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Impact of Information Communication Technologies (ICTs) on Career Advancement of Women in Academics

Joshua O. Ojo PhD[1], Racheal O. Odunlade PhD[1], Elizabeth A. Adekanye PhD[1]

[1]**University of Lagos Library**

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Abstract

Advancement in one's chosen career has a fundamental impact on individual's efficiency and job productivity. Apart from that, it also promotes actualization of dreams, empowerment and visibility at the echelon of one's chosen career. To that extent, this study unraveled the visible impacts that the use of ICTs could have on career advancement of female academia especially in these days of information explosion. The research design adopted for the study is survey; through a case study of University of Lagos, 3 faculties within the university constituted the study population (faculty of arts, education and science). Total enumeration technique was applied to sample all female lecturers in the 3 faculties totaling up to 144. Instrument of data gathering was questionnaire and out of the 144 administered, 104 were returned and found analyzable. Findings revealed that the most applicable ICT facilities to female academia's job is the computer systems (58.7%) and the internet connectivity (51%), Also, out of the several ICT based activities investigated, the most applicable was information retrieval activity (53%). Greater number of the population under study was competent in those areas of ICT use that were basically useful to their job schedule. This has in turn impacted some routine academic activities especially research and publication activity (71.4%) and research collaboration among colleagues. Though some of the major challenge of ICT use included, power outage (46.2%), lack of internet connectivity (48%) and inadequate maintenance of ICT equipment (48%), Hypothesis 1 tested that there was no significant difference in the use of ICT among women academics in the faculties (P value is >0.05). Also, hypothesis 2 carried out a two tailed test correlation on the variables of 'ICT use' and 'ICT impact'. The correlation was tested and the result showed a significant correlation meaning there was a significant contribution of ICT use to career advancement of female academia.

Keywords: career advancement, women, academics, information communication technology.

Introduction

The importance of individual's advancement in chosen career cannot be overemphasized. It is a known fact that career advancement enhances job productivity. Not only that, it also promotes actualization of dreams, empowerment and visibility at the echelon of one's chosen career. In every organization, development of human capacity has a fundamental impact on individual's efficiency and job productivity. To that extent, career advancement which gives a picture of future opportunities in terms of promotion is a motivating factor for performance and development of skills (Mwanje, 2010).

In the academia world especially the university, most often than not the yardstick for measuring career advancement is hinged on research output which is evidenced by scholarly publications. Though the extent of teaching and its effect may not be readily quantified, research publication is taken to be a major benchmark for assessment and promotion in the academic world hence the phrase "publish or perish". Research has established that lack of career advancement in an organization is not only a problem but one that affects the motivation of employees, and since the concept of career advancement is hinged on promotion, higher salaries, higher allowances (Mwanje, 2010,) additional responsibilities and visibility within one's organization, it is expedient that this aspect of people's work life is given more attention by both employers of labour and the employees. Nowadays, it is no longer a story that ICT provides a great development opportunity and a suite of indispensable tools used by all to deal with the limitations of time, cost, knowledge dissemination and distance problems, among others.

Specifically for the academia, ICT has become part and parcel of the various routines and daily activities carried out especially by lecturers. Universities all over the world are rapidly incorporating information and communication technology into all facets of teaching, research and management (Carlson & Gadio, 2000). In the same vein, academic libraries in their bid to support teaching, learning and research have embraced ICT in the area of library automation thereby providing information resources in electronic format to their users as well as other ICT based services in addition to their traditional role.

Lecturers can now carry out their job efficiently and effectively (Akpan, 2014) using various ICT facilities. One major breakthrough of ICT in the academic world is that teachers who succeed in making use of ICT in their work processes do not only contribute to improved learning outcomes in their students, but also benefit personally from enhanced work productivity (Onuma, 2007; Yusuf, 2005; Daniel 2000; Carlson & Gadio, 2000).

With the evolution of ICT, education delivery is fast changing and learning is assuming a new paradigm that is completely different from the old traditional system. Teaching could be said to be easier and more impactful and the library can now provide a hitch free access to current and up-to-date information resources in various areas of specialization to both lecturers and students. Variety of activities that can be carried out in the academic setting using ICT include teaching and learning (teleconferencing, electronic classroom), Seminar/classroom presentation, students work supervision, research and publication (use of electronic information resources), research collaboration among colleagues, communication (with students and colleagues), social networking among colleagues in the same discipline, and so on.

