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*Full Length Research Paper*

# **Use of electronic resources by postgraduate students in University of Cape Coast**

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**The study investigates the use of electronic resources by postgraduate students in University of Cape Coast (UCC). It specifically targets first year postgraduate students of UCC. Awareness, usage, training, and access were explored. A survey method was employed and a structured questionnaire was utilized to solicit data. The findings revealed that, though students are aware of electronic resources, they do not fully utilize them to support their academic pursuit due to poor level of information literacy skills. However, few students had not participated in all information literacy skills training organized by the library. Results from the study showed that, significant number of postgraduate students do access electronic resources when on campus and mostly use electronic devices such as laptops, ipad, desktop computers, and mobile phones. The findings indicated that students use the electronic resources to complete assignments, write project work, to update lessons note, for research, and update themselves on new information in their fields of study. It was recommended that a structured curriculum should therefore be established as part of postgraduate students' normal lecture periods where time is allocated on their time table for electronic resource training, and if possible, credited to their academic performance ratings or grading.**

**Key words:** Awareness, electronic resources, postgraduate students, training.

## **INTRODUCTION**

Electronic resource is digitized information, facilitated by computers, network connectivity, electricity, other peripheral components and most importantly human beings. It comes in different formats including text, videos, audio, maps, graphics, tables, pictures, etc. Tsakonas and Papatheodorou (2006) indicate that electronic resources include full text documents, CD-ROMs, resources available on the internet such as E-journals, Online Public Access Catalogues (OPACs) and other computer based electronic networks. For the

purposes of this study, electronic resources refer to OPAC, Dspace and academic databases subscribed to by University of Cape Coast (UCC).

The UCC Sam Jonah Library subscribe to a wide range of electronic databases that make available full-text articles to support teaching, learning and research activities. These include Emerald, EBSCO Host, JSTOR Archival Database, HINARI, SAGE Journals, Highwire, African Journal Online (AJOL), Free Book Center, SAGE Knowledge, Taylor and Francis. The Library also has

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access to free e-Books and E-Journals for all categories of students. Thus, as part of efforts to encourage postgraduate students to make use of the electronic resources, the School of Graduate Studies, in collaboration with the University Library organizes sensitization workshops on availability and utilization of e-resources every academic year for all first year postgraduate students, and introduces them to these resources. Essentially, the workshop seeks to introduce the postgraduate students to the electronic databases, search strategies and search engines as well as ways of using the internet to find information for research.

Electronic information resources, interchangeably used in this study with “electronic resources” are information materials in the library that can only be accessed electronically, with the use of Information and Communication Technology (ICT) facilities. Examples of the electronic information resources often consulted by postgraduate students using the Internet include online databases, Online Public Access Catalogues (OPACs), electronic journals, electronic books and digitized materials. These resources are slowly replacing the use of print media as a result of their ability to provide one with timely and up-to-date information (Bhatt, 2013).

The UCC Sam Jonah Library’s mandate is to provide information support services to facilitate teaching, learning and research activities in order to accomplish the mission of the University. To achieve this, the Library is also obliged to introduce postgraduate students to the information resources that are available in the Library to support their academic pursuits. With this in mind, the library continually renews the university’s subscription to the electronic databases through the Consortium of Academic and Research Libraries in Ghana (CARLIGH) (Asamoah-Hassan, 2009). This makes it possible for the faculty and students to have access to over 100,000 titles of full-text articles to support teaching, learning and research activities.

Amankwa (2015), Ahmed (2013), and Madhunsundhan (2010) also enumerate the use of electronic resources by students and researchers of some universities in Ghana, Bangladesh and India. The studies report that researchers and scholars in these countries see electronic resources as very important tool in accessing information. According to Van and Cason (2006), the prevalent use of electronic resources in academic institutions is as a result of the increasing demand by students, faculty and researchers for alternate ways of seeking information and the development of information and communication technology.

Postgraduate students from UCC study various programs in Sciences, Business, Arts and Humanities that lead to the award of degrees, diploma and certificate with doctorates being the terminal degree. With the changing trend in postgraduate students information needs (hardcopy to softcopy) it is important they acquire the right information literacy skills in accessing electronic

resources. The use of these resources by students is necessary because they provide better and easier access to information than information accessed through the print media (Barfi et al., 2017; Kumah, 2015). Electronic information resources help to expand access, increase usability and establish new ways for students to use information to be more productive in their academic activities. They can be relied upon for timely information which upholds the axiom of providing the; “right information to the right user at the right time” as very important and necessary for students’ academic work.

