

Usefulness of Online library Databases in the progress of Learning, Research and Consultancy: The Case of Higher Learning Institutions in Tanzania

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ABSTRACT

The study aimed at assessing the usefulness of online database systems in Higher Education Institutions (HEIs) in Tanzania. Separate research objectives were formulated for both students and academic staff as a means to guide and meet the main research aim stated above. The study adopted a case study approach in which a survey was run across 12 HEIs in Tanzania. Simple random sampling strategy was adopted in which all participants were given equal chance of being selected and a total of 559 students, and 149 Academic Staff participated in this study.

The major findings of the research show that the usefulness of the online databases was appreciated by every participant to the extent of enhancing learning and teaching using credible sources subscribed by HEIs.

KEYWORDS: *Usefulness of online databases, Higher education institutions in Tanzania, Online database uses*

1.0 INTRODUCTION AND BACKGROUND TO THE PROBLEM

The Internet has brought revolution on the World like nothing before. The growth of the internet has made sharing of information simple and reliable. Information is being shared through Intranet and Extranet on dedicated networks (Connolly and Begg 2006). Web technologies have enabled the search engine queries to be able to locate data within the World Wide Web. These data come in various types and forms and are data from all industries and corners of life. The data located can be used for various purposes ranging from business to educational.

In the education sector, the growth of the internet and the evolution of the web technologies have given ability to students and staff to possess everything they need in terms of reference materials. Things have been made so clear and easy; especially with the use of online databases (Wienclaw 2008).

According to Gardner & Eng (2005), in the developing world, the students' utilization of digital technology has inspired officials to rethink services provided on-campus and off (More recently, libraries are integrating library services with learning management systems and providing streaming video instruction (Nicholas & Tomeo, 2005).

The growth of online learning and Information Technology has resulted in librarians accommodating fewer materials in the physical building while providing more access to digital resources (Johnson, Trabelsi, & Fabbro, 2008). Online learning library support for virtual patrons has evolved into the digital or virtual component of the academic library (Moyo, 2004). Virtual services and resources provided by libraries generally consist of (a) reference assistance, (b) e-books, (c) electronic journals and magazines, (d) online databases, (e) an online library catalogue, (f) tutorials, (g) an interlibrary loan form, (h) book delivery, (i) instant or quick search, and (j) Internet links (Blackman, 2003; De Rosa, Cantrell, Hawk, & Wilson, 2006; Moyo, 2004; Song, 2004). Rapid changes to Information and Communication Technology have altered the information-seeking behaviours of college students as well (Nicholas, 2008; Williamson, Bernath, Wright, & Sullivan, 2007). However, very few studies have been done to find out how students and scholars in developing countries utilize these electronic resources.

1.1 STATEMENT OF THE PROBLEM

Institutions of higher learning in Tanzania have subscribed to several online databases. These online databases are subscribed at both free use and subscription fees. When subscribing, these Institutions expect significant use by students and staff. They want to ensure that there is return on investment. When doing so, Institutions aim at facilitating learners and instructors with current educational materials. For students, the use of online resources is expected to broaden their skills and knowledge; enable them produce quality reports and acceptable results on their assessment. For academic staff, online databases are expected to supplement their research for both teaching and publications. For non-teaching staff, online databases are expected to contribute significantly on research and knowledge management. This means that online databases are used to supplement other materials and resources for students, academic staff and non-teaching staff.

However, this essential usefulness may not be realized due to a number of reasons. This study therefore will assess the usefulness of online databases in training, research and consultancy functions in higher learning institutions in Tanzania. The findings will help the management, users of the databases and the general public to devise strategies to encourage the effective use of online databases.

1.2 RESEARCH OBJECTIVES

The study aimed at evaluating the usefulness of online databases in achieving main objective in higher learning institutions which are training, research, and consultancy. Specifically, the research aimed to:

1. Evaluate how online databases smooth the progress of learning and research for students in HEIs.
2. Evaluate how online databases smooth the progress of learning, research and consultancy for academic staff in HEIs.

