

Awareness and Utilization of Electronic Resources by Postgraduate Students at Pan Africa Christian University Library, Nairobi, Kenya

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Abstract: According to the American Library Association, utilization of electronic resources in the developed world is at a high level due to awareness, accessibility and high impact coupled with relatively few challenges faced during their utilization. In the developing world, compared to the developed world, the usage is at a medium level due to a medium level of awareness and accessibility, with relatively high impact but also with quite a few challenges. In Kenya, in spite of many challenges and a medium level of awareness and accessibility, there is the usage with some positive impact. Because of these benefits of electronic resources, Pan Africa Christian (PAC) University has availed them for use by the university's postgraduate students. The purpose of this study, therefore, was to establish the relationship between awareness and utilization of electronic resources by the postgraduate students at PAC University Library so as to enhance and promote their use by the postgraduate students. 65 Questionnaires were administered to the purposively selected sample. Findings indicate that the postgraduate students are aware of, access and utilize the electronic resources at PAC University. Some of the challenges cited include the need for more computers to be provided for use at the library and better quality internet connectivity. The study recommends an increase in the number of computers provided for use at the library and provision of improved internet connectivity within the university.

Keywords: Awareness, Electronic resources, Utilization.

I. BACKGROUND OF THE STUDY

Awareness refers to the knowledge or perception of a fact or a situation, consciousness, recognition, realization, grasp, acknowledgement, concern regarding and well-informed interest or conversance with a particular situation or development [1].

In electronic resources, awareness is the state of target users being aware of the presence of electronic resources within their reach in their locality. This can be through various means such as orientation, continuous communication, peer and faculty interactions.

There is an evolution in the way libraries are meeting their users' needs. Around the world, electronic sources of information are increasingly being prepared, availed and utilized for academics and research. Being the most efficient document-delivery means linking Kenya and indeed Africa to the rest of the world scholars, the usage of electronic resources is on the increase in Africa and in Kenya, specifically. Thousands of articles are accessible through both free and paid electronic resources.

Richard Ondeng' made great contributions in the establishment of Pan Africa Christian University (PAC University), and as such, the Pan Africa Christian University Library is named after him. The vision of the Richard Ondeng' Library is to become the best information provision center for academic and research needs. In order to meet this vision, the library endeavors to constantly provide required, relevant and timely resources within the conducive and serene learning environment of the PAC University Community. The library does so by acquiring both print and electronic resources in a bid to support the University's various academic programs. These electronic resources such as databases, e-books, electronic journals, Electronic Theses and Dissertations (ETDs) among others can be accessed both on-site and off-site. The library users are taken through the information literacy curriculum in order to gain much-needed information literacy skills considering the amount of information available on the web and in print format [2].

Crawford and Groman, through their laws of the digital library, emphasize the need for digital objects, i.e. electronic resources to be made use of by users [3]. The needs of every user should be met through these digital objects. Users should be made

aware of these resources in every possible way. To satisfactorily meet the users' needs, these digital objects should be easily, effectively and efficiently available to them. They should also be quickly available when needed so as to save the users' time. The making and maintenance of the digital library should be in a way that anticipates its growth and continually meets the increasing and evolving demand of its users.

In light of this, PAC University has gone to great lengths to acquire electronic resources for its postgraduate students. In a bid to encourage utilization of these resources, awareness about electronic resources and how they can be accessed has been created. This is a heavy financial investment and resource commitment, and so there was a need to find out the relationship between awareness and utilization of these resources in regards to the postgraduate students, because to a large extent, postgraduate programs are offered electronically or through distance learning.

Therefore, there was a need to find out how aware the postgraduate students were about the university's electronic resources, and as a result of this awareness, how they made use of them. This is in light the library of achieving its vision. A study needed to be conducted so as to establish the relationship between awareness and utilization of electronic resources by postgraduate students at the Pan Africa Christian University. Awareness, utilization and challenges are the factors that were investigated. Proposals on how to promote the utilization of the electronic resources at PAC University were made.

II. SIGNIFICANCE OF THE STUDY

Due to the evolving modes of learning as well as the increasing student population, electronic resources are being increasingly provided by libraries in response to these needs. No similar research has been conducted at PAC University, to the best of the researcher's knowledge. Therefore, this study may be significant in providing the university and library management with valuable information regarding the relationship between awareness and utilization of the availed electronic resources by shedding light on factors such as awareness, accessibility, user experience as well as challenges faced by postgraduate students while utilizing the electronic resources. Proposals about how to improve the awareness and utilization of the electronic resources were made, that would lead to the postgraduate students being better served and also, the PAC University resources being put to good use. This study can also be a launchpad for future extensive studies that might be carried out within this area.

