



## Computer Self-Efficacy, Attitude Towards Computer and Identification with Internet as Determinants of Internet Use Among Librarians in Public Universities in Western Nigeria

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### ABSTRACT

The study examined the extent to which computer self-efficacy, attitude towards computer and identification with Internet determined the Internet use among librarians in public universities in western Nigeria. The study adopted the descriptive research design of the ex-post facto type. The target population for the study were librarians in public universities in western Nigeria. One hundred and seventeen librarians participated in the study. Computer self-efficacy inventory, Computer attitude inventory, identification with Internet inventory, and Internet use inventory were used to obtain data. Five hypotheses were tested at 0.05 level of significance. Data were analyzed using descriptive statistics, Pearson product moment correlation and multiple regression. Results indicated that a combination of computer self-efficacy, attitude towards computer and identification with Internet had significant positive relationship with Internet use ( $R = 0.509$ ,  $p < 0.05$ ) and contributed 25.9% of the variance in Internet use. Identification with Internet ( $\beta = 0.464$ ,  $t = 4.946$ ,  $P < 0.05$ ) and computer self-efficacy ( $\beta = 0.200$ ,  $t = 2.370$ ,  $P < 0.05$ ) were found to be significant predictors of Internet use. Internet use among librarians had significant positive relationship with identification with Internet ( $r = 0.455$ ,  $P < 0.05$ ) and Computer self- efficacy ( $r = .309$ ,  $P < 0.05$ ) but had no significant relationship with attitude towards computer ( $r = 0.098$ ,  $P > 0.05$ ). Computer self-efficacy, attitude towards the computer and identification with the Internet significantly determined the use of Internet among librarians in public universities in western Nigeria. It is therefore recommended that the administrators of university libraries take these factors into account when making organizational policies.

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## 1. INTRODUCTION

The Internet has become one of the most important tools for the acquisition and dissemination of information to the world in this contemporary time. Long and Long (1997) defined the Internet as a worldwide network of millions of computers that has emerged as the enabling technology in our migration to a global village. Similarly, Frangos and Kiohos (2010) in Rajab (2019) described the Internet as a widely recognized channel for information exchange, academic research, entertainment, communication and commerce. The Internet is very beneficial to people from all walks of life especially those in the information and communication technology sector like journalists, documentalists, archivists, authors, computer scientists, information scientists, librarians to mention but a few.

The library is established in the university primarily to provide information to staff and students to enable them carry out educational activities of teaching, learning and research as the case may be, so that the university can achieve its organizational goal of training manpower for the development of the country. To achieve this feat, the librarian as an information specialist is saddled with the responsibility of collecting, processing and preserving information materials and making them available for use. The librarian is also expected to be well knowledgeable in the use of modern information and communication gadgets like the computer and smart phones to access the Internet for vital information that could be useful to his/her clientele.

Studies have shown that the use of the Internet could be influenced by variables including demographic factors like (gender, age, marital status), Internet anxiety and computer self-efficacy to mention but a few. The concept of computer self-efficacy is based on self-efficacy literature propounded by Bandura (1977), who defined self-efficacy as the belief that one can successfully perform certain behavior. He stated that there are four sources of self-efficacy to any individual. These are namely; (i) Past accomplishments; (ii) Observation of others; (iii) Verbal persuasion and (iv) Logical verification or emotional arousal.

In addition, Bandura (1989) argued that self-efficacy beliefs are important because they determine what we try to accomplish. He stated further that self-efficacy expresses what we believe we are capable of achieving in a given situation. According to him these beliefs in turn influence our perception, motivation and performance.

Compeau and Haggins (1995) in Azizi et al. (2022) defined computer self-efficacy "as a judgment of one's capability to use a computer. It is not concerned with what one has done in the past but rather with the judgments of what could be done in the future. Moreover, it does not refer to simple component sub skills, like formatting diskettes or entering formulas in a spread sheet. Rather, it incorporates judgment of the ability to apply those skills to broader tasks. e.g. preparing written reports or analyzing financial data." They highlighted the dimension of computer self-efficacy to include magnitude of computer self-efficacy, strength of a computer self-efficacy judgment, and computer self-efficacy generalizability. They also noted that individuals with higher computer self-efficacy beliefs tend to see themselves as being able to use the computer technology, whereas those who have low computer self-efficacy beliefs tend to see themselves as being unable to use computer technology.

Prior studies have shown that computer self-efficacy has relationship with variables like computer ability and usage Hasan in (Hong, 2022) computer anxiety and computer anger (Downey & McMurtrey, 2007) in (Thongsri et al. 2019) individual's decision to use computer (Compeau et al. 1995) and with attitude towards computer and Internet (Akpan, 2018).