1.3 RESEARCH QUESTIONS

A general research question asked: *What is the usefulness of online databases in achieving main objectives in higher learning institutions which are training, research, and consultancy?*

In order to provide answers to the general research question, six research questions were used to achieve the research objectives:

1. How do the online databases smooth the progress of learning and research for students in HEIs?
2. How do the online databases smooth the progress of learning, research and consultancy for academic staff in HEIs?

1.4 SIGNIFICANCE OF THE STUDY

The main contribution of the study is that it has generated new knowledge on the usefulness of online databases in training, research and consultancy functions of higher learning institutions in Tanzania.

1.5 SCOPE OF THE STUDY

The study focused on the usefulness of online databases in HEIs in Tanzania. Only the selected fifteen (12) HLIs in Tanzania were surveyed. The study concentrated on the usefulness variables and excluded other variables in order to ensure manageability and comprehensiveness of the study.

2.0 LITERATURE REVIEW

Kinner, L. & Rigda C. (2009) in the study of the Integrated Library System argues that, the evolution of the internet necessitates a number of services to run over the internet. There are many systems running through web browsers. Most of these systems are database driven. Some examples of such systems are online booking systems, customer management systems, mobile phone service provider databases, just to mention a few. These database systems which are online provide quick access to everyone at any time in 24/7 days throughout the year. In this study, the usefulness of such system in the areas mentioned remains untouchable.

Online databases offer many advantages to scholars, students as well as Libraries and Universities in general. These advantages ranges from plethora of information on every subject they wish to research, to immediate access of information to ease in searching and accessing the information Quickbase (2017). Also, online



databases shorten academic searches, and result in a vastly more focused research effort Quickbase (2017). To realize these benefits and others, there should be a computer, a smartphone or any other device that can be connected to the Internet.

To libraries and Higher learning institutions it costs much less to subscribe to a service offering many different journals than to archive and maintain its paper copy versions.

According to Edmeades (2005), full distributed databases have become a reality and that the current trend towards centralization of database will continue. This advancement reduces communications costs, with increased volume and availability of data.

Online databases enable users to retrieve data by specifying the data or information they desire, rather than how to retrieve them (McLeod 2005). Users of online database system can search, upload and download files in word documents, pdf and other file formats. Further, the materials accessed through online databases may often be downloadable and accessed anywhere with the use of notebook computers, tablets, or smart phones. This allows material from these sources to be used and studies be conducted in locations where internet connectivity is unavailable, and transportation of hard copy academic journals is not viable, Quickbase (2017).

McLeod 2005 in his paper entitled *why online database*, argues that, online database system can be easily accessible for untrained users. For example users was able to request data in a more natural language and natural database technology will anticipate user's data needs based on past queries and relevant database changes.

Furthermore, online database create succinct reports for busy professionals by mentioning thousands of sources and ensuring access to millions of records. This enables professionals to quickly find quality articles for publications that they may not have had access to or the time to check otherwise. The articles and other publications are provided on user - friendly platforms Lyman et al (2003).

On the survey conducted on *Faculty awareness and use of Library subscribed online databases in the University of Education*, Larson (2017) also examined awareness, extent of use and purpose of using the online databases. On awareness, it was found that 75.49% were aware, on extent of use; it was found that 72.48% were frequent users of online databases. The purpose of using databases were found to be Research activities, paper writing for publication, seminar/ workshop/presentation, teaching, to prepare lecture notes and to find relevant areas of specialization.

3.0 METHODOLOGY

In order to achieve the research objectives, the researcher adopted a survey study approach from twelve (12) HEIs. The population for the study was all Higher Education Institutions in Tanzania. The following HEIs participated: Bugando University, College of Business Education, Institute of Accountancy Arusha, Institute of Finance Management, Mzumbe University, St. Augustine University of Tanzania, St Joseph Institute of Technology, Sokoine University of Agriculture, State University of Zanzibar, Tumaini University, University of Dodoma, and the University of Dar es Salaam. Both qualitative and quantitative research techniques were used.