The study presents helpful, in-depth information on how to enhance the utilization of electronic resources at PAC University by postgraduate students by improving awareness and the user experience, and by minimizing the challenges faced. The study also adds to the body of knowledge in this area and provides valuable literature for those who may wish to carry out related research.

III. STATEMENT OF THE PROBLEM

The role of electronic resources is to aid in the dissemination of scholarly content. Librarians perceive non-use of electronic resources as a crisis. PAC University has availed electronic resources for postgraduate students. User statistics at PAC University reveal that there is low usage of electronic resources by postgraduate students. It is not clear why the usage of electronic resources is low. The issue under investigation is the reason behind the low usage of electronic resources. This raises concerns about the postgraduate students' awareness about the electronic resources whose potential has not been fully exploited. If this situation continues, the electronic resources will not meet the objectives for which they were acquired and, therefore, the resources invested in them will go to waste and the postgraduate students will not benefit from the acquired electronic resources. This study, therefore, evaluates the awareness about electronic resources by postgraduate students at PAC University with the aim of suggesting interventions to ensure that the electronic resources are fully utilized.

IV. PURPOSE OF THE STUDY

The purpose of this study, therefore, was to establish the relationship between awareness and utilization of electronic resources by the postgraduate students at PAC University Library so as to enhance and promote the use of electronic resources by the postgraduate students.

V. OBJECTIVES OF THE STUDY

The objectives of this study were:-

- To assess awareness about electronic resources by the postgraduate students at PAC University.
- To establish the relationship between awareness and utilization of electronic resources by postgraduate students at PAC University.
- To identify the challenges faced by postgraduate students in their utilization of electronic resources at PAC University.

VI. LITERATURE REVIEW

A number of studies have been carried out to examine how awareness influences the utilization of electronic resources for research in many regions across the world.

N. Dolo-Ndlwana [4] conducted a study at the Cape Peninsula University of Technology (CPUT) which revealed that most of those who responded made use of electronic resources because they were aware of them. Their awareness of the availability of these resources did have a significant impact on their usage habits, although they cited challenges such as slow downloading

speed, lack of adequate user training, slow internet connection and time constraints.

E. E. Baro, B. Endouware and J. O. Ubogu [5] conducted a study in Nigeria at the Niger Delta University which showed that awareness about available electronic resources played a major part in the decision by students to use these resources for research. However, their use of these resources was also affected by other factors such as ease of access to these resources, as well as how relevantly the electronic resources met their research needs.

S. R. Hikmany [6] carried out a study in Tanzania and found that the users would use certain databases and electronic resources based on how aware they were about them. This shows that quality and awareness levels affect how electronic resources are accessed. Knowledge about available electronic resources is not adequate, one needs to have a fairly high awareness of the databases that are present within the electronic resources.

N. Gathoni *et al.* [7] carried out a joint study by focusing on the observation and evaluation of e-resources in institutions of research in Kenya. The study showed that most of those who responded in this study did not have awareness of the full range of electronic resources available in their institutions. In addition, the study found that training of users is a key intervention for increasing awareness levels of the availability of electronic resources in an institution. This is also affected by the marketing strategies used by libraries to create interest in their electronic resources.

W. M. Mwatela [8] in a study at the University of Nairobi Library concluded that electronic resources in the library were utilized in direct proportion to how aware users were about them, alongside factors such as information literacy skills and access to information retrieval skills.

Library professionals should provide awareness about electronic resources because scholars use them for research as well as communication purposes [9].

The literature reviewed indicates that awareness as well as the quality of available information to users play a key role in users' access to and utilization of electronic information resources. Therefore, the studies provide a useful basis for anchoring a study on the relationship between awareness and utilization of electronic resources. They have served to indicate that awareness is a qualitative matter, meaning that usage of electronic resources is affected by not just knowing about the availability of electronic resources, but also knowledge of the quality and nature of electronic resources available. Lack of awareness may be attributed to the lack of user training programs, lack of continuous user empowerment, uncooperative library staff as well as lack of infrastructure to access and publicize the same.