Another variable that is germane to this study is attitude towards computer otherwise known as computer attitude. Smith et al. (2000) in Gyau et al. (2023) defined computer attitude “as a person’s general evaluation or feeling of favorableness or unfavorableness toward computer technologies and specific computer-related activities.” According to them computer technologies include computer programs, computer games, computer training while specific computer related activities cover behaviors like using computer, taking computer related course and so on. An individual’s attitude towards the computer has a great impact on his intention towards the computer or his intension to use or reuse the computer. Awofala et al. (2019) opined that computer attitude reflects the disposition towards computers with respect to learning or using them. In other words, it is the pre-disposition of a person to respond positively or negatively towards the computer.

Yulianto et al. (2023) described attitude towards computer or computer attitude “as a concept that is more cognitive in scope as opposed to affective.” They defined it as positive or negative thoughts that people have about computers in terms of their utility and their social roles. Several studies that addressed the relationship between computer attitude and Internet use have been conducted among various groups like dental students, (Jali, Singh, Babaji, Chaurasia, Somasundaram and Lau, 2014), nursing students (Shirazi et al. 2019) and private secondary school students (Akpan, 2018) to mention but a few.

In addition, another factor that will be considered in this study is Internet identification also known as identification with the Internet. According to Green et al. (2019) Internet identification refers “to the extent to which an individual’s self - concept is bond with his or her perceived ability to use the Internet.” An individual with a high degree of Internet identification is able to use the Internet effectively to maintain his or her self-worth.

Literature has shown that a few studies on the association between Internet identification and Internet use have been conducted among students.

Previous studies on Internet use have focused more attention on level of Internet use among librarians with less emphasis on factors that could determine its usage among librarians in universities in Nigeria. Therefore, this study seeks to investigate the extent to which computer self- efficacy, attitude towards the computer and identification with the Internet could determine Internet use among librarians in public universities in Western Nigeria. This present study intends to fill this gap.

The objectives of the study are to: (i) Determine the relationship between computer self-efficacy and Internet use among librarians in public universities in Western Nigeria; (ii) Examine the relationship between attitude towards the computer and Internet use among librarians in public universities in Western Nigeria; (iii) Ascertain the relationship between identification with the Internet and Internet use among librarians in public universities in Western Nigeria; (iv) Assess the relative influence of computer self-efficacy, attitude towards computer and identification with internet-on-internet use among librarians in public universities in Western Nigeria. (v) Analyze the joint influence of computer self-efficacy, attitude towards computer and identification with the internet-on-internet use among librarians in public universities in Western Nigeria.

The research hypotheses of the study are: (i) There is no significant relationship between computer self-efficacy and Internet use among librarians in public universities in Western Nigeria; (ii) There is no significant relationship between attitude towards the computer and Internet use among librarians in public universities in Western Nigeria; (iii) There is no significant relationship between identification with Internet and Internet use among librarians in public universities in Western Nigeria; (iv) Computer self-efficacy, attitude towards computer and identification with Internet do not have a significant relative

influence on Internet use among librarians in public universities in Western Nigeria. (v) Computer self-efficacy, attitude toward computer and identification with Internet do not have a significant joint influence on Internet use among librarians in public universities in Western Nigeria.

## 2. METHODS

### Research Design

The study adopted the descriptive research design of the ex-post facto type because the independent variables were not manipulated because they have already occurred. The independent variables in this study include computer self-efficacy, attitude towards computer and identification with Internet, while the dependent variable is Internet use.

### The Study Population

The study population comprised all the librarians in the employed in 14 public universities in Western Nigeria.

### Sampling technique and Sampling size

Single stage random sampling technique was used to select 11 out of 14 public universities (federal and state-owned universities). From these 11 universities, a total population of 158 librarians who participated in the study was obtained. Of these 117 respondents filled and returned their questionnaires which were used for analysis. See Table

**Table 1.** Population of Respondent in the Sampled Universities

No	Name of Universities	Population of Respondents	No of Questionnaires Administered	No of Questionnaires Returned
1	Obafemi Awolowo University, Ile-Ife.	22	22	16
	University of Ibadan,			14
2	Ibadan.	21	21	
3	University of Lagos, Lagos.	19	19	11
	Federal University of			14
4	Agriculture, Abeokuta.	14	14	
5	Federal University of Technology, Akure.	8	8	7
	Ambrose Alli University,			9
6	Ekpoma.	10	10	
7	Ekiti State University, Ado – Ekiti.	10	10	10
	Delta State University,			10
8	Abraka.	24	24	
9	Adekunle Ajasin University, Akungba.	5	5	5
	Adekunle Ajasin University,			14
10	Akungba.	15	15	
11	Osun State University,	10	10	7
	Osogbo,			
	Total	158	158	117

## Research Instrument

Four instruments were used for data collection. These are : (i) Computer self-efficacy scale; (ii) Attitude towards computer scale; (iii) Identification with Internet scale and (iv) Internet utilization scale.

