THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Influence of Individual Characteristics on the Use of Information and Communication Technology (ICT) by Lecturers in Library Schools in South-East and South-South Zones of Nigeria

Magnus C. Unegbu
Senior Librarian, Alvan Ikoku University of Education, Owerri Imo State, Nigeria

Abstract:
The general purpose of the study is to determine the influence of individual characteristics on the use of Information and Communication Technology (ICT) by lecturers in Library Schools in South-East and South-South zones of Nigeria. The survey research design was used for the study using questionnaire as the instrument for data collection. Three research questions were framed for the study. The study covers the entire population of 162 lecturers in Library Schools in South-East and South-South zones of Nigeria. 145 copies of the questionnaire were completed and returned for analysis representing 89.5%. The findings show that lecturers with computer skill use ICT more than those with less computer skill. Again, the findings show that lecturers with positive attitudes use ICT more than those with negative attitudes. The study recommends that both lecturers with high computer skill and less computer skill should make extensive use of ICT will enable them to have quick access to information which will help them in teaching, learning and research activities. Again, lecturers with negative attitudes to ICT should be encouraged through ICT training programme. This will make such lecturers to develop positive attitudes towards ICT and use it for their academic activities.

1. Introduction

The emergence of information and communication technology (ICT) has brought about a tremendous technological revolution in the world. This revolutionary impact has affected all aspects of human endeavours, including teaching and research. ICT is crucial to the continued survival of universities and research institutes in developing countries. This is supported by Paterson (1995) who identifies three areas in which ICT can make significant contributions to the economic and social development of developing countries, namely as an instrument to making existing productivity sectors more efficient, as an area of economic activities in its own rights and as a tool in education. Mangesi (2007) remarks that ICT use in education is now at a particularly dynamic stage in Africa with new developments and announcements happening on a daily basis somewhere on the continent.

Use, in library parlance, is to utilize. To utilize means the ability to make use of something. Uhegbu (2007) posits that utilization is the actual putting into appropriate use of something. It is the process of making use of something available. To Uhegbu (2007:68) utilization is governed by several principles which are goal identification, availability and utilization (in which utilization is governed by "thing" provided and its accessibility). Availability is meaningless if it is not put to use; others are communication channel, which is a critical requisite for utilization because the way information is passed to people to a large extent determines its way of use by seekers and user satisfaction which is the ultimate purpose of utilizing information.

A lecturer in the institution of higher learning holds a position that involves carrying out both teaching and learning. Many lecturers are experienced researchers with many publications. In universities, professors are those who lead a group of other academics thus everyone is a lecturer. Lecturers always have at least a master's degree and quite often a doctorate. A lecturer may be part-time or a full-time. Full-time lecturers now incorporate their role quite formally with performance reviews, promotional tracks, administrative service responsibilities and many faculty privileges. Dyck and Smither (1994) found that when the effects of computer experience were controlled, there were no gender effects.

Faseyitan and Hirschbuhi (1992) examine the effects of personal attributes as well as organizational and attitudinal factors, on the adoption of computers for instruction by lecturers. The results from their study indicated that discipline, computer self-efficacy, computer utility beliefs and attitude towards computers were predictors of adoption. Computer skill is another contributing reason that discourages users from taking advantage of library resources and services (Brosnan, 1998). This is because much of today's information and communication technology (ICT) makes use of computers. A study of faculty at Western Michigan University showed that frequent users of the library tended to make greater use of computer application and library's databases than infrequent users, and also reported higher expertise in using these applications (Meer, Fravel, Poole and Van 1997).

Attitude refers to either positive or negative judgment about concrete subject. It can also refer to positive or negative evaluation of people, objects, events, activities, ideas or just about anything in your environment. Eagly and Chaiken (1998) view attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavor.