In all of these, can it be said that female academics also benefit from these myriads of opportunity presented in this era of knowledge based technology and globalization? Previous studies established that when it comes to using ICT facilities, the women folk are not on the same page with their male counterpart. In fact, women are seen to be marginalized where matters of ICT use and compliance are concerned especially in third world countries (Dholakia , Dholakia & Kshetri,2003; Omenyi, Agu & Odimegwu, 2007).

It is in view of this that this study explores the impacts of ICTs on career advancement of female academia in University of Lagos, Nigeria.

Objectives of the Study

To guide the study, four objectives and one hypothesis were formulated. These are:

- To identify the aspect of ICT that is applicable to women academia's job.
- To determine women academic's skill in using ICT tools.
- To find out how ICT usage has enhanced the work output vis-a-vis career development of women in academics.
- To establish the challenges encountered by women in academics in the course of using ICT.

Hypothesis

H_1: There is no significant difference in the use of ICT among women academia in faculties

H_2: There is no significant contribution of ICT use to career advancement of women in academics

Literature Review:

While career can be defined as a pattern of work experience comprising the entire life pattern of a person and is generally seen with regard to a number of phases or stages reflecting the transition from one stage of life to the next (Weinert, 2001). Career advancement otherwise

known as career progression is seen as a key strategic consideration for all organisations regardless of their size, sector, market or profile and lack of it can affect motivation and performance of employees in any given organisation (Mwanje, 2010). In the words of Graham and Bennet (1995), the prospect of career advancement might in itself motivate employees to work hard. As pointed out by Capelli and Hamori (2005), lack of advancement in an organization for whatever reason damages employee's chances of making it the top.

Under normal circumstances, career advancement could translate into all or some of the following visible impacts – promotion, additional responsibility, higher salary, higher allowances, higher status, and acquisition of skills. For the academia, some of the indices of career advancement include additional academic qualification, research publications relevant to one's area of specialization, attitude to work/commitment to work, relationship with colleagues, and so on. Importantly, career advancement normally follows a clear marked path of progression through the ranks based on merit without prejudice to gender, age, race or ethnicity but purely on eligibility (Mwanje, 2010).

However, with the advent of technology, career advancement can only get better and made easier. This is because technology especially ICTs as affirm by (UNCTAD, 2003; Huyer & Sikuoska, 2003) has the potential to reshape, re-organize and restructure working methods. They offer generic advantages of efficiency and productivity gains; information-sharing, storage and communication; foster knowledge-accumulation, dissemination and application; in support of the specific purposes in which they are used. ICTs also permit new collaborative work methods, enabling rapid and continuous transfer of commercial, financial and political information crucial to the development process. To this extent, ICT can be described as a delivery mechanism and communication tool that is becoming more and more a part of our daily lives (Horie, 2003). It is the key resource of the information society. In the academic world, ICTs has become indispensable tool especially for teaching, learning, research and development.

It must be noted that ICTs are not gender neutral, rather, the use of ICT and other technologies by women and men reflects to a large extent the wider socio-cultural and economic context within which technologies are produced and used (Huyer & Sikosa, 2013). However, previous studies revealed that women participation in ICT based activities is usually low and lower that the level for men (Trauth et al, (2004; Olatokun, 2007; Buskins and Webb, 2009; Ojokoh, 2010). Owing to the findings of these studies, the need for women especially those in the academic world to avail

themselves of the benefits of ICT especially where it concerns research and development, a key index for advancement in their line of profession.

Research Methods

The research design adopted for this study is survey. The Population consisted of female academia in university of Lagos. Sample was taken from three Faculties which are Faculty of Arts, Faculty of Education and Faculty of Science. No of female lecturers in faculty of Arts is 28, faculty of Science, 72 and faculty of Education, 44, totaling up to 144. Total enumeration technique was adopted in administering the questionnaire and out of the 144 administered, 104 were returned and found analyzable. Data analyses were done using tables, frequencies, percentages, charts, correlation coefficient and Friedman test.

Results and Discussion

Respondents were made up of female academia in three faculties in university of Lagos. Status or grade level was not considered in data gathering. That is, all cadres of female lecturers (from assistant lecturers to Professors) were considered for data collection. Also, age was not factored into data gathering.

