Self-Assessment of Information Retrieval Skills in Using Electronic Information Resources: A Case Study of Maseno University Students

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INTRODUCTION

- Provision and use of the electronic information resources (EIR) have increased over time
- Most academic libraries have directed budgets to acquisition of EIR e.g e-books, e-journals, information databases, etc.
- The optimal use of EIR is greatly dependant on the information retrieval skills
- Retrieval skills, enables one to identify, access, search, and retrieve accurate information related to their information needs.
- Acquiring information retrieval skills is one thing and feeling confident to use them is yet another- self-eficacy
- This study focused on Maseno University students' self-reported retrieval skills and competencies when utilising the EIRs.

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- Maseno University was founded in 1991 as an institution of higher learning among the public Universities in Kenya. There are three campuses of the university. This study was carried out in one of the campuses-the eCampus.
- Maseno University library subscribes to electronic resources through Kenya Library and Information Services Consortium
- The electronic information resources are made available to both the on-campus and off-campus students (EZProxy).

BACKGROUND TO THE STUDY

- EIR have become an inseparable part of today's academic Libraries' collection (Ukac hi, 2015:488; Bhukuvhani, et al., 2012)
- Studies have reported low usage of the EIRs in academic contexts (Olasore and Adek unmisi (2015), Konappa (2014), Okite-Amughoro, et al. (2014), Ekenna and Iyabo (2 013), Gakibayo, et al. (2013), Oyedapo and Ojoo (2013), and Dhanavandani, et al. (2 012).
- Some of the reported reasons for low usage of EIR are:
  - ✓ inadequate computer skills
  - ✓ lack of awareness of the existence of the electronic resources
  - ✓ low bandwidth
  - ✓ lack of information retrieval skills
  - ✓ students' information behaviour

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  - ✓ lack of information searching skills, etc
- Of importance to this study is the reported lack of information retrieval skills (Konappa (2014), Ekenna and Iyabo (2013), and Dhanavandani, et al. (2012).

RESEARCH PROBLEM

- It is widely recognized that EIRs are a major source of scholarly information for teaching, learning and research in academic environment.
- A lot of research has been conducted on how the EIRs are used in different academic contexts.
- Little research report about the level of information skills of students in using the EIRs.
- There is witnessed poor usage statistics of the EIR availed through the Maseno University library
- Frequent questions on how to find relevant information from the EIRs
- Information retrieval skills influence the use of the electronic information resources.
- The study therefore sought to find out whether the students at Maseno University consider their skills of information retrieval as adequate in using the diverse electronic information resources available through the library

RESEARCH OBJECTIVES

- To find out how the students use the EIR available through the library
- To determine how students at Maseno University self-rate their ICT skills relevant to information retrieval
- To determine how the students self-rate their information retrieval skills

Research Question

What are the self-reported information retrieval skills of students at Maseno University Library and how are these skills impacting on their use of the electronic information resources?

Definition of key Terms

Information Retrieval Skills

The ability to understand and apply the techniques used in representation, storage, searching, finding, filtering and presentation of information (Ekenna, 2013:6; ALA,2009:3).

Information Retrieval

"The processes involved in representation, storage, searching, finding, filtering and presentation of potential information perceived relevant to a requirement of information desired by a human user in context" (Ingwersen and Järvelin, (2005:385)

Self Assessment

The perceived evaluations that learners make about their current knowledge/competency levels in a particular area (Sitzman et al. (2010)

METHODOLOGY

- Quantitative research approach was majorly used with limited qualitative data
- Case study research design was used
- Data was collected by using an electronic, semi-structured self-administered Questionnaire
- Purposive sampling and simple random sampling was used to select the desired number of participants who were students across all the schools at the eCampus of Maseno University.
- From a target population of 1001, a sample size of 286 was used.
- The questionnaire completion rate was 96.2%
- Data was analysed by using a data analysis software, SPSS
- Data presentation was in form of tables and charts for quantitative data and organized in themes for the qualitative data collected from the few open ended questions.

FINDINGS

Use of Electronic Information Resources by the students

Electronic information resources	Daily n=275 (%)	Weekly n=275 (%)	Fortnightly n=275 (%)	Monthly n=275 (%)	Not at all n=275 (%)
E-books	77 (28.0)	99 (36.0)	40 (14.5)	30 (10.9)	29 (10.5)
E-journals	61 (22.2)	102 (37.1)	37 (13.5)	42 (15.3)	33 (12.0)
Institutional repositories	60 (21.8)	100 (36.4)	42 (15.3)	28 (10.2)	45 (16.4)
Internet sources	162 (58.9)	75 (27.3)	22 (8.0)	14 (5.1)	2 (0.7)
Online databases	115 (41.8)	94 (34.2)	26 (9.5)	23 (8.4)	17 (6.2)
Online Public Access Catalogue (OPAC)	82 (29.8)	82 (29.8)	41 (14.9)	33 (12.0)	37 (13.5)
Reference management software such as Zotero, Mendely, Refworks	64 (23.3)	73 (26.5)	42 (15.3)	25 (9.1)	71 (25.8)

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Students' self-rated skills in using search features and techniques