R. K. Joteen Singh, Th. M. Devi and A. Raychaudhury [10] in a survey of internet-based electronic resources at Manipur University revealed that unreliable power supply, slow internet speed and absence of needed full-text journals posed challenges to the users. H. D. Kayaoglu [11] carried out a study that revealed the need for more subscriptions in various disciplines as expressed by frequent e-journal users. M. M. Raza, S.

Fatima and A. K. Upadhyay [12] at Aligarh Muslim University conducted a research which showed that the researchers were aware of and using e-journals for academic and personal knowledge purposes, but also desired training and faster download speeds.

M. W. Ndungu [13] carried out research that revealed that electronic resources are now an integral part of the collections in academic libraries. Librarians are under pressure to justify the investment through evidence of usage. Consequently, they have realized that they must aggressively market and create awareness about them. Because this costs money and funds allocation has been overlooked, many librarians have created promotional activities at minimal cost to the library.

M. R. Kennedy [14] says that connecting library clients to relevant resources have become an interesting concern for libraries as a focus on collection development shifts from print to e-resources. M. Vasileiou and J. Rowley [15] observed that many authors have encouraged libraries to take initiative when it comes to marketing and promoting their library services. M. W. Ndungu [13] carried out a research that showed that the change in collections and services, competition for funding and demand to justify expenditure is getting librarians out of a state of complacency and seeing them engage in some form of marketing. Most of their efforts have been geared towards promotional activities.

According to [2], there are ways and strategies for promoting e-resources on a minimal budget. PAC University employs several strategies such as conducting library orientation for new students and sending out continuous communication. Postgraduate students also get to learn about e-resources from interactions with their peers and also from interactions with faculty. The annual university magazine also avails information on the same. Instructional sessions have been introduced within the curriculum and regular learning schedules. In addition, information on e-resources has been availed on the university website.

VII. THE ROLE OF LIBRARIES IN ENHANCING THE USAGE OF ELECTRONIC RESOURCES

Although a good IT infrastructure is required for optimum use of electronic resources, it does not suffice on its own. Creativity is required in exercising proactivity when it comes to making users aware of available electronic resources. Libraries need to make it easy for users to know about, access and utilize the availed electronic resources. The users' confidence can be boosted by training them on how to use electronic resources. Those who do not use them can be shown how to use them and thus begin to use them. Librarians need to think about promoting the libraries in creative ways such as taking advantage of modern social media platforms such as blogs, RSS feeds, online tutorials, emails and Facebook. This should be done in addition to the traditional methods such as physical library orientation, availing information through brochures, pamphlets, posters, holding

in-person training sessions and taking advantage of events happening in their institutions to publicize their libraries [16].

The absence of basic skills is a militating factor against optimum use of electronic resources. The university libraries should be more proactive in informing users about electronic resources, promoting the electronic resources and teaching users how to make the optimum use of the available electronic resources [17].

VIII. RESEARCH METHODOLOGY

The study used the correlational design research method. Purposive sampling was done and data collection was carried out through the administration of questionnaires and collection of information from existing sources. The postgraduate student population is 218. 30% of the researcher's population size is 65 respondents. 65 questionnaires were issued to the postgraduate students, after being randomly selected by the department.

IX. DATA ANALYSIS

The researcher was able to access 60 out of the 65 intended respondents. From the study of sample 60, 42 out of 60 subjects completed and returned the questionnaire, resulting in a 70% response rate. 1 of the questionnaires had errors, so only 41 were fit for analysis.

X. AWARENESS ABOUT ELECTRONIC RESOURCES

Respondents were asked to indicate in terms of yes and no whether they were aware of the existence of the electronic resources such as e-journals, institutional repository, e-book etc. The results show that the respondents are aware of the electronic resources to a large extent.

Of the 41 respondents, 40 (98%) were aware of e-journals, 39 (95%) were aware of the Library Catalogue, 33 (80%) about the Ebookcentral (Proquest), 36 (88%) about the E-book depository and 26 (63%) about the Institutional Repository.

The responses are represented in Table I.

These responses, therefore, indicate that to a very large extent, postgraduate students are aware of the availability of electronic resources at PAC University.