Three factors were used obtain a list of institutions to be involved in the study. First, the selected institutions were those from the researcher's knowledge possess adequate infrastructure to support online database systems. Second the selection considered geographical distribution of HEIs in the country (all major cities were included). Lastly the selection ensured that the list of HEIs will have a mixture of Institutions under both National Council for Technical Education (NACTE) and Tanzania Commission for Universities (TCU).

Probability sampling strategies and simple random sampling technique were used to obtain students and academic staff participants. A sample of 660 students, and 180 academic staff was obtained. The sample consisted of 55 students, and 15 academic staff from each participating HEI.

Questionnaires, personal interviews and documentary sources were used to collect both primary and secondary data for the study.



4.0 DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

This chapter presents the research findings, data analysis, and the interpretation of the findings. The findings are based on the data analysis described in section 3.9. The demographic data for the participants is provided in 4.2. The chapter shows the research findings according to each objective in section 4.3. The discussion of the findings is provided alongside each research objective. This approach seeks to create a coherent flow of the findings, discussion, and interpretation of the research. The next section is the demographic data of respondents.

4.2 RESPONDENTS DEMOGRAPHIC

There were 595 students and 149 academic staff participating in the research. This makes a total of 744 participants. This is equivalent to 88.57% turn up of about 840 sampled respondents. From the students, the turn up was 595 of 660 which is equivalent to about 90.15% and for the academic staff, the turn up was 149 of 180, which is about 82.77%. According to gender, there were 308 female equal to 41.4% and about 436 male equal to 58.6% of all participants. The established consistency data reliability was above the required score of 0.7. For example, the overall degree to which the results of a measurement consistently and accurately represent the true quality of a construct was measured at 0.83 for students and 0.80 for academic staff. Below we present the results and the discussion.

4.3 OBJECTIVE ONE: TO EVALUATE HOW ONLINE DATABASES SMOOTH THE PROGRESS OF LEARNING AND RESEARCH FOR STUDENTS IN HEIS

To answer the first objective stated above, about seven questions were asked. The questions required every participant to answer YES or NO or Somewhat. This type of scale questions have been used by many other researchers in the social science research. The questions asked were only meant to be relevant to the students.

Firstly, on whether online library databases help students find sources of solutions on their project work; the findings show that 15.5% responded NO, about 52.9% responded Somewhat; and 31.3% responded YES, while and 3 did not answer.

Secondly, on whether the online databases help students find sources of solutions on their research and dissertation; the findings show that 17.1% said NO; 42.2 said SOMEWHAT, and 40.7% said YES.

Thirdly, on whether the online library databases help students find sources of learning materials; 10.8% said NO, 48.7% said SOMEWHAT and 40.2% said YES.

Fourthly, on whether these systems provide help to find sources of solutions during coursework and assignment preparations; about 22.4% said NO, 49.6% said SOMEWHAT, and 28.1% said YES.

Fifthly, on whether the online library databases helped students to find sources of information on the development of professional careers; 21.5% said NO, 51.3% said SOMEWHAT, and 27.2% said YES.

Sixthly, on whether the online library databases helped students find source of recent knowledge and development on professions; 21.5% said NO, 51.3% said SOMEWHAT, and 27.2% said YES.

Seventhly, on whether the online library databases help students find sources of research and scholarship opportunities; 37.8% said NO, 37% said SOMEWHAT and 25.2% said YES.

From the evidence provided above, it is obvious that majority of students see the online database systems as SOMEWHAT smooth the progress of learning and research in HEIs. The keyword "SOMEWHAT" is used to mean "to a moderate extent or by a moderate amount; rather" not used with a negative (Dictionary.com LLC. 2017). As further discussed in a discussion chapter, and conclusion provided, students in HEIs are the main intended users of the online database systems. Thus, institutional efforts are really needed to increase and motivate students' attitude and usage on the online library database systems respectively.