A brief description of each inventory is hereby presented:

### *The computer self-efficacy scale*

This inventory was used to measure the self-efficacy of respondents in the use of the computer. The computer self-efficacy scale developed by Compeau and Higgins (1995) was adopted for the study. The scale consisted of 10 items measured on a 10 point Likert scale labelled from 1 = not confident to 10 = very confident. The reliability co-efficient of the scale was found to be 0.95. Individual with high computer self-efficacy should have a higher confidence in their capacity to perform task than those with low computer self-efficacy.

### *The attitude towards computer scale*

This inventory was used to measure the attitude of the respondents towards the use of the computer. The attitude towards computer scale developed by Hsu et al. (2009) was adopted for the study. The scale comprised 5 items measured on a 7 point Likert scale labelled strongly disagreed = 1, moderately disagree = 2, slightly disagree = 3, Neither Agree or Disagree = 4, Slightly Agree = 5, Moderately Agree = 6, Strongly Agree = 7. The Cronbach - alpha reliability was 0.89.

### *The identification with Internet scale*

This was used to measure the respondent's identification with Internet. The scale was developed by Joiner et al. (2007). The scale comprised 10 items measured on a 5 point Likert scale labelled strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5

### *The Internet use scale*

This was used to measure the rate or frequency of Internet use among respondents. The scale was developed by Joiner et al. (2007). The scale comprises 15 items measured on a 5 point Likert scale labelled Never = 1, Rarely = 2, Sometimes = 3, Often = 4, Very often = 5.

The demographic characteristic section requested respondents to provide information on their gender, marital status, age, years of service, educational qualification and so on.

## 2.4 Validity and Reliability of the Instrument

The content validity of each of scale in the questionnaire has been conducted by the original authors. The reliability co-efficient of the computer self-efficacy scale developed by Compeau et al (1995) was found to be 0.95. The reliability co-efficient of attitude towards computer scale developed by (Hsu et al. 2009) in (Fouladi et al. 2019) was 0.89, identification with Internet scale developed by Joiner et al. (2007) was 0.76 and the Internet use scale developed by Joiner et.al was found to be 0.77 using the Cronbach - alpha method

To determine the reliability status of the questionnaire used for this study, it was pretested to 30 librarians who were not part of the sample population. The questionnaire was found to have a reliability co-efficient for computer self-efficacy inventory = 0.87, for attitude towards computer scale = 0.85, for Internet identification scale = 0.76 and for Internet use scale = 0.77 using the Cronbach- alpha method.

## 2.5 Method of Data Collection and Analysis

Data were collected from the respondents using the four instruments namely; Computer self-efficacy scale, Attitude towards computer scale, Identification with Internet scale and

Internet utilization scale. Collected data were analyzed using descriptive and inferential statistics. The hypotheses were tested at 0.05 level of significance. The statistical package for the social sciences (SPSS) was used to analyze the data.

## 2.6 Demographic characteristic of Respondent

The 117 respondents who participated in the study comprised 61(52.1%) male and 56 (47.9%) female. As regards their marital status, 11(9.4%) were single, 104(88.9%) were married, while 2(1.7%) were widowed. Their educational qualification shows that 15(12.8%) had the Bachelor's degree, 95 (81.2%) possessed the master degree, while 7(6.0%) had the PhD degree in Library and Information Studies. Their ages ranged between 22 years and 66 years with a mean age = 42.40, SD = 7.150.

With respect to their job status, 23(19.7%) of the respondents were Assistant librarians, 33(28.2%) were Librarians II, 32(27.4%) were Librarians I, 14 (12.0%) were Senior Librarians, 13 (11.1%) were Principal Librarians and 2 (1.7%) were Deputy University Librarians. Their working experience ranged between 1 and 32 years with a mean age = 10.33 years and a standard deviation (S.D) = 8.00.

## 2.7 Testing of Research Hypothesis

Research hypothesis 1: The hypothesis states that there is no significant relationship between computer self- efficacy and Internet use among librarians in public universities in Western Nigeria. The hypothesis was tested by subjecting data to Pearson product moment correlation analysis. The results are presented in Table 2.