1.1. Research Questions
This research is based on the following questions
   a) What is the influence of academic discipline on lecturers' use of ICT in library schools in South-East and South-South zones of Nigeria?
   b) What is the influence of computer skill on lecturers' use of ICT in library schools in South-East and South-South zones of Nigeria?
   c) What is the influence of attitudes on lecturers use of ICT in Library schools in South-East and South-South zones of Nigeria?

2. Literature Review
Larose (1999), in a survey of lecturers at a major Quebec university on ICTs in university teaching and in teacher education journey found significant different in anxiety about computer environment according to the faculty of origin of respondents.However, Mitra, Hazen, Lafrance, and Rogan (1999) in a study of use and non-use of email by lecturers in a United State University found that even though users and non-users tended to differ in their attitudes towards computers, these differences were not significant by discipline.
A study of faculty's use of electronic resources found that it was influenced by such factor as computing skills of lecturers their age and gender (Majid and Abazova 1999). The author further states that faculty with higher computing skills were not only more likely to use and be familiar with their library's ICT resources, including Online Public Access Computer (OPAC), but also tended to use the Internet more frequently. An anonymous survey conducted by JSTOR among lecturers at higher institutions in the United States also showed disciplinary differences in faculty perceptions and attitudes towards electronic resources (Heterick, 2002).Igbaria and Chakrabarti (1990) also found that computer experience significantly affected attitudes towards computers. Wilberly and Jones (1994) in a longitudinal study of the ICT adoption behaviour of eleven humanist scholars over a five-year period, concluded that while lack of money may be only a minor factor in the slow adoption of ICT, frustrating experience with computers and negative reports of such experiences played a greater role in hindering the adoption of ICT by the lecturers.
Powell (1996) found that faculty who integrated computer technology into non-computer courses perceived computers to be more useful, had more confidence, more liking and less anxiety towards computers than their cohorts who did not integrate. Christensen (1997) observes that with familiarity, anxieties and fears tend to decrease and confidence increases, and that people with prior positive experience tend to be more to adopt a technology that those who have had either a prior negative experience at all. Bandura (1997) asserts that people with good working experience make use of computers than those without good working experience. Studies have shown that people who have used ICT (Christensen 1997). Females also have more negative attitude towards computer, thus they are often less computer literate than males and this may result in different ways of using the computer (Jackson, Ervin, Gardner, and Schmitt, 2001). Sefyrin (2003) study showed that competence in ICT could be seen as a question of interest in ICT, where men are more interested in ICT than women. The study thus confirmed the view of gender and competence as actively constructed in a social process. This is because understandings of the terms were negotiated among individuals in the groups studied, and therefore used as norms with which individuals understood themselves and their behaviours.Agbonlahor (2006) shows that frequency of ICT use and number of computer applications used by Nigerian university lecturers was significantly influenced by perceptions of ease of use.
Attitudes are key factors in whether lecturers accept computer as a tool in teaching, research and learning. Pintrich and Garcia (1991) show that lecturers with higher attitudes use more cognitive and metacognitive strategies and persist longer than those cognitive and metacognitive strategies and persist longer than those who do not. Harrison and Rainer (1992) in their studies on an examination of the factor structures and concurrent validates for the computer attitude scale, the computer anxiety rating scale and the computer self-efficacy scale using data compiled from a 1990 survey of 776 knowledge and information workers from a large university in the Southern United States. They found that participants with negative computer attitudes were less skilled in computer use and were therefore less likely to accept and adapt to technology than those with positive attitudes. Schunk (1994) states that when attitudes towards ICT is too low, lecturers will notbe motivated to learn. Therefore, different strategies will need to be devised to reach such lectures. This study is related to academic motivation and self-regulation and computer use.(Compeau and Higgins, 1995). The studies focusing on lecturers have explored the relationship of attitudes with the choice of college major and career, and with lecturers' attitudes and achievements.