Aspects of ICT Applicable to the Job Schedule of Women in Academics

Table 1: Applicability of ICT Facilities

ICT Facilities	Most Applicable	Applicable	Averagely Applicable	Not Applicable	No Response	Total
A set of computer (desktop/laptop/notebook)	61(58.7%)	36(34.6%)	6 (5.8%)	1 (0.96%)	0(0.0%)	104
Internet connectivity	53 (51.0%)	46 (44.2%)	4(3.8%)	1 (0.96%)	0(0.0%)	104
External memory drive (Flash drive, CD-Rom, Memory card)	42 (40.4%)	47 (45.2%)	14(13.5%)	1 (0.96%)	0(0.0%)	104
Multimedia Projector	40 (38.5%)	43 (41.3%)	13 (12.5%)	7 (6.7%)	1(1.0%)	104

Applicability of ICT facilities to the job schedule of female academia was measured in Table 1. The result revealed that the most applicable ICT facility to female academia's job is the computer system (desktop/laptop/notebook), as indicated by the highest number of respondents (61 = 58.7%). Next to this is internet connectivity (53 = 51%), while the least applicable is the multimedia projector (40 =38.5%). Owing to this indication by respondents, it is obvious that ICT is central to female academia's job

output. To further ascertain the applicability of ICT to academia's job schedule, a number of ICT oriented activities that affected academia's job performance were investigated. The result of this is presented in table 2.

ICT Oriented Activities Applicable to Academia's Job Schedule

Table 2: ICT Oriented Activities

Activities	Most Applicable	Applicable	Averagely Applicable	Not Applicable	No Response	Total
Teleconferencing	10(9.6%)	26(25.0%)	23 (22.1%)	35(33.7%)	10(9.6%)	104
Video conferencing	8 (18.3%)	26 (25.0%)	26(25.0%)	37 (35.6%)	6(5.8%)	104
Data creation	19 (18.3%)	44 (42.3%)	20 (19.3%)	18 (17.3%)	3(2.9%)	104
Information retrieval	29 (27.9%)	52 (50.0%)	13 (12.5%)	7 (6.7%)	3(2.9%)	104
Database searching	41 (39.4%)	43 (41.3%)	9 (8.7%)	7(6.7%)	4(3.9%)	104
Social media	14 (13.5%)	39 (37.5%)	23 (22.1%)	20 (19.2%)	8(7.7%)	104
Electronic mail	45 (43.3%)	25 (24.0%)	17 (16.3%)	10 (9.6%)	7(6.7%)	104
Facsimile	7 (6.7%)	19 (18.3%)	34 (32.7%)	32 (30.8)	12(11.5%)	104
Presentation	56 (53.8%)	24 (23.1%)	18 (17.3%)	5 (4.8%)	1(1.0%)	104

It is obvious from table 2 that several ICT based activities were actually applicable to the academia's job schedule though the most applicable here is information retrieval activity (56 =53%). Information retrieval by implication has to do with the use of information resources which in this case is accessible on electronic databases provided either in the library (institutional subscription), personal subscription or open access. Other variables that were also found to be applicable are as follows in their order of ranking: data creation activity (44 = 42.3%), database searching (43 = 41.3%), social media interaction (39 = 35.5%), Teleconferencing (26 = 25%), videoconferencing (26 =25%), presentation (24 = 23.1%), electronic mail activity (25 = 24%), and lastly, facsimile (19 =18.3%). Regardless of the point of access,

information retrieval being the most applicable activity is an indication that the role of information resources in an academia's job schedule cannot be underestimated. Information retrieval activity in this context no doubt is achievable through access to the avalanche of information resources presented electronically and because of this, it may be correct to assume that information resources is an integral part of the academics career development. In all, this finding has established that ICT facilities were indeed applicable to the academia's job though at different levels.

ICT Skills of Women in Academics

Table 3: Level of ICT Competence/Skills of Women in Academics

Skills	Very Competent	Competent	Averagely Competent	Not Competent	No Response	Total
Window Competency skill	64(61.5%)	34(32.7%)	4 (3.8%)	0(0.0%)	2(1.9%)	104
Keyboard/mouse and related skills	51 (49.0%)	48 (46.2%)	4(3.9%)	0 (0.0%)	1(1.0%)	104
Writing and word processing competency	65 (62.5%)	31 (29.8%)	8 (7.8%)	0 (0.0%)	0(0.0%)	104
Communication competency	58 (55.8%)	34 (32.7%)	9 (8.7%)	3 (2.9)	0(0.0%)	104
Data retrieval and manipulation competency	44 (42.3%)	46 (44.2%)	7 (6.7%)	3(2.9%)	4(3.9%)	104
Presentation Competency	48(46.15%)	44 (42.3%)	9 (8.7%)	3 (2.9%)	0(0.0%)	104
Basic operations competency	56 (53.8%)	33 (31.7%)	9 (8.7%)	4 (3.9%)	2(1.9%)	104
General command competency	39 (37.5%)	42 (40.4%)	15 (14.2%)	8 (7.7%)	12(11.5%)	104
Disk/folder/document competency	53 (51.0%)	29 (27.8%)	11 (10.6%)	10(9.6%)	1(1.0%)	104