4.4 OBJECTIVE TWO: TO EVALUATE HOW ONLINE DATABASES SMOOTH THE PROGRESS OF LEARNING, RESEARCH AND CONSULTANCY FOR ACADEMIC STAFF IN HEIS

Using survey data from the second objective, about ten questions were asked to the academic staff. Firstly, on whether the online library databases help academic staff to find sources of solutions to research and research supervision; about 15.4% said NO, about 65.8% said SOMEWHAT, and 18.8% said YES.



Secondly, on whether the online library databases help to find sources of publications; 37.6% said NO, 13.4% said SOMEWHAT, and 49% said YES.

Thirdly, on whether online library databases help academic staff to find sources of conferences and seminar preparation; 3.4% said NO, 68.5% said SOMEWHAT and 28.2% said YES.

Fourthly, on whether the online library databases help academic staff to find sources of solutions on their consultancy assignments; 40.3% said NO, 37.6% said SOMEWHAT, and 22.1% said YES.

Fifthly, on whether the online library databases help academic staff to find sources of teaching materials; 36.9% said NO, 59.1% said SOMEWHAT, and 4% said YES.

Sixthly, on whether the online library databases help academic staff find sources of information on the development of professional career; 14.8% said NO, 81.9% said SOMEWHAT and 3.4% said YES.

Seventhly, on whether the online library databases help academic staff to find sources of recent knowledge and development in their professional; 18.1% said NO, 61.7% said SOMEWHAT, and 20.1% said YES.

Eighthly, on whether the online library databases help academic staff to find sources of publication outlets and public engagement; 29.5% said NO, 24.2% said SOMEWHAT, and 46.3% said YES.

Ninthly, on whether the online library databases help academic staff to find sources of recent research and scholarship opportunities; 22.1% said NO, 73.8% said SOMEWHAT, and 4.0% said YES.

Tenthly, on whether the online library databases help academic staff make informed decisions on job related problems; 46.3% said NO, 30.9% said SOMEWHAT, and 22.8% said YES.

The findings from academic staff provide evidences that suggest that, like the students, academic staff said at SOMEWHAT the online library databases smooth the progress of teaching, research and consultancy in HEIs. This is provided by many academic staff who answered SOMEWHAT to the ten questions above. This implies a similar weight given to online library database systems by both students and academic staff.

INTERVIEW FINDINGS

In a follow up interview conducted to 15 students regarding their choice of somewhat, it was revealed that the current state-of the art is an improved one compared to the past. For example, one respondent said *“When I started my degree two years ago, I did not know whether there were online databases free for students. It was until when one lecturer demanded us to submit work with references from journals only.”*Source: Student Interview 2017.

Additionally, students regarded the current situation as not very good, but somehow an improved situation as compared to a worst situation previously. In the response to a question, one student said *“At least of recently, you can see a list of subscribed journals posted on students’ portal, but still some are not accessible, and portal accessible only within campus.”*Source: Student Interview 2017.

Furthermore, the interview results from academic staff showed similar meaning in terms of the SOMEWHAT. Majority of the interviewed academic staff were optimistic that the situation has improved compared to the previous years.

“The efforts made by the Management is somehow giving me some hope, may be in future we will have better and easily accessible online databases”

Source: Lecturer Interview 2017.

From the above findings, both students and academic staff agree that the online library databases have an essential role in smoothening the progress of training, research, and consultancy. In addition, all respondents seem to be more optimistic to improved services in future. However, as of the current situation, somewhat, the online library databases meet the users expectations, thus much has to be done for an improved situation. There is a further discussion of this line of argument in the next chapters.