3. Research Methods
The descriptive survey design was adopted using the questionnaire as the instrument for data collection. The questionnaire is titled individual characteristics on the use of ICT by lecturers Questionnaire (ICUICTLQ). The population of the study is 162 (One hundred and sixty two lecturers). This comprised all the lecturers in the library schools in South-East and South-South zones of Nigeria. The breakdown is shown as follows

	Institutions	No of lecturers
1	Aba State University Uturu (ABSU)	8
2	AlvanIkoku University of Education (AIUE)	7
3	Ambrose Ali University (AAU)	10
4	Delta State University, Abraka (DELSU)	17
5	Enugu State University of Science and Technology	12
6	Federal Polytechnic Nekede (FPN)	11
7	Federal Polytechnic Oko (FPO)	14
8	Federal College of Education Technical Omoku (FCETO)	6
9	Federal College of Education Technical Umuze(FCETU)	8
10	Imo State University Owerri (IMSU)	9
11	Michael Okpara University of Agriculture Umudike (MOUAU)	8
12	NnamdiAzikiwe University Awka (NAU)	10
13	University of Calabar, Calabar (UNICAL)	14
14	University of Uyo, Uyo (UNIUYO)	13
15	University of Nigeria Nsukka (UNN)	15
	Total	**162**

Table 1
Source: Administrative Records of the Institutions Studied, 2015

- Research Question 1: What is the influence of academic discipline on lecturers' use of ICT in library schools in South-East and South-South zones of Nigeria?

	Academic Discipline of Lecturers on Their Use of ICT	No respondents	Responses											
			SA		A		Total Score on agreement		D		SD		Total score on disagreement	
			F	%	F	%	F	%	F	%	F	%	F	%
a	The curriculumof my academic affects my use of ICT	145	48	33,1	42	29.0	90	62.1	31	21.4	24	16.6	55	37.9
b	The course(s) I teach affects my use of ICT	145	51	35.2	42	29.0	93	64.1	28	19.3	24	16.6	52	38.9
c	My research area affects my use of ICT	145	45	31.0	38	26.2	83	57.2	40	27.6	22	15.2	62	42.8
d	I do not feel anxious using ICT because of my academic discipline	145	22	15.2	11	7.59	33	22.8	58	40	54	37.2	11	77.2
e	I enjoy using ICT because of my academic discipline	145	67	46.2	52	35.9	11	82.1	14	9.66	12	8.28	26	17.9

Table 2: Responses on influence of academic discipline of lecturers ontheir use of ICT

From Table 2, it can be observed that 48(33.1%) of the respondents stated that the curriculum of their academic discipline affects their use of ICT were on strongly agree and 42(29.0%) of them were on agree. The agreement grand total had 90(62.1%). Meanwhile grand total disagreement response on this construct was 55(37.9%) with disagree response of 31(21.4%) and 24(16.6%) response on strongly disagree.

45(31.0%) of the respondents and 38(26.2%) of the respondents were on strongly agree and agree respectively that their research area affects their use of ICT. This had a grand total agreement responseof 83(73.2%). However, grand total disagreement to this construct was 62(42.8%) with disagree response of 40(27.6%) and strongly disagree response of 22(15.2%).

Table 2 also shows that the agreement grand total response of those that do not feel anxious because of their academic discipline had 33(22.8%) with strongly agree response of 112(77.2%) broken down as follows: disagree had a frequency response rate of 58(40%) and strongly disagree had 54(37.2%).

For those who indicated that they enjoy using ICT because of their academic discipline had a grand total agreement of 119(83.0%) with strongly agree response of 67(46.2%) and agree response of 52(35.9%).

However, the grand total disagreement response on this construct was 26(17.9%) with disagree response of 14(9.66%) and strongly disagree response of 12(8.28%). It can be seen from the analysis that irrespective of academic discipline, lecturers are generally positive about the prospect of using ICT.

- Research Question 2: What is the influence computer skill on lecturers' use of ICT in library schoolsin South-South and South-East zones of Nigeria?