A cursory look at table 3 showed that an average female academia under study do possess the basic skills needed to manipulate ICT facilities in the course of discharging their duties. More than half of the respondents are very competent in manipulating 6 out of the 9 variables of skills competency measured in table 3 with window competency skill ranking the highest (61%) in percentage and general command

competency ranking the lowest (37%). Even at that, this percentage is more than one third of the total respondents. Only an infinitesimal fraction indicated non competency across all the variables measured. By implication, it means greater number of the population under study were competent in those areas of ICT use that were basically useful to their job schedule. This is contrary to the popular view that when it comes to skills and capabilities in the area of IT and ICT use, women are unskilled which often make women to feel disempowered and possibly excluded (Dittmar et al., 2004;Shih, 2006).

Impacts of ICT Use on Work Output and Career Advancement of Women in Academics

To measure the impact of ICT use on the work output and career advancement of the female academia, relevance of ICT use to some routine academic activities was investigated. Thereafter, the relationship between ICT use and certain variables of career advancement was also considered. These are presented in tables 4 and 5.

Table 4: Relevance of ICT Use to Some Routine Academic Activities

Purpose	Most Relevant	Very relevant	Relevant	Averagely Relevant	Not Relevant	No Response	Total
For research & publication purpose	74(71.4%)	23(22.1%)	4 (3.9%)	0(0.0%)	2(2.0%)	1(1.0%)	104
For communication	47(45.1%)	46 (44.2%)	8(7.8%)	1 (1.0%)	1(1.0%)	1(1.0%)	104
For research collaboration among colleagues.	54(51.9%)	34 (32.7%)	13 (12.5%)	0 (0.0%)	0(0.0%)	3(2.9%)	104
For students' work supervision	24(23.1%)	46 (44.2%)	22 (21.2%)	7 (6.7%)	1(1.0%)	4(3.9%)	104
For	9(8.7%)	21	31	5 (4.8%)	24(23.1%	14(13.5	104

teleconferencing		(20.2%)	(29.8%)		)	%)	
For presentation	42(40.4%)	42 (40.4%)	13 (12.5%)	3 (2.9%)	1(1.0%)	3(2.9%)	104
For e-learning application	39 (37.5%)	31 (29.8%)	24 (23.1%)	5(4.8%)	1(1.0%)	4(3.9%)	104
For e-classroom	24 (23.1%)	23 (22.1%)	28 (27.0%)	6(5.8%)	15(14.4%)	8(7.7%)	104
For preparing lesson note	50 (48.1%)	12(11.5%)	22(21.2%)	13(12.5%)	2(2.0%)	5(4.8%)	104
For social networking with colleagues both local & international	36(34.6%)	24(23.1%)	21 (20.2%)	11 (10.6%)	8(7.7%)	4(3.9%)	104

As evidenced in table 4, ICT use was most relevant to research and publication activity (71.4%) and least relevant to teleconferencing activity (8.7%). The second most relevant activity as indicated on the table is research collaboration among colleagues (51.9%) which is another pointer to the fact that ICT is key to research and development as it affected career advancement in the academic world. A keen consideration of other variables of relevance considered on this table may be an indication that it was either the ICT facilities needed to manipulate those activities were not accessible or they were not available at all for use.

Beyond these, it is obvious from this table that women in academics understood the need and most relevance use of information communication technologies for advancement in their career, and with more exposure, availability and accessibility of relevant facilities, there might be more empowerment in that area through training and practice.