Search features and techniques	Very good n=275 (%)	Good n=275 (%)	Fair n=275 (%)	Poor n=275 (%)	Have never used n=275 (%)
Locating electronic databases from the library website	104 (37.8)	109 (39.6)	38 (13.8)	7 (2.5)	17 (6.2)
Selecting an appropriate database(s)	101 (36.7)	109 (39.6)	49 (17.8)	5 (1.8)	11 (4.0)
Searching more than one database at once	98 (35.6)	106 (38.5)	48 (17.5)	8 (2.9)	15 (5.5)
Title searches	126 (45.8)	97 (35.3)	38 (13.8)	8 (2.9)	6 (2.2)
Author searches	116 (42.2)	102 (37.1)	44 (16.0)	4 (1.5)	9 (3.3)
Keyword searches	126 (45.8)	103 (37.5)	34 (12.4)	4 (1.5)	8 (2.9)
Boolean operators (OR, AND, NOT)	78 (28.4)	94 (34.2)	55 (20.0)	14 (5.1)	34 (12.4)
Truncation techniques (such as $, *, +)	82 (29.8)	97 (35.3)	55 (20.0)	15 (5.5)	26 (9.5)
Searching in a combination of specific fields such as an author in the author field and a search term in the title field	95 (34.5)	98 (35.6)	54 (19.6)	12 (4.4)	16 (5.8)
Filtering search results such as specifying the year of publication, language	101 (36.7)	103 (37.5)	46 (16.7)	12 (4.4)	13 (4.7)
Displaying the search results	107 (38.9)	110 (40.0)	42 (15.3)	9 (3.3)	7 (2.5)

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Students' self-rated skills in using search features and techniques

Search features and techniques	Very good n=275 (%)	Good n=275 (%)	Fair n=275 (%)	Poor n=275 (%)	Have never used n=275 (%)
Recognising relevant information	124 (45.1)	97 (35.3)	44 (16.0)	4 (1.5)	6 (2.2)
Selecting relevant information for further use	107 (38.9)	112 (40.7)	44 (16.0)	6 (2.2)	6 (2.2)
Sharing relevant records via e-mail	125 (45.5)	92 (33.5)	47 (17.1)	6 (2.2)	5 (1.8)
Printing relevant records	124 (45.1)	99 (36.0)	36 (13.1)	10 (3.6)	6 (2.2)
Setting up alerts such as to be notified about new information on a topic, the work of an author	89 (32.4)	125 (45.5)	42 (15.3)	7 (2.5)	12 (4.4)
Downloading the full-text of an article such as in PDF, HTML format	130 (47.3)	100 (36.4)	36 (13.1)	6 (2.2)	3 (1.1)
Gaining access to an e-book/chapters of a book or other electronic publication	103 (37.5)	113 (41.1)	42 (15.3)	8 (2.9)	9 (3.3)
Requesting an article/book through the library	101 (36.7)	100 (36.4)	46 (16.7)	9 (3.3)	19 (6.9)

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Students' perceptions of their ICT skills

ICT Tasks	Very good n=275 (%)	Good n=275 (%)	Fair n=275 (%)	Poor n=275 (%)
General use of computers and computer devices like a mouse, touchpad and keyboard	199 (72.4)	61 (22.2)	14 (5.1)	1 (0.4)
Basic computer operations e.g. using Word processing software	163 (59.3)	85 (30.9)	25 (9.1)	2 (0.7)
Storing information on alternative devices e.g. flash disc/USB, external hard drive	167 (60.7)	77 (28.0)	30 (10.9)	1 (0.4)
Using cloud storage	110 (40.0)	96 (34.9)	47 (17.1)	22 (8.0)
Transferring information from one computer device to another	145 (52.7)	95 (34.5)	31 (11.3)	4 (1.5)
Downloading information	167 (60.7)	81 (29.5)	26 (9.5)	1 (0.4)
Printing information	156 (56.7)	87 (31.6)	28 (10.2)	4 (1.5)
Finding information stored on a device or cloud storage	129 (46.9)	97 (35.3)	41 (14.9)	8 (2.9)
Web browsing	164 (59.6)	89 (32.4)	21 (7.6)	1 (0.4)
Online communication via e-mail, telecommunication, online discussion forums, etc.	160 (58.2)	93 (33.8)	21 (7.6)	1 (0.4)

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Students' opinion on how to improve their information retrieval skills

Four major themes emerged:

- Regular practice
- Training,
- Self-learning
- Self-efficacy and positive attitude.

CONCLUSIONS

- This study established that the majority of students indicated to have good information retrieval skills contrary to what is reported in the literature (Very good and good)
- Majority of the students indicated to be using the electronic information resources either daily or weekly. Contrary to the reported low usage of the EIRs across the literature

This shows the correlation between the information retrieval skills and the use of the EIR.

- A number of students, however also indicated that they have poor skills in various aspects of information retrieval that were listed
- However, it must also be acknowledged that as a limitation of self-rating, students may rate their skills higher or lower than what they really are.
- On improving the retrieval skills and search experiences, the majority of the students indicated that they would need regular practice, training, self-learning and self-efficacy and positive attitude.

APPLICATION & RECOMMENDATIONS

- ❖ Findings of this study is being used to inform the development of the IL curriculum at the University which is in its initial stages.
- ❖ A repetition of the study using a different methodology e.g focus group interviews which can reveal more on how the students perceive their skills
- ❖ Comparative studies of this kind can be done using students from different universities to get more comprehensive understanding and comparisons
- ❖ A systematic literature review can be conducted to identify supplementary methods of evaluation of skills
- ❖ Encourage self-learning of skills which can be done through creation of peer to peer sharing platforms or any other means that can encourage personal sharing and self-learning.
- ❖ Explore methods that can be used to enhance students' self-efficacy and positive attitude which are core elements in building skills.

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