Furthermore, the use of electronic resources aid postgraduate students in keeping abreast with current developments in their respective subject disciplines, in contrast with print media which are not regularly updated and easily available if you do not have the funds to purchase them (Bhatt, 2013).

### Research Questions

The study attempted to find answers to the following questions:

1. Are postgraduate students in UCC aware of electronic resources?
2. What is the extent of use of electronic resources by postgraduate students?
3. What level of training is provided by the library for postgraduate students on the use of electronic resources?

### REVIEW OF RELATED LITERATURE

Though electronic resources were first introduced into Libraries in the mid 60’s, there is a lot more to be done in creating awareness through knowledge and skills development for effective and efficient utilization by students (Hawthorne, 2008). In creating awareness however, information literacy programs requires individual to be able to define a problem and initiate a plan to access information with ease (Ojedokun, 2007). Studies have investigated students’ awareness of electronic resources in academic institutions. For example Kinengyere (2006), conducted a study to investigate four academic and research institutions in Uganda. The findings showed that available resources were not utilized by students because users were not aware of the resources; do not know how to access them; or they do not know what the resources offer. The study concluded that availability of information does not necessary mean usage.

Baro et al. (2011) in a study to investigate 244 medical students of Delta State University of Nigeria on awareness of electronic resources, reported that, majority of the students were not aware of electronic databases

that the university had subscribed to. For example, over 70% of the respondents were unaware of Medline while 79.9% did not have any idea about the existence of CINAHL database in the Library. Others were HINARI (60.3%) and EBSCOHOST (57.1%).

A comparative study in three universities in Iran, involving 300 medical students on Integrated Digital Library portal by Anaraki and Babalhavaeji (2013) on awareness of electronic resource revealed that only 16% of students from Iran University of Medical Science were well aware of IDL and its resources while more than 52% of the students were not aware. At Tehran University of Medical Science, 28% were much aware as against 42% who were not aware. The findings of Shahid Beheshti Medical University (SBMU) showed only 10% awareness.

Another study by Majid and Tan (2002) investigated the use of electronic resources by computer engineering students of Nanyang Technology University (NTU) in Singapore. The study sought to investigate the use of different engineering databases through the NTC Library within a six months period. The results showed that the most used database was the Institute of Electrical and Electronic Engineers (11.9%) followed by Association of Computer Machinery (6%) and DATAPRO IT which was accessed two to five times by two respondents and more than five times by only one respondent.

A study to investigate the perception, use and management of electronic resources among 18 graduates from the humanities, social science, and science and technology of National Taiwan University (NTU) revealed that, 70 to 95% of the respondents use the NTC electronic resource regularly (Wu and Chen, 2012).

### Theoretical framework

The study is underpinned by the Diffusion of Innovation Theory. Rogers (2003) describes the diffusion of innovation as a theory of how, why and at what rate new ideas and technology spread through cultures. The diffusion process, he explains, occurs within society or an organization, as a group process. The four main factors which interact to influence the diffusion of an innovation are the innovation itself, the mode of information communication, time, and the nature of the social system into which the innovation is being introduced (Rogers, 2003).

The understanding of the factors that influence the acceptance of technology by users is important to both researchers and organizations that procure the technology. Academic institutions for example, will like to know the extent to which their huge expenditures on technologies such as electronic resources have benefited faculty and students. User acceptance refers to the evidence of the willingness of a user group to use information technology to support a designated task (Dillon and Morris, 1996).

### METHODOLOGY

Survey methodology was adopted for this study. This methodology provides quantitative or numeric description of trends or opinions of a population by studying a sample of that population (Creswell, 2014). The target population for this study was the first year postgraduate students of UCC. They are engaged more in electronic resources training by the library every academic year.

For the purpose of this study, the entire population of first year postgraduate students in UCC was used. The population of postgraduate students is 1,039 (Student Records and Information Management Unit, 2016). The sampling technique that was used is stratified random sampling. The 5 Colleges in UCC were grouped into 5 different strata. The Colleges are College of Education Studies, College of Distance Education, College of Humanities and Legal Studies, College of Agricultural and Natural Sciences, College of Health and Allied Sciences. In all, 80 postgraduate's students were selected from each college. Simple random sampling was used in selecting the respondents from the various Colleges. In all, 400 postgraduate students were selected for the study.

This study used structured questionnaires as the main data collection instrument. Questionnaire was administered by the researchers and Statistical Product and Service Solutions (SPSS) version 21.0 was used for the analysis. The data collected were analysed using descriptive statistics.

### RESULT AND DISCUSSION

#### Research Question 1: Are Postgraduate Students in UCC aware of Electronic Resources?

One of the objectives of the study is to access the level of postgraduate student's awareness of electronic resources. Respondents were asked to indicate the electronic resources they were aware of, and the details of their responses are represented in Table 1.