	Computer skill of Lecturers on Their Use of ICT	No respondents	Responses											
			SA		A		Total Score on agreement		D		SD		Total score on disagreement	
			F	%	F	%	F	%	F	%	F	%	F	%
a	I can use both system and application programmes of the ICT	145	45	31.0	37	25.5	82	56.6	34	23.4	29	20	63	43.4
b	I can access the internet via website address	145	58	40	45	31.1	103	71.0	33	22.8	9	6.21	42	29.0
c	I can do deep web searching using appropriate meta-search engines of the ICT	145	47	32.4	45	31.0	92	63.4	38	26.2	15	10.3	54	37.2
d	I can publish online because of my computer skill	145	52	35.9	67	46.2	119	62.1	12	8.27	14	9.66	26	17.9
e	I can chat online using the ICT	145	55	37.9	47	32.4	102	70.3	18	12.4	25	17.2	43	2.7

Table 3: Responses on influence of computer skill of lecturers ontheir use of ICT

As shown on Table 3, respondents who indicated that they can use both system and application programmes of the ICT scored 45(31.0%) on strongly agree and 37(25.5%) on agree. This had a grand total agreement of 82(56.6%). For disagreement it recorded a grand total response of 63(43.4%), broken down as follows: disagree had 34(23.4%) and strongly disagree had 29(20%).

Again in Table 3, the respondents who indicated that they can access the Internet via the website address scored 58(40%) response on strongly agree and 45(31.0%) response on agree. Total agreement had 103(71.0%). Disagreement had a total of 42(29.0%) with disagree response of 33(22.8%) and strongly disagree response of 9(6.21%).

The grand total agreement of respondents who indicated that they can publish online because of their computer skill had 119(82.1%) broken down as follows: 52(35.9%) on strongly agree and 67(46.2%) on agree. For disagreement, it recorded a grand total response of 26(17.9%), broken down as follows; 12(8.27% on disagree and 14(9.66%) strongly disagree.

For those who stated they can do deep web searching using appropriate meta-search engines of the ICT had grand total agreement response of 93(63.4%) representing 47 (32.4%) on strongly agree and 45(31.0%) on agree. For disagreement, it recorded a grand total frequency response of 54(37.2%) broken down as follows: disagree had 38(26.2%) and strongly disagree had 25(17.2%).

The grand total agreement of respondents who can chat online using the ICT had 102(70.3%) with 55(37.9) response on strongly agree and 47(32.4%) on agree. This construct had a grand total disagreement response of 43(29.7%) representing 18(12.4%) and 25(17.2%) responses on disagree and strongly disagree respectively. Evidence from the analysis showed that lecturers with computer skill use ICT more than lecturers with less computer skill.

- Research Question 3: What is the influence of attitudes on lecturers' use of ICT in library schools in South-East and South-South zones of Nigeria?

	Attitudes of Lecturers on Their Use of ICT	No respondents	Responses											
			SA		A		Total Score on agreement		D		SD		Total score on disagreement	
			F	%	F	%	F	%	F	%	F	%	F	%
a	The curriculum of my academic affects my use of ICT	145	62	42.8	55	37.9	11.7	80.7	10	6.90	18	12.4	28	19.3
b	I am easily excited using ICT because of my academic rank	145	68	46.9	53	36.6	121	83.4	16	11.0	8	5.52	24	16.6
c	I feel anxious using ICT because of my academic rank	145	62	42.8	43	29.7	105	72.4	17	11.7	23	1.59	40	27.6
d	My academic rank does not affect my use of ICT	145	57	39.3	38	26.2	95	65.5	35	24.1	15	10.3	50	34.5
e	My rank demands that I use ICT for academic work	145	53	36.6		22.1	85	58.6	22	15.2	38	26.2	60	41.4

Table 4: Responses on influence of attitudes of lecturers ontheir use of ICT

As shown on Table 4, the respondents who stated that they do not have phobia for ICT equipment had a frequency grand total response of 117(80.7%) for agreement, broken down as follows: 62(42.8%) responses were on strongly agree and 55(37.9%) response were on agree. For agreement, it recorded a grand total frequency response of 28(19.3%), broken down as follows: disagree had 10(6.90%) and strongly disagree had 18(12.4%).