Table 5: Relationship between ICT Use and Career Advancement of Women in Academics

Impact	**High Impact**	**Average Impact**	**No Impact**	**Not sure**	**No Response**	**Total**
Carrying out research work effectively	74(71.4%)	23(22.1%)	4 (3.9%)	0(0.0%)	1(1.0%)	104

Navigation of scholarly database	47(45.2%)	46 (44.2%)	8(7.8%)	1 (1.0%)	1(1.0)	104
Teaching methodology.	54 (52.0%)	34 (32.7%)	13 (12.5%)	0 (0.0%)	3(2.9%)	104
Exposure to information that keep me abreast of my students	24(23.1%)	46 (44.2%)	22 (21.2%)	7 (6.7%)	4(3.8%)	104
Total control and monitoring of students' performance	13 (12.5%)	37 (35.6%)	27 (26.0%)	14(13.5%)	4(3.8%)	104
Easier and faster students' supervision	31(30.4%)	38 (36.5%)	29 (27.8%)	3 (2.9%)	3(2.9%)	104
Keeping students' record	45(44.1%)	31 (30.4%)	24 (23.5%)	2 (2.0%)	2(2.0%)	104
Research collaboration among colleagues	51 (49.0%)	30 (28.8%)	21(20.2%)	2(1.9%)	0(0.0%)	104
Student/lecturer relationship in terms of giving assignment and submission	27(26.0%)	34 (32.7%)	34 (32.7%)	8(7.7%)	1(1.0%)	104
Active students' participation in learning	28 (27.5%)	33(32.4%)	35(34.3%)	6(5.9%)	2(2.0%)	104
Publication of research output.	54(52.0%)	22(21.2%)	17 (16.3%)	8 (7.7%)	1(1.0%)	104

As mentioned earlier on, furtherance to the 4 variables of relevance considered in table 4, table 5 also presented the relationship between ICT use and a number of variables that could impact career advancement of the female academia. Interestingly, the finding showed that the highest variable impacted by ICT use was in the area of research work. As indicated on this table, almost three quarter of the respondents (71.4%) affirmed that ICT use had high impact on carrying out research work effectively. Apart from the fact that this result further confirmed the variables of relevance discussed under table 4, it is also

not surprising since teaching and learning is all about research. However, it is noteworthy that there is little or nothing that could be achieved in the area of research without the use of information resources.

Besides, when it comes to career advancement as it is being considered in this study, the issue of research and development cannot be overemphasized. This study has only confirmed that ICT can actually enhance career advancement where academics are concerned. Next to this are the variables of teaching methodology (52%) and publication of research output (52%). While publication of research output is synonymous with carrying out research work since the ultimate goal of every researcher is to publish his/her findings for people to read thereby sharing information and contributing to the body of knowledge in that field, it must also be taken into cognizance that to advance career wise in the university system, academic staff must "publish" otherwise "perish". To that extent, it is not surprising that publication of research output ranked second highest impact as revealed on this table. Also 52% of respondents indicated high impact of ICT use on teaching methodology. If we get anything below this, it should call for concern. This is because the whole world has become technological and the university environment especially lecturers cannot shy away from being techno savvy in the area of teaching and learning. Otherwise, transfer of knowledge may become difficult and catching up with new innovations/knowledge in one's area of specialization may become a challenge to both the students and the lecturers.

Another variable rated to have been highly impacted by the use of ICT on this table was research collaboration among colleagues which has 49%. Again, this still boils down to the ongoing discussion – research and publication. All other variables measured on this table were ranked below average on how they were impacted by ICT usage. This is an indication that amongst all the indices of impact, these 4 as highlighted above were the most impacted by ICT use vis a vis career advancement of the respondents under study, and the four by implication are closely knitted to use of information resources

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Challenges of ICT Use on Career Advancement of Women in Academics

Table 6: Challenges of ICT Use on Career Advancement of Women in Academics

Challenges	Most challenging	Challenging	Averagely Challenging	Not Challenging	No	Total

					Response	
Inadequate skills to manipulate applicable aspects of ICT	32(30.8%)	19(18.3%)	20(19.2%)	30(28.8%)	3(2.9%)	104
Power outage	48 (46.2%)	43 (41.3%)	11(10.6%)	2 (1.9%)	0(0.0%)	104
Inadequacy of ICT infrastructure	40 (38.5%)	34 (32.7%)	23 (22.1%)	2 (1.9%)	5(4.8%)	104
Lack of internet connectivity	50 (48.1%)	14 (13.5%)	30 (29.4%)	8 (7.84)	2(1.9%)	104
Inadequate maintenance of ICT equipment	50 (48.1%)	15 (14.4%)	25 (24.0%)	12 (11.5%)	2(1.9%)	104
Frequent breakdown of equipment due to lack of expertise in handling it	39 (37.5%)	16(15.4%)	28 (26.9%)	21 (20.2%)	0(0.0%)	104

