relationship with acceptance of e-resources among students of NOUN in North East Nigeria

Methodology

Descriptive research survey was used for this study. The population of the study consist of all the undergraduate students of (NOUN) in the North Eastern Nigeria which is 12,004. The target population that this study used was the 100 and 200 level students totaling 3150. The fundamental reason of sampling is to select elements that correctly represent the entire population from which the elements were drawn. The instrument that was used for data collection in this research was Students Self-efficacy Facilitating Conditions and, Acceptance of E-resources (SSFCAE) questionnaire which was design by the researcher. To test the reliability of the instrument, it was subjected to a pilot test at the Azare study center which is outside the targeted population to be sampled for the study. A total number of seventy (70) students were purposely sampled for the study. These respondents are not within the sample which were used for the study but possess similar characteristics in almost all respected, the questionnaires were distributed and personally retrieved in a single administration by the researcher. To effectively carry out this study and obtain the required data, the researcher sought the permission of the school authority by presenting letter of introduction from the Head of Department. The statistical methods that was used to analyze the generated data are both the descriptive and inferential statistics. Specifically, descriptive statistic and correlation analysis were used to answer the research questions and, regression analysis and t. test were used to test the hypotheses of the study.

Results

Research Question One: What is the relationship between perceive usefulness and the acceptance to use e-resources among students of Open University in North East Nigeria?

The relationship between perceived usefulness and acceptance to use e-resources for learning among Open University students was analysed using Pearson product moment correlation coefficient. Preliminary analysis was performed to ascertain no violation of the assumption of normality and linearity. The finding in (Table 1) showed a strong positive correlation between the two variables, $r = .60$, $n=204$, $p < .001$, with high relationship between perceived usefulness and acceptance to use e-resources for learning.

Table 1: Summary of Correlation Analysis of Perceive Usefulness, Ease of Use, Facilitating Conditions Self-efficacy on Acceptance to Use e-resource

		PUSEFUL	FACONDITION	SELFEFFICACY	ACCEPTANCE
PEOUSE	Pearson Correlation		.629**	.620**	.620**
	Sig. (2-tailed)		.000	.000	.000
	N		204	204	204
FACONDITION	Pearson Correlation		1	.592**	.589**
	Sig. (2-tailed)			.000	.000
	N			204	204
SELFEFFICACY	Pearson Correlation			1	.890**
	Sig. (2-tailed)				.000
	N				204
ACCEPTANCE	Pearson Correlation				1
	Sig. (2-tailed)				
	N				204

Table 1 shows correlation analysis result between perceive usefulness and the acceptance to use e-resources among students of Open University in North East Nigeria?

Research Question Two: What is the relationship between perceive ease of use and the acceptance to use e-resources among students of Open University in North East Nigeria?

The relationship between perceived ease of use and acceptance to use e-resources for learning among Open University students was analysed using Pearson product moment correlation coefficient. Preliminary analysis was performed to ascertain no violation of the assumption of normality and linearity. The finding in (Table 1) above showed a strong positive correlation between the two variables, $r = .62$, $n=204$, $p < .001$, with high relationship between perceived ease of use and acceptance to use e-resources for learning.

Research Question Three: What is the relationship between self-efficacy and the acceptance to use e-resources among students of Open University in North East Nigeria?

The relationship between computer self-efficacy and acceptance to use e-resources for learning among Open University students was analysed using Pearson product moment correlation coefficient. Preliminary analysis was performed to ascertain no violation of the assumption of normality and linearity. The finding in (Table 1) showed a strong positive

correlation between the two variables, $r = .89$, $n=204$, $p < .001$, with high relationship between computer self-efficacy and acceptance to use e-resources for learning.

Research Question Four: What is the relationship between facilitating condition and the acceptance to use e-resources among students of Open University in North East Nigeria?

The relationship between facilitating condition and acceptance to use e-resources for learning among Open University students was analysed using Pearson product moment correlation coefficient. Preliminary analysis was performed to ascertain no violation of the assumption of normality and linearity. The finding in (Table 1) showed a strong positive correlation between the two variables, $r = .59$, $n=204$, $p < .001$, with high relationship between facilitating condition and acceptance to use e-resources for learning.