Table 4 also reveals the respondents who indicated that they learn more from ICT than they do from book. The agreement grand total had 121(83.4%) responses representing strongly agree response of 68(46.9%) and agree response of 53(36.6%), grand total disagreement response on this construct was 24(16.6% with disagree response of 16(11.0%) and strongly disagree response of 8(5.52%).

For those who discuss ICT with friends had total agreement response of 105(72.4%), 62(42,8) response were on strongly agree and 43(29.7%) response were on agree. This construct had a total disagreement response of 40(27.6%), 17(11.7%) response were on disagree and 23(1.59%) response were on strongly disagree.

The grand total agreement of respondents who do not always apply ICT in their teaching and research had 95(65.5%) broken down as follows: 57(39.3%) response were on strongly agree and 38(26.2%) response were on agree. For agreement, it recorded a grand total response of 50(34.5%), broken down as follows: 35(24.1%) response were on strongly agree and 15(10.3%) response were on agree.

For the respondents who indicated that using ICT makes them to be more creative scored 53(36.2%) response were on strongly agree and 32(23.1%) response were on agree making a grand total agreement of 85(58.6). However, 22(15.2%) of the respondents were on disagree and 38(26.2) response were on strongly disagree. The total disagreement was 60(41.4%). Based on this analysis, it could be inferred that lecturers with positive attitudes to ICT use ICT more than lecturers with negative attitudes

4. Findings

Evidence from Table 2 showed that academic discipline of lecturers is not a determinant factor on their use of ICT in library schools in South-East and South-South zones of Nigeria.

The result agreed with Mitra, Hazen, Lafrance and Rogan (1999) in a study of use and non-use of ICT by lecturers in a United States University found that even though users and non-users tended to differ in their interest towards computers, these differences were not significant by discipline. This is in contrast with Larose (1999) and Heterick (2002) who found disciplinary differences in faculty perceptions and interests towards electronic recourses.

The result of data analysis in Table 3 confirms the findings of Igbaria and Chakrabarti (1999) who found that computer experience significantly affect attitudes towards computers. Christensen (1997) found that familiarity with ICT tends to decrease anxieties and fears while increasing confidence. The findings also support that of Idowu (1997) who found that frequency of use of computers was significantly related to positive attitudes towards computers. Bandura (1997) found that people with good working experience make use of ICT than those without a good working experience. Agbonlahor (2006) also found that frequency of ICT use and number of computer applications use by lecturers was significantly influenced by perception of ease of use.

The findings of these studies are in line with Gracia (1991) who found that lecturers with high attitudes use more cognitive and metacognitive strategies and persist longer than those who do not. Harrison and Rainer (1992) who found that lecturers with negative computer attitudes were less skilled in computer use and were therefore less likely to accept and adapt to technology than those with positive attitudes. Schunk (1994) who found that when attitudes towards ICT is too low, lecturers will not be motivated to learn. Therefore, different strategies will need to be devised to reach such lecturers. Lee (1997) in his studies found that lecturers who have a positive attitude are highly enthusiastic about ICT as an important feature of teaching and learning.

5. Recommendations

Based on the findings and conclusions of this study, the following recommendations were proposed.
    i.   Organization facilitation for use of ICT by lecturers needs to be improved in their academic discipline. Especially important is the need to provide functional ICT unit in every discipline where lecturers who have problems with ICT equipment or software can go and receive immediate attention whenever they run into problems with using ICT.
    ii. Both lecturers with high computer skill and less computer skill should make extensive use of ICT in the search for information. Using ICT will enable them to have quick access to information which will help them in teaching learning and research activities
    iii. Lecturers with negative attitudes to ICT should be encouraged through ICT training programmes. This will make such lecturers to develop positive attitudes towards ICT and use it for their academic activities.