**Table 2.** Correlation between computer Self-efficacy and Internet use Among Respondent

	No	Mean	Std D	r	P
Computer self- efficacy	117	43.71	8.637	0,309	0.001
Internet use	117	41.47	41.74		

### Correlation is significant at P<0.05

The data in Table 2 shows that the correlation between computer self-efficacy and Internet use of librarians is 0.309 which is significant at 0.05 level ( $r = .309$ ,  $P < 0.05$ ). This indicates a significant positive relationship between computer self-efficacy and Internet use among librarians. Therefore, the stated null hypothesis 1 is rejected.

**Research Hypothesis 2:** The hypothesis stated that there is no significant relationship between attitude towards computer and Internet use among librarians in public universities in Western Nigeria. Pearson product moment correlation analysis was used to test the hypothesis. The results are presented in Table 3.

**Table 3.** Correlation between Attitude towards Computer and Internet use Among Respondent

	No	Mean	Std D	r	P
Computer Attitude	117	30.79	6.154	0,098	0.293
Internet use	117	41.47	7.579		

### Correlation is not significant at $P > 0.05$

From Table 3 the correlation between attitude towards computer and Internet use among librarians is 0.098 which is not significant at 0.05 level ( $r = 0.98$ ,  $P > 0.05$ ). This means the relationship between computer attitude and Internet use among librarians is not significant. Hence, the stated null 2 hypothesis is accepted.

**Research Hypothesis 3:** States that there is no significant relationship between identification with Internet and internet use among librarians in public universities in Western Nigeria.

The hypothesis was tested using Pearson product moment correlation analysis. The data is presented in Table 4

**Table 4.** Correlation between Identification with Internet and Internet use Among Respondent

	No	Mean	Std D	r	P
Computer Attitude	117	37.59	5.646	0,455	.000
Internet use	117	41.74	7.579		

### Correlation is significant at $P < 0.05$

The data in Table 4 shows that the correlation between identification with Internet and Internet use is 0.455 which is significant at 0.05 level ( $r = 0.455$ ,  $P < 0.05$ ). This implies a significant relationship between identification with Internet and Internet use among librarians. Therefore, the null hypothesis 3 is rejected.

**Research Hypothesis 4:** The hypothesis states that computer self-efficacy, attitude towards computer, identification with Internet do not have a significant joint influence on Internet use among librarians in public universities in Western Nigeria.

Multiple regressions analysis was used to test the stated hypothesis. Computer self-efficacy, attitude towards computer and identification with Internet were entered as independent variables, while Internet use was considered as the dependent variable. The results are presented in Tabel 5 and 6

**Table 5.** Summary of multiple regression analysis of relationship between independent variable (Computer self-efficacy, attitude towards computer and Identification with Internet) and Internet use among Respondents

Model	R	R Square (R <sup>2</sup> )	Adjusted R square (R <sup>2</sup> )	Standard Error of the Estimate
1	0.509	0.259	0.239	6.611

**Table 6.** Analysis of variance showing the relationship between computer self-efficacy, computer attitude, identification with Internet and Internet use among librarians.

Model		Sum of Squares	df	Mean	F	P
1	Regression	1723.584	3	574.528	13.144	0.000
	Residual					

	Total	6662.786	116		
Predictors (Constant): Computer Self-efficacy, Attitude toward computer and Identification with Internet					

*Dependent variable: Internet use*

The data in Table 5 show that the three independent variables (computer self-efficacy, attitude towards the computer and identification with Internet) jointly yielded a multiple correlation co-efficient ( $R$ ) = 0.509 and a co-efficient of determination ( $R^2$ ) = 0.259 or 25.9%. This co-efficient of determination ( $R^2$ ) shows that the three independent variables jointly accounted for 0.259 or 25.9% of the variance in Internet use among librarians in universities in Western Nigeria. The remaining unexplained 74.1% could be attributed to other variables that were not considered in this study.

Furthermore, the data in Table 6 show that the analysis of variance of multiple regression yielded an  $F$ -value = 13.144 which is significant at  $P < 0.05$  level of significance. This implies that computer self-efficacy, attitude towards computer and identification with Internet jointly have significant influence on Internet use among librarians in universities in Western Nigeria. Therefore, the stated null hypothesis 4 is rejected.

To determine the relative contribution of each independent variables (computer self-efficacy, attitude towards computer and identification with Internet) to predict Internet use among librarians, the three independent variables were entered into a multiple regression analysis with Internet use as dependent variable. The results are presented in Table 7.

