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Evaluation of Web Information Sources for Academic Purposes by Undergraduate Students in a Developing country

ABSTRACT

The study examined the web information seeking behavior of undergraduate students by evaluating information sources for academic purpose on the web. Three hundred questionnaires were distributed evaluating students perceptions on information sources on the web. Descriptive analysis, One-Way ANOVA was carried out in the analysis of data using Statistical Package for Social Science (SPSS) software. The study revealed that relevance of the information source was a major criterion for evaluation among undergraduate students in Landmark University. It was further revealed that undergraduate students showed preference for search engines as the preferred information source medium on the web as more than 50% of students rated accessibility and authority on search engines high. Results obtained from the study further revealed the need to improve information literacy skills and the information retrieval skills of undergraduate students in Nigeria.

Keywords: Web Information Sources, Academic Purpose, Evaluation Criteria, Information Search Skills, Undergraduate Students, Information Literacy, Information seeking behavior, Information Sources, Electronic Resources, Search Skills

1. INTRODUCTION

The web and electronic publishing has changed the information seeking behavior of students, as majority of students have shown more interest towards searching for information on the web. However, though vast amount of information is available on the web, the amount of quality information is limited. This raises questions on students' information behavior in differentiating high quality information. Therefore, information search skills have become necessary for students to enable appropriate selection of quality information from the vast amount of information sources available on the web ¹

Several researchers ^{2, 3, 4} have shown that undergraduate students show preference to online sources and depended on general search engines for assignments and projects in the learning

process. However, Borland ⁴ showed that undergraduate students searched based on convenience and were not willing to subject such information to evaluation. It is therefore pertinent to study undergraduates' students' information seeking behavior by evaluating students perception of some information sources available on the web .

2. STATEMENT OF PROBLEM

Landmark University subscribes to several electronic resources but students' usage of these resources is relatively low, students continue to show preference to general search engines than scholarly databases which necessitates a study on information literacy skills of students as relates to information seeking behavior by understanding perception of students of variables that constitute the information selection criteria of undergraduate students. Though several studies have shown students preference for general search engines, no study has examined students' perception on the criteria for evaluation of information sources on the web. This study fills this gap by understanding the information literacy skills of undergraduate students in Nigeria.

3. OBJECTIVE OF STUDY

The overall objective of this study is to examine the web information seeking behavior by undergraduates' students in Landmark University. Specifically, the study seeks to understand

1. The purpose undergraduate students seek information on the web
2. Perception of undergraduate students on different information sources available on the web
3. Examine factors that influence the choice of an information source by undergraduate students
4. Examine the information search skills students
5. Examine the relationship between level of study and criteria for evaluating information sources on the web

4. LITERATURE REVIEW

Several studies have examined the information seeking behavior of students but only few studies have focused on student information behavior on the web. Research ^{5,6} reveals that the internet is the most consulted and usually the first option of students when seeking for information. However, students have been shown to stop searching for information when they had gotten enough with little or no evaluation ⁷. Evaluation of information sources is an important component in the information search process due to the vast amount of information available on the web, which is considered a major challenge for information seekers.

Studies by Hirsh ⁸ reveal that younger information seekers focus majorly on the relevance and convenience in information seeking rather than authority and currency. Similar studies by Drabensott ⁹ reveal that students are heavily dependent on general search engines than scholarly databases. Though library play a critical role in promoting information seeking behavior, the role of the student in the information seeking process is seen to be dependent on teaching and learning style and learning task ^{10, 11} Urquhart & Rowley ¹² categorized factors that influence information seeking behavior of students into micro and macro factors. Micro factors includes information search skills, information literacy, role of faculty, disciple and technological support while macro factors consist of information access, organizational leadership and organizational policies, infrastructure to support teaching and information seeking and information resource design. A similar study by Whitmire ¹² shows the role of course discipline on the information seeking behavior of students as Social Science and Arts students are considered better web information seekers than Science and Engineering students. Though students spend a lot of time online ¹³, they are still considered hasty in navigating web pages without adequate study and evaluation of web-pages ¹⁴.

6. METHODOLOGY

The study was made up of Landmark University undergraduate students. Landmark University spends a large amount of her resources subscribing to scholarly databases annually. This study was carried out using random sampling method. The overall sample size was 300.

A structured questionnaire was used for data collection which was divided into three sections. Section A measured the demographic characteristics of students ranging from gender, colleges and level of study. Section B examined students perception of web Information seeking behavior while Section C evaluated various information sources as perceived by students.

To analyze the data, frequency distributions were used thereafter analysis of variance (ANOVA) was used to establish how criteria for selection of an information source varies with students level of study. In all tests a significance level of 95% was used

6.1 Analysis

Demographic Variables

In analysis of the demographic profile of respondents, Table 1 shows that 54.5% were males and 45.5% females. All Colleges were full represented in the study with Business and Social Sciences accounting for 48.5% in the study

The study focused majorly graduating students of Landmark University, majorly students in their fourth and fifth years with experience in research

Table 1: Demographic Data on Undergraduate Students Web Information Seeking Behaviour

Variables	Measurement	Frequency	Percentage
Gender	Male	110	54.5
	Female	92	45.5
College	College of Agricultural Sciences	47	23.3
	College of Business and Social Science	98	48.5

	College of Science and Engineering	54	26.7
Level of Study	Fourth Year Students	120	59.4
	Fifth Year Students	82	40.59

6.2 Factors that determine the choice on an Information source

In determining the factors that determine the choice of an information source, results from Table 2 showed that 72.8% of undergraduate students considered only relevance to the information need as a criterion for choosing an information source, while 23.8% of students considered the accessibility of an information source. Only 5.9% of undergraduate students considered the Author and 9.9% of undergraduate students considered the currency of the information source

Table 2: Factors that determine the choice on an Information source

Evaluation Criteria	Frequency	Percentage
Accuracy	39	19.3
Accessibility	48	23.8
Author	12	5.9
Currency	20	9.9
Relevance	147	72.8

6.3 Information Search Skills of Students

The information search skills of undergraduate students was also considered, results from Table 3 showed that more than 50% of students engage in Keyword search, while 42.1% of students type search need directly. The study further showed that only few 5.4% and 5.9% of students engage in Boolean Search or Recommended article search.

Table 3: Information Search Skills of Students

Information Search Skills	Frequency	Percentage
Type topic directly	85	42.1
Boolean Search Terms	11	5.4
Keyword Search	113	55.9
Searching from cited reference	21	10.4
Recommended articles	12	5.9

6.4 Challenges in Seeking Information on the Web

Table 4 considered challenges encountered in Web Information seeking by undergraduate students. The major challenge encountered was slow connection while 25.7 % of students encountered challenges while locating information on the web.

Table 4: Challenges in Seeking Information on the Web

Information Search