6. References

    i.   Agbonlahor, R. O. (2006). Motivation for use of information technology of University Faculty: A developing country perspective. Information Development. 22(4); 263-277.
    ii.   Bandura, A. (1997). Self-efficacy: the Exercise of Control. New York: W.H Freeman
    iii. Brosnan, M.J (1998). The impact of computer anxiety and self-efficacy upon performance.Journal of computer Assisted Learning 14(3): 223-235
    iv.   Christensen, R. (1997). Effect of technology integration education on the attitudes of teachers and their students.Doctoral dissertation, University of North Texas, Denton.
    v.   Compeau, D. R and Higgins, A (1995). Computer self-efficacy: Development of a measure and initial test. MIS Quarterly 19: 189-195
    vi.   Dyck, J.L and Smithers, J.A (1994). Age differences in computer anxiety: the role of computer experience, gender and education. Journal of educational computing Research. 10(3): 239-248.
    vii. Eagly, A.H and Chaiken, S (1998).Attitude structure and function. In Gilbest, D. T; Fisk, S.T and Lindesing, G(eds). Handbook of social psychology. New York: McGraw-Hill.

viii. Faseyitan, S and Hirschbuhl, J (1992). Computers in University instruction: what are the significant, variables that influence adoption? Interactive Learning International. 8(3): 185-194

ix. Harrison, W and Rainer, K (1992). An examination of the factor structures and concurrent validates for the computer attitude scale, the computer anxiety rating scale and the computer self-efficient scale. Educational and Psychological measurement. 52:735-744.

x. Igbaria, M and Chakrabarti A. (1990).Computer anxiety and attitudes towards microcomputer use. Bahaviour and Information Technology.9(3): 229-241

xi. Jackson, L.A; Ervin, K.S; Garhner, P.D and Schmitt, N (2001).Gender and the Internet. Women communication and men searching.Sex Roles. 44(5): 363-379.

xii. Larose, F (1999). Information and communication technologies in university teaching and in teacher education journey in a major Quebec University's reality. Electronic Journal of Sociology. 4(3); 57-69.

xiii. Majid, S. and Abazova, AF. (1999). Computer literacy and use of electronc information sources by academics: a case study of International Islamic University Malaysia. Asian Libraries. 8(4): 100-111.

xiv. Mangesi, K. (227). Survey of ICT and education in Africa Ghana country report. In Farell, G and Shafiks I.I (eds). Survey of ICT and education in Africa: A Summary Report Based on 53 Country Surveys. Washington DC: McGraw-Hill.

xv. Mitra, A, Hazen M, Lafrance, B and Rogan, R (1999). Faculty use and nn-use of electronic mail: attitudes, expectations and profiles. Journal of Computer Mediated communication. 4(3): 10-15.

xvi. Meer, V, P., Poole, H and Van, T.V (1997). Are library users also computer use? A survey of faculty and implications for services.The public-Access Computer System Review. 8(1): 27-30).

xvii. Paterson, P.J (1995). Information Technology and Development in Jamaica, in information technology for development.Advanced Technology System Bulletin. 10: 9-15.

xviii. Pintrich, D.R. and Garcia, T (1991). Student goal orientation and self-regulation in the college classroom. In M Maehr and P.R Pinrich (eds). Advances in Motivation and Achievement: Goals and self-regulatoryProcess. Greenwich: JAI Press.

xix. Powell, R. A (1996).A study of suburban community college faculty attitudes toward integration of computers into non computer courses.Doctoral Dissertation, Wayne State University.

xx. Schunk, D. H. (1994).Self-regulation of self-efficacy and attribution in academic setting. In D.H, and B. J Zimerman (eds). Self-regulation of learning and performance: Issues and educational application. New Jersy: Lawrence Exblaun

xxi. Sefyrin, J (2005). Understanding og gender and competence in computer. Paper presented at 6th international women into computing conference. University of Greenwich. http/www.mium.se/upload/instcitutioner/itm/iks/si/publicationer/seyrinwic. Accessed on 25th July, 2015