TABLE I: AWARENESS ABOUT E-RESOURCES

Awareness of E-Resources	Yes	No	Percentage Yes (100%)	Percentage No (100%)
E-Journals	40	1	97.56	2.44
Library Catalogue	39	2	95.12	4.88
E-Bookcentral (Proquest)	33	8	80.49	19.51
E-Book Depository	36	5	87.80	12.20
Institutional Repository	26	15	63.41	36.59
Average			84.88	15.12

XI. LIBRARY ORIENTATION

The study sought to find out whether or not the respondents, during their admission, attended the library orientation. In response to this question, a majority of those who agreed to participate, 31 (76%) indicated that during their admission, they attended the library orientation. Only 10 (24%) responded otherwise. This is represented in Fig. 1.

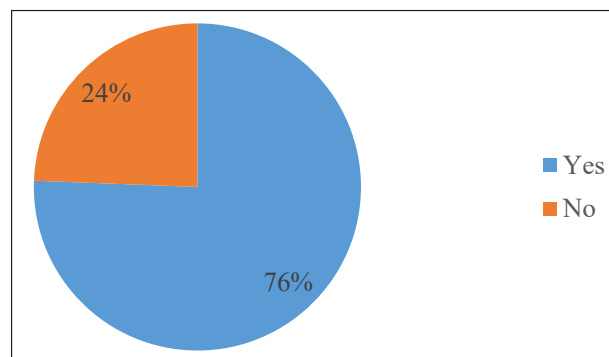


Fig. 1: Orientation Attendance

The Usefulness of Library Orientation

The respondents were asked to indicate their level of agreement with this statement: The library orientation process was helpful in my understanding of the electronic resources available at the PAC University Library.

The ratings were in terms of strongly agree, agree, neutral, disagree and strongly disagree. This is represented in Table II.

TABLE II: USEFULNESS OF LIBRARY ORIENTATION

The Usefulness of Library Orientation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The library orientation process was helpful in my understanding of the electronic resources available at the PAC University Library	18	12	8	1	2

18 (43.90%) of the respondents strongly agreed that the library orientation process was helpful in their understanding of the electronic resources available at the PAC University Library, while 12 (29.27%) agreed. 8 (19.51%) of the respondents were neutral about it, 1 (2.44%) disagreed and 2 (4.88%) strongly disagreed. The responses indicate that to a very large extent, the library orientation process was helpful in the postgraduate students' understanding of the electronic resources available at the PAC University Library.

XII. SELECTIVE DISSEMINATION OF INFORMATION TO USERS

In order to determine how users receive information on existing electronic resources, they were asked to select their options in terms of email, posters/circulars on notice boards, discussions with library staff and continuous library orientation.

24 (58%) of the respondents said that they had received information via email while 17 (42%) had not. 13 (32%) had received information via posters while 28 (68%) had not. 26 (63%) had received it via discussions with library staff, while 15 (37%) had not. 10 (24%) had received it through continuous library orientation while 31 (76%) had not. This shows that majority of the postgraduate students received information about electronic resources through discussions with library staff and through emails.

The details are provided in Fig. 2.

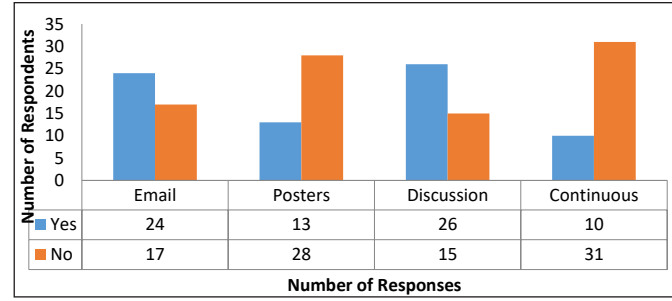


Fig. 2: Communication from the Library

XIII. CHALLENGES FACED IN UTILIZATION OF ELECTRONIC RESOURCES

A. Difficulty in Accessing Computers at the Library

The respondents were asked to indicate their level of agreement with this statement: It is difficult to get access to a university computer at the library.

5 (12%) of those who took part in the survey strongly agreed that it was difficult to get access to a university computer at the library. 2 (5%) agreed and 12 (29.3%) were neutral. 12 (29.3%) disagreed while 10 (24.4%) strongly disagreed.

The responses are represented in Table III.

TABLE III: DIFFICULTY IN ACCESSING COMPUTERS AT THE LIBRARY

Difficulty in Getting Access to Computers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is difficult to get access to a university computer at the library	5	2	12	12	10

The responses indicate that to some extent, it is difficult to get access to a university computer at the library.