Result of the Hypotheses

Table 2 Summary of Correlation Coefficient, R-Square and Adjusted R-Square

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.808 ^a	.650	.645	5.00056

a. Predictors: (Constant), SELFEFFICACY, FACONDITION, PUSEFUL, PEOUSE

b. Dependent Variable: ACCEPTANCE

Table 2 presents the result of correlation coefficient ($R = .81$) which is the combination of the predictors of the study and the R-Square = .65 this indicates that the four predictors (self-efficacy, facilitating condition, perceived usefulness and perceived ease of use) explained 65% of the variance on acceptance to use e-resources for learning. This suggests that there are other important factors that may impact on NOUN student's acceptance of e-resources for learning which are not accounted for in this study.

Table 3 Showing Summary of Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F-ratio	p-value
1	Regression	6376.660	4	1594.165		.000 ^a
	Residual	.000	200	.000	86.77	
	Total	6376.660	204			

a. Predictors: (Constant), SELFEFFICACY, FACONDITION, PUSEFUL, PEOUSE

b. Dependent Variable: ACCEPTANCE

Table 3 presents the result of ANOVA which shows that $f(4,139) = 86.77$, $p < .000$ was quite significant, this indicates that the combination of the predictors (self-efficacy, facilitating condition, perceived usefulness and perceived ease of use) significantly combine together to influence acceptance of e-resources among students of National Open University of Nigeria.

Hypotheses One: Perceived usefulness will positively influence acceptance of e-resources among students of NOUN in North East Nigeria

Table 4: Summary of Regression Analysis of the Influence of Perceived Usefulness and Acceptance of e-resources for Learning

Model	Unstandard Coefficient		Standardized Coefficient			Collinearity Diagnostic	
	Std	Error	Beta (β)	t-value	p-value	Tolerance	VIF
(Constant)	9.322	2.304		4.807	.000		
Total Perceived usefulness	.563	.051	.632	10.834	.000	.467	2.188

Dependent variable: Acceptance to use e-resources

The finding in table 4 above showed a regression analysis of perceived usefulness and its influence on acceptance of e-resources for learning among students of NOUN in North East Nigeria. The beta value showed ($\beta = .632$), $p = .000$. The result revealed that there is significant influence of perceived usefulness on acceptance of e-resources for learning among the students of NOUN in North East Nigeria. The result of this analysis supports the hypothesis.

Hypotheses Two: Perceived ease of use will positively influence acceptance of e-resources among students of NOUN in North East Nigeria

Table 5: Summary of Regression Analysis of the Influence of Perceived Ease of Use and Acceptance of e-resources for Learning

Model	Unstandard Coefficient		Standardized Coefficient			Collinearity Diagnostic	
	Std	Error	Beta (β)	t-value	p-value	Tolerance	VIF
(Constant)	9.322	2.304		4.807	.000		
Total Perceived ease of use	.563	.051	.602	10.834	.000	.467	2.188

Dependent variable: Acceptance to use e-resources

The finding in table 5 above showed a regression analysis of perceived ease of use and its influence on acceptance of e-resources for learning among students of NOUN in North East Nigeria. The beta value showed ($\beta = .602$), $p = .000$. The result revealed there is significant influence of perceived ease of use on acceptance of e-resources for learning among the students of NOUN in North East Nigeria. The result of this analysis supported the hypothesis.

Hypotheses Three: Computer self-efficacy will positively influence acceptance of e-resources among students of NOUN in North East Nigeria

Table 6: Summary of Regression Analysis of the Influence of Computer Self-efficacy and Acceptance of e-resources for Learning

Model	Unstandard Coefficient		Standardized Coefficient			Collinearity Diagnostic	
	Std	Error	Beta (β)	t-value	p-value	Tolerance	VIF
(Constant)	9.322	2.304		4.807	.000		
Total							
Computer Self-efficacy	.563	.051	.804	10.834	.000	.467	2.188

Dependent variable: Acceptance to use e-resources.