Variant of challenges were presented for ranking and obviously, from the result on table 6, power outage (46.2%) ranked the highest of all. This is not surprising since this is a major challenge facing the country Nigeria as a whole. Apart from this, there were also other challenges such as lack of internet connectivity (48%), inadequate maintenance of ICT equipments (48%), lack or inadequate skills to manipulate ICT facilities (30.5%), break down of ICT equipments due to lack of expertise to manage it (37.5%), and inadequacy of ICT infrastructures (38.5%). All of these as indicated on table had hitherto affected use of ICT thereby posing a threat to career advancement of women in academics.

Hypothesis Testing

Hypothesis 1: There is no significant difference in the use of ICT among women academia in faculties.

Friedman Test

Ranks

	Mean Rank
VAR1	1.67
VAR2	2.07
VAR3	2.26

VAR 1-Women academia in the Faculty of Education

VAR 2-Women academia in the Faculty of Arts

VAR 3-Women academia in the Faculty of Science

Test Statistics[a]

N	21
Chi-Square	4.025
Df	2
Asymp. Sig.	.134

a. Friedman Test

Hypothesis 1 was tested at 0.05 level of significance using Friedman Test. The result revealed that the P value for the 3 faculties tested was greater than 0.05 (P value is >0.05). It was therefore concluded that there was no significant difference in the use of ICT among women academics in the faculties. Hypothesis 1 is therefore accepted. Ordinarily, one would have expected that level of ICT use would be higher among those in faculty of science but this result has shown a contrary reasoning. With this, it may be right to conclude that awareness level of ICT infrastructures and the attendant availability and usage in the society, all areas of academic endeavour actually make the most use out of it.

Hypothesis 2: There is no significant contribution of ICT use to career advancement of women in Academics.

Correlations

		VAR1	VAR5
VAR 1	Pearson Correlation	1	.293**
	Sig. (2-tailed)		.003
	N	104	104
VAR5	Pearson Correlation	.293**	1
	Sig. (2-tailed)	.003	
	N	104	104

**. Correlation is significant at the 0.01 level (2-tailed).

VAR 1- Applicability of ICT Facilities

VAR 5- Impact of ICT on Work Output.

To test hypothesis 2, a two tailed test correlation was carried out on the variables of 'ICT use' and 'Career impact'. The correlation was tested at 0.01 level of significance and the result showed that there was a significant correlation between the 2 variables, meaning there was a significant contribution of ICT use to career advancement. This hypothesis is therefore rejected.

When considered in the area of availability and accessibility of information resources especially those that ride on the back of ICT, (that is electronic information resources such as e -books and e-journals being consulted for teaching, learning, research and development), there is a clear indication that a relationship exist even as the number of female ICT user is also on the increase . Hardly can there be any successful research these days without utilizing ICT in one way or the other. Without much ado, this study concurred that in spite of the challenges confronting the effective use of ICTs, it is not an understatement that ICT plays a major role in career advancement of the female academia.

Conclusion and Recommendations

Owing to the direction of the a foregoing, it was obvious that ICT played a central role in academia's job output especially in the area of information retrieval, research and publication, teaching methodology, as well as research collaboration amongst themselves. The implication of these to the subject under discussion was that women in academics understood the need and most

relevant use of information communication technologies for advancement in their career, and with more exposure, availability and accessibility of relevant facilities especially as it relates to electronic information resources (e-books and e - journals) and necessary ICT facilities (computers and required accessories with internet connectivity), there might be more empowerment in that area. In view of this, the study recommends the following:

- Alternative energy: Apparently, power outage posed a major threat to effective utilization of ICT facilities. Though it is a major challenge facing the country as a whole, provision for alternative energy (generating plant) could be an option. Otherwise, research becomes a herculean task since access to resources will be denied.
- Internet connectivity within academic environments (university campus) should be made vibrant. There should be proper networking so that access will not be a challenge. It is known fact that availability of bandwidths is not synonymous with internet access, and where there is need to increase the bandwidths of existing internet access, it should not be neglected.
- IT staff in charge of managing ICT on our campuses should be proactive. They should be alive to their responsibilities when it comes to discharging their duties.
- University management should ensure proper and time to time maintenance of ICT facilities so as to get the best use of them.

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