**Table 7.** Relative Contribution of Computer self-efficacy, Attitude towards computer and Identification with Internet to the Prediction of Internet use Among Librarians in Public Universities in Western Nigeria.

Independent Variables	Unstandardized co-efficient		Standardized co-efficient		
	B	Std Error	Beta	t	P
(constant)	16.103	4.789		3.363	.001
Computer self-efficacy	.176	.074	.200	2.370	-.019
Attitude towards computer	-.177	.112	-.144	-1.582	.117
Identification with Internet	.623	.126	.464	4.946	.000

### Significant at $P < 0.05$

Independent Variables: Computer self-efficacy, attitude towards computer and identification with Internet.

Dependent Variable: Internet use

As regards the relative contribution, the data in Table 7 show that of the three independent variables: computer self-efficacy, attitude towards computer and identification with Internet, only two that is identification with Internet ( $\beta = .464$ ,  $t = 4.946$ ,  $P < 0.05$ ) and computer self-efficacy ( $\beta = .200$ ,  $t = 2.370$ ,  $P < 0.05$ ) significantly predicted the use of Internet among librarians.

In addition, the data shows that identification with the Internet made the highest contribution to influence the Internet use among respondents ( $\beta = .464$  or 46.4%). Followed by computer self-efficacy ( $\beta = .200$  or 20.0%) and attitude towards computer ( $\beta = .144$  or 14.4%) respectively.

### 3. RESULTS AND DISCUSSION



This section discusses the major findings of this study with respect to each of the stated hypothesis.

The study revealed that there was a significant positive relationship between computer self-efficacy and Internet use among librarians in universities in western Nigeria. In other words, the higher the computer self-efficacy beliefs of librarians, the more they used the Internet and vice-versa. This finding is line with the finding of [Oyewusi, et al. \(2016\)](#) who reported significant positive relationship between computer self – efficacy and Internet use among senior secondary school students in Lagos state.

Another major finding of this study shows that there was no significant relationship between attitude towards computer and Internet use among librarian in public universities in western Nigeria. That is the librarians’ attitude towards the computer has no influence on their use of the Internet. However, this finding is at variance with that of [Oyewusi, et al. \(2016\)](#) who reported that attitude towards computer has significant positive influence on Internet use among senior secondary school students in Lagos state.

The study revealed a significant positive relationship between identification with Internet and Internet use among librarians. That is the more the librarians identified with the Internet, the more they used it and vice-versa. This is in agreement with the finding of [Joiner et.al \(2005\)](#) in [Reuben et al. \(2021\)](#) who reported a significant positive relationship between Internet identification and Internet use among the respondents of their study.

In addition, the results of the study indicated that a combination of computer self-efficacy, attitude towards computer, identification with Internet have significant positive relationship with the Internet use ( $R= 0.509$ ,  $P < 0.05$ ) and contributed 25.9 % of the variance in Internet use among librarians in public universities in Western Nigeria. In other words, computer self-efficacy, attitude towards computer and identification with Internet jointly determined the Internet use among librarians public universities in Western Nigeria. This finding is novel because previous studies on Internet use among librarians did not consider the joint influence of the computer self-efficacy, attitude towards computer and identification of with internet-on-internet use among librarians in public universities.

That is not all, the study revealed that of the three independent variables; that is computer self-efficacy, attitude towards computer and identification of with Internet, identification with Internet ( $\beta = .464$ ,  $t = 4.946$ ,  $P < 0.05$ ) and computer self-efficacy ( $\beta = .200$ ,  $t = 2.370$ ,  $P < 0.05$ ) were significant predictors of Internet use among librarians in public universities in Western Nigeria.

#### 4. CONCLUSION

The study shows that the use of the Internet among librarians had significant relationship with computer self – efficacy and identification with Internet but was not significantly related to attitude towards the computer. The study also reveals that computer self-efficacy, attitude towards computer and identification with the Internet jointly determined the use of the Internet among librarians in public universities in western Nigeria.

Based on the findings of this study, the following recommendations are made for the improvement of Internet use among librarians: Librarians should undergo regular training in the use of computer so that they could develop and maintain a very high level of computer self-efficacy. This will motivate them to use the Internet more than ever before for their jobs and personal purposes; (ii) Librarians should be encouraged to developed a positive attitude towards use of computer as this will enhance their use of the Internet. One of the ways of doing this is to embark on their continuous training on the job. (iii) Librarians should identify more with the Internet as this would increase their usage of the Internet

Administrators of university libraries should take into the consideration the computer self-efficacy, attitude towards the use of computer and identification with the Internet when they are formulating policy aimed at improving on the use of Internet among librarians.

## 5. AUTHOR'S NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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