5.0 DISCUSSION OF THE FINDINGS

The findings for the first objective which sought to evaluate how online databases smooth the progress of learning and research in HEIs are presented above. From the students' point of view, the online databases are very useful but for the time being they somewhat support learning and teaching. That means, although HEIs have subscribed to the online databases, however, such services meet students expectations to the lower level. The findings support the claim posed by Nwaogu & Ifijeh (2014) and Naqvi (2012) that library users must be informed of what is available for them and how they should get it. In this study, it was seen that students and academic staff have no idea that they can get more from their university's library resources. A similar case was found in a study at the University of Ghana, in which many students and academic staff were not familiar with resources in their disciplines (Kwadzo, 2015).

On the other hand, academic staff agreed that the online library databases have an essential role in smoothening the progress of training, research, and consultancy. As forward referenced above, it is a fact that, the current situation in many HEIs in Tanzania, somewhat, meets the users' expectations. However, the respondents suggested that much has to be done for an improved situation. Empirically, Naqvi (2012) found out that both students and academic staff are aware of the importance of the online databases, and that with an appropriate support, learning and teaching could be enhanced by the use of credible materials from online databases. In the light of the above discussion, this research strongly suggests some improvement strategies in the conclusion and recommendation chapter.

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The research has provided answers on the aims which sought to evaluate the usefulness of online databases in achieving the main functions of higher education institutions that includes training, research, and consultancy. The general aim above was attained using two specific objectives stated in section 1.3 above. The review of the literature on the online databases and how they are useful in training, research and consultancy was carried out and revealed a gap in the contexts of higher education in Tanzania. The literature discussed in chapter two above has discussed the theoretical and empirical reviews and has ascertained the gap that little is known about the usefulness of online databases in higher education in Tanzania. This study therefore provides a novelty in about Tanzania and how the online databases could be improved and used to aid in the efforts committed towards training, research and consultancy.

The research findings have revealed that:

First, the findings has concurred with similar studies to submit an argument that both students and academic staff in HEIs understand that the online library databases have an essential role in smoothening training, research, and consultancy. In addition, majority of students and academic staff in HEIs in Tanzania are optimistic that access, usage, and services for the online databases will improve in future. However, the current situation of the online databases in HEIs in Tanzania is somewhat good enough to meet the users expectations, thus much has to be done for an improved situation.

6.2 REFLECTIONS AND FURTHER STUDIES

The following are the recommendations and suggestions in relation to the objectives set:

1. HEIs should put in place subject librarians who shall be responsible to guide both students and academic staff on awareness, training, and support available.
2. Awareness strategies are needed to ensure that all students and HEI staff are aware of the available resources, procedures and policies with regard to the online databases.
3. Improve access to computer labs and Internet connectivity to both students and staff
4. The HEIs should strive to improve the access and effective use of the online databases so that the above activities are smoothened by awareness strategy on the availability, use, and accessibility.

From the foregoing, this research provides opportunities for further research in the online databases awareness and usage, return on investments, and ICT infrastructure for online services in developing countries.