B. Inadequate Hardware to Access Electronic Resources

The respondents were asked whether or not they believe that there is inadequate hardware to access electronic resources, and, therefore, it is necessary to own a laptop/tablet/smartphone to access electronic resources at the university library. 40 (98%) of those who responded said that there is inadequate infrastructure in terms of hardware to access electronic resources at the university library, and, therefore, it was necessary to own a laptop/tablet/smart-phone in order to access e-resources at the library. These findings indicate that there is inadequate hardware for postgraduate students to access electronic resources at the PAC University Library. The responses are represented in Fig. 3.

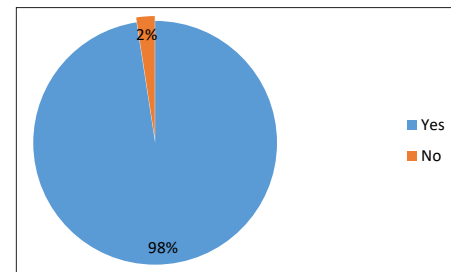


Fig. 3: Inadequate Hardware to Access Electronic Resources

C. Insufficient Quality of Internet Connectivity

The respondents were asked to indicate their level of agreement with this statement: The quality of the internet connectivity within the university is insufficient.

Of the 41 subjects who completed the questionnaire, 7 (17.1%) strongly agreed that the quality of the internet connectivity within the university is insufficient, while 7 (17.1%)

agreed. 10 (24.4%) were neutral, 11 (26.8%) disagreed and 6 (14.6%) strongly disagreed. The responses are represented in Table IV.

TABLE IV: INSUFFICIENT QUALITY OF INTERNET CONNECTIVITY

Insufficient Quality of Internet Connectivity	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The quality of the internet connectivity within the university is insufficient	7	7	10	11	6

The findings show that 34.2% of the respondents found the quality of internet connectivity to be inadequate. This means that due to the inadequate quality, those respondents would have limited utilization of the electronic resources available at the PAC University Library.

D. Relationship between Awareness and Utilization of Electronic Resources

There is a positive correlation between the awareness of e-resources and the utilization of e-resources by postgraduate students at PAC University as shown in Fig. 4. Electronic resources that the postgraduate students were aware of were more utilized than the ones that the postgraduate students were less aware about. This supports the findings that the utilization of electronic resources is influenced by how aware the users are about the existing electronic resources (Hikmany, 2014).

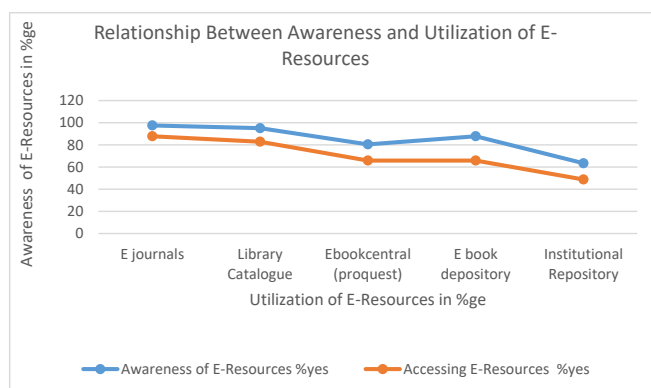


Fig. 4: Relationship between Awareness and Utilization of E-Resources

XIV. CONCLUSIONS

The study resulted in three main conclusions as follows:

Firstly, findings indicate that to a very large extent, the postgraduate students are aware of the availability of the electronic resources at PAC University.

Secondly, findings show that the postgraduate students access the electronic resources mostly through e-journals, library catalogue and Ebookcentral (Proquest).

Thirdly, some of the challenges cited include the need for more computers provided for use at the library and better quality internet connectivity.

Relationship between Awareness and Utilization of Electronic Resources

There is a strong positive correlation of 9.959 between awareness and utilization of e-resources.

Considering the reported rate of utilization, it is clear that the postgraduate students are aware of the availability of the electronic resources at PAC University. The postgraduate students have access to the electronic resources at PAC University. However, there is need for more computers to be provided for use at the library, better quality internet connectivity and more support from faculty members (lecturers) in order to make the best use of the electronic resources at the library.

XV. RECOMMENDATIONS OF THE STUDY

Based on the objectives, findings and conclusion of the study, the following recommendations are made:-

- The number of computers provided for use at the university library should be increased.
- The quality of internet connectivity within the university should be improved.
- The community of users should be given training on how to make optimum use of the availed electronic resources.

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