The finding in table 6 above showed a regression analysis of computer self-efficacy and its influence on acceptance of e-resources for learning among students of NOUN in North East Nigeria. The beta value showed ($\beta = .804$), $p = .000$. The result revealed there is significant influence of computer self-efficacy on acceptance of e-resources for learning among the students of NOUN in North East Nigeria. The result of this analysis supported the hypothesis.

Hypothesis Four: Facilitating condition would positively influence acceptance of e-resources among students of NOUN in North East Nigeria.

Table 7: Summary of Regression Analysis of the Influence of Facilitating Condition and Acceptance of e-resources for Learning

Model	Unstandard Coefficient		Standardized Coefficient			Collinearity Diagnostic	
	Std	Error	Beta (β)	t-value	p-value	Tolerance	VIF
(Constant)	9.322	2.304		4.807	.000		
Total							
Facilitating Condition	.563	.051	-.055	10.834	.780	.467	2.188

Dependent variable: Acceptance to use e-resources.

The findings in table 4.8 above showed a regression analysis of facilitating conditions and its influence on acceptance of e-resources for learning among students of NOUN in North East Nigeria. The beta value showed ($\beta = -.055$), $p = .000$. The result revealed that there is no significant influence of facilitating conditions on acceptance of e-resources for learning among the students of NOUN in North East Nigeria. The result of this analysis did not support the hypothesis.

Discussion

The result of this research work revealed positive correlation between perceived usefulness, perceived ease of use, computer self-efficacy, facilitating conditions, gender and acceptance to use e-resources for learning, while facilitating conditions has no significant influence on acceptance to use e-resources for learning among students of NOUN in North East Nigeria.

The influence of computer self-efficacy on acceptance to use e-resources for learning is similar to the findings of Israel (2016) who revealed that self-efficacy plays a significant role in predicting technology use. It is also in agreement with the findings of Adu (2013) who observed the relationship between computer self-efficacy and intended use of technology, and revealed that significant relationships exist between computer self-efficacy and technology. Adu (2013) also revealed that computer self-efficacy is what students require in order to use computer-mediated instructions; that is, the more computer self-efficacy they possess, the more they see the usefulness of computer-mediated instructions.

The result of facilitating conditions which has no significant relationship on acceptance to use e-resources for learning is not in conformity with Adeniran (2013), who revealed that facilitating condition has appositive and strong relationship to student's computer usage. Abbit and Klett (2015), revealed a negative but insignificant relationship between facilitating conditions and personal computer usage. These findings of negative relationship are not consistent with other studies, which generally have found computer which provide e-resources to be positively related to variable incorporating various aspect of facilitating conditions (Chiu & wang, 2015).

The findings of this study which revealed a significant influence of perceived usefulness on the acceptance to use e-resources for learning is in line with Adu (2013) who reported that people use technology because, of its perceived usefulness. Also Adams, et.al revealed that perceived usefulness was the important determinant of system usage.

The result of this work which showed a significant influence of perceived ease of use on acceptance to use e-resources for learning is similar to the work of Lee (2010), who revealed that the more an individual view an innovation as being easy to use, the more likely the individual is to develop a positive attitude towards using it. According to Technology Acceptance Model (TAM), attitude towards using a particular system or technology is determine by perceived ease of use.

Conclusion

The result of this study confirm the validity and reliability of the Technology Acceptance Model which explain that people use technology because, of perceive ease of use and perceive usefulness, it also shows that self-efficacy has strong relationship on acceptability of e-resources. Consequently, the study recommends the following:

Recommendations

- (i) It is recommended that the use of e-resources by students in our universities should be encouraged to improve learning process.
- (ii) Government should provide more internet facilities in our universities to encourage the students make full use of e-resources.
- (iii) Parents should provide communication gadgets like laptops, smart phones, and ipads to enable their children harness e-resources opportunities.
- (iv) Universities administrators should also help by organizing seminars and workshops on the use of e-resources for learning.
- (v) Where e-resources tools are available, universities administrators should influence its usage in the classroom to the students by making it compulsory to imbibe the culture of integrating e-resources tools in learning process.
- (vi) Universities administrators should make technicians and ICT experts available in the school so as to assist the students in utilizing e-resources for learning.

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