BIBLIOGRAPHY

1. Blackman, R. F. (2003) *A study of the perceptions and attitudes regarding library services available to students enrolled in online degree programs* (Doctoral dissertation). Available from ProQuest Dissertations database, (UMI No. 3126987)
2. De Rosa, C., Cantrell, J., Hawk, J., & Wilson, A. (2006) *College students' perceptions of libraries and information resources* [Online] Available from <<http://www.oclc.org/us/en/reports/perceptionscollege.htm>> Retrieved on [15 September 2016]
3. Edmeades, Chris (2005) *Why online database?* [Online] Available from: <www.aiswalibraries.org.au/onlinedases.pdf> Retrieved on [4 September 2017]
4. *Electronic age; Communications in Information Literacy*, 1, 47-63 [Online] Available from: <<http://www.comminfolit.org/index.php/cil>> Retrieved on [12 Sept 2017]
5. Gardner, S., & Eng, S. (2005) *What students want: Generation Y and the changing function of the academic library* Portal: Libraries and the Academy, 5, 405-420.
6. Johnson, K., Trabelsi, H., & Fabbro, E. (2008) *Library support for e-learners: E-resources, e-services, and the human factors*, In Terry Anderson (2011.) *The theory and practice of online learning* (2nd ed., pp. 397-418), AU Press, Athabasca University
7. Kinner, L. and Rigda, C. (2009) *The Integrated Library System: From Daring to Dinosaur?* Journal of Library Administration; Jun2009, Vol. 49 Issue 4, pp. 401-417, 17p, 3 Black and White Photographs, 1 Graph
8. Kwadzo, G. (2015). Awareness And Usage Of Electronic Databases By Geography And Resource Development Information Studies Graduate Students In The University Of Ghana. *Library Philosophy and Practice*, e-journal. Retrieved June 20, 2016, from <http://digitalcommons.unl.edu/libphilprac/1210>
9. Larson, Agatha Gifty (2017) *Faculty awareness and use of Library subscribed online databases in the University of Education: A Survey* [Online] Available from <http://digitalcommons.unl.edu/libphilprac/1515> Retrieved on [03 April 2018]
10. Lyman, Peter and Hal R Varian (2003) *How much information?* [Online] Available from <<http://www.sim.berkeley.edu/how-much-info-2003>> Retrieved on [25 April 2016]
11. McLeod, Ian (2005) *Why online database?* [Online] Available from <<http://www.aiswalibraries.org.au/onlinedases.pdf>> Retrieved on [12 June 2011]
12. Moyo, L. M. (2004). The virtual patron. *Science & Technology Libraries*, 30(12), 12-13. [Online] Available from <<http://www.tandf.co.uk/journals/WSTL>> Retrieved on [7 May 2017]
13. Naqvi, T. H. (2012). Use of Electronic Databases by Postgraduate Students and Research Scholars at GBPUAT Library, India. *Library Philosophy and Practice (e-journal)*, 10(3), e-journal. Retrieved December 12, 2015, from <http://digitalcommons.unl.edu/libphilprac/809>
14. Nicholas, M., & Tomeo, M. (2005) Can you hear me now? Communicating library services to distance education students and faculty Online Journal of Distance Learning Administration, 8(2), 1-8 [Online] Available from <http://www.westga.edu/~distance/ojdl/search_results_id.php?id=298> Retrieved on [11 June 2017]
15. Nwaogu, H. O., & Ifijeh, G. I. (2014). The Use of Electronic Journals by Lecturers: A Case Study of University of Ibadan, Nigeria. *International Journal of Education and Social Science*, 1(1), 66-73. Retrieved December 04, 2015, from <http://www.ijessnet.com/wp-content/uploads/2014/08/8.pdf>
16. Quickbase (2017) Using Online Academic Journal Databases [Online] available from <<https://www.quickbase.com/articles/using-online-academic-journal-databases>> Retrieved on [01 March 2018]
17. Wienclaw Ruth A. (2008) *Database Management* [Online] Available from <<http://web.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=87671e8e-ee9d-4dfb-b359-4ac6fd80c529%40sessionmgr111&vid=2&hid=122>> Retrieved on [01 June 2017]
18. Tampro (2011), *REGISTERED TECHNICAL INSTITUTIONS* [Online] Available from: <http://www.tampro.org/index.php?option=com_rokdownloads&view=file&Itemid=111> Retrieved on [01 June 2017]
19. Connolly, Thomas & Begg, Carolyn (2006) *Database Systems: A Practical Approach to Design, Implementation, and Management*, 4th Edition, Addison-Wesley
20. Wikipedia (2011) *Database Management Systems* [Online] Available from: <http://en.wikipedia.org/wiki/Database_management_system> Retrieved on [12 Sept 2017]
21. Williamson, K., Bernath, V., Wright, S., & Sullivan, J. (2007) *Research students in the*
22. Yin, Robert K. (2011) *Qualitative Research from Start to Finish*, The Guilford Press, New York