The findings revealed that awareness was high. Twenty (5.0%) were aware of CD-ROM, 138 (34.5%) were aware of OPAC, 149 (37.3%) were aware of Academic Databases whilst 93 (23.2%) were aware of Dspace. This means respondents have a good idea of electronic resources available for their academic work. The findings are consistent with Okiki (2012) who concluded that majority of students are aware of electronic resources available in their university.

However, this result contradicts the findings of Togia and Tsigilis (2009), who concluded that most students were not aware of certain electronic resources in Aristotle University of Thessaloniki. They indicated that 43.4% of the respondents were not aware of ERIC, the largest digital source of literature in Education. Again, the findings do not agree with the work done by Bayugo and Agbeko (2007). They concluded that majority of students in University of Ghana were unaware of the two full-text electronic resources databases (HINARI). Hence they used PUBMED as their source of access to full-text articles.

The researchers went on further to find out how respondents got to know of the electronic resources available to them for their academic works or research

**Table 1.** Awareness of E-resources.

| <b>Resources</b>  | <b>Frequency</b> | <b>Percent</b> |
|-------------------|------------------|----------------|
| CD ROM            | 20               | 5.0            |
| OPAC              | 138              | 34.5           |
| Academic Database | 149              | 37.3           |
| DSpace            | 93               | 23.2           |
| <b>Total</b>      | <b>400</b>       | <b>100</b>     |

Source: Field data, 2017.

**Table 2.** Distribution of channel of awareness.

| <b>Channel of Awareness</b> | <b>Frequency</b> | <b>Percent</b> |
|-----------------------------|------------------|----------------|
| Notices                     | 78               | 19.5           |
| Flyers                      | 63               | 15.8           |
| Radio adverts               | 67               | 16.7           |
| Newsletters                 | 26               | 6.5            |
| Posters                     | 43               | 10.8           |
| Library Guide               | 123              | 30.7           |
| <b>Total</b>                | <b>400</b>       | <b>100</b>     |

Source: Field data, 2017.

**Table 3.** Extent of use of electronic resources.

| <b>Responses</b> | <b>Frequency</b> | <b>Percent</b> |
|------------------|------------------|----------------|
| Daily            | 230              | 57.5           |
| Twice a week     | -                | -              |
| Once a week      | 119              | 29.8           |
| Once a month     | 16               | 4.0            |
| Not at all       | 35               | 8.7            |
| <b>Total</b>     | <b>400</b>       | <b>100</b>     |

Source: Field data, 2017.

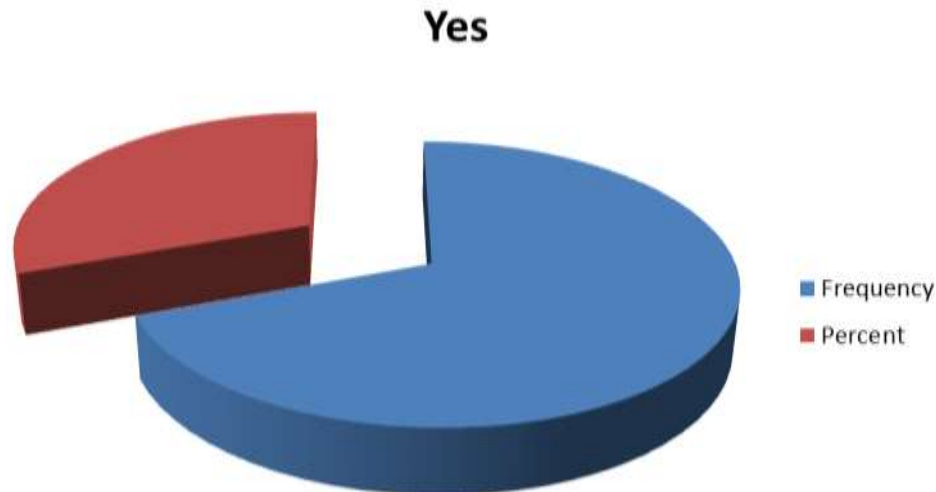
activities. It was indicated that 78 (19.5%) of the respondents got to know of them from notices on campus, 63 (15.8%) through flyers, 67 (16.7%) through radio adverts, 26 (6.5%) through newsletters, 43 (10.8%) through posters and 123 or 30.7% through UCC library guide. The details are represented in Table 2.

The channel or sources of awareness given by the respondents were similar to the reasons given by Baffour (2014) as the major sources of information for electronic resources. However, Dadzie (2005), acknowledged the contribution of orientation session, E-mail communication, newsletter and brochures in creating awareness of the library electronic resources at Ashesi University Library. Among other media that the Sam Jonah Library of UCC uses include radio adverts and notices to create awareness as well as for the E-resource seminar for postgraduate students every academic year.

### **Research Question 2: What is the Extent of Use of Electronic Resources by Postgraduate Students?**

Another objective of the study was to find out the extent of use of electronic resources by postgraduate students in UCC. To enable the researchers achieve this objective, respondents were asked to indicate how often they used the electronic resources. The results in Table 2 show an impressive use of the electronic resources. For example, 230 (57.5%) of the respondents used the resources daily. No respondent indicated twice a week, 119 or 29.8% indicated once a week, 16 (4.0%) of the respondents indicated once a month, and 35 (8.7%) indicating not at all. The details of their responses are provided in Table 3.

A deduction from the above is that majority of the respondents have been using the electronic resources daily. This result corroborates studies conducted by



**Figure 1.** Training on Electronic Resources.  
Source: Field data, 2017.

**Table 4.** Provision of training.

| Training          | Yes       |         | No        |         |
|-------------------|-----------|---------|-----------|---------|
|                   | Frequency | Percent | Frequency | Percent |
| OPAC              | 266       | 66.5    | 134       | 33.5    |
| Academic Database | 292       | 73.0    | 108       | 27.0    |
| Dspace            | 273       | 68.3    | 127       | 31.7    |

Source: Field data, 2017.

Togia and Tsigilis (2009) who concluded that a vast majority (86.0%) of participants had used electronic resources more than 6 times during a week. However, the findings do not agree with the work done by Ojo and Akande (2005), which revealed that the level of usage of the electronic information resources is not high.

**Research Question 3: What level of training is provided by the library for postgraduate students on the use of electronic resources?**

Respondents were asked whether the library has provided any training on electronic resources or not. The majority of the respondents indicated that the library has organized training for them on the use of the electronic resources. The details of their responses are provided in Figure 1.

Figure 1 shows that as many as 320 (80.0%) of the respondents responded in the affirmative that the library provide training for them. The remaining 80 (20.0%) responded in the negative. A deduction from the above is that, majority of the respondents indicated that the library

provide training for them on the use of electronic resources.

Respondents were further asked to indicate the categories or level of the training. Two hundred and sixty-six (66.5%) said the library had provided training on the use of OPAC while 134 (33.5%) said the library had not provided training on use of OPAC. Also, 292 (73.0%) said the library had provided training on the use of Academic databases while 108 (27.0%) said the library had not provided training on using Academic databases. Again, 273 (68.3%) said the library had provided training on the use of Dspace while 127 (31.7%) said the library had not provided training on the use of Dspace. The details of their responses are represented in Table 4.

A deduction from the above is that postgraduate students have been given training on the use of electronic resources. As part of the library's attempt to encourage postgraduate students to access and use the electronic resources via their computers, smartphones or tablets, an annual e-learning seminar is cooperatively organized by the School of Graduate Studies and the University library. Unfortunately, some of the graduate students do not avail themselves to the training

programs. The finding supports the work of Adeleke and Olorunsola (2010), who reported that a high percentage of students in Redeemer University in Nigeria had training regarding access and use of electronic resources.

However, the data do not agree with the work done by Egberongbe (2011) in University of Lagos, Nigeria. He concluded that the majority of the postgraduate students had not been given training on the use of electronic resources. In the opinion of the researchers, the current trend in the Universities that subscribe to these expensive databases, i.e. to put in place some training programs to encourage the students to make use of the electronic resources in their studies.

## RECOMMENDATIONS

1. Participation in the training of electronic resources was found to be high, but not all students attended the training. A structured curriculum should therefore be established as part of postgraduate students' normal lessons periods where time is allocated on their timetable for electronic resource training and if possible credited to their academic performance.
2. The library should create a social media platform such as Facebook, Twitter and Instagram that will enable students and users of the library to access the electronic resource online.

## CONCLUSIONS

The findings of the study have shown that electronic resources are very important to postgraduate students in UCC. Although there are high levels of awareness of electronic resources among the postgraduate students, their proficiency level in searching for these resources are low. The study also shows that most respondents became aware of some electronic resources through notices, flyers, display, newsletters, posters, and library guide.

The results showed that majority of the respondents have been using the electronic resources daily. The study therefore indicated that participation in the training of use of electronic resources was high. Consequently, provision of reliable information communication technology (ICT) infrastructure by UCC remains critical to the effective and efficient use of the electronic resources by postgraduate students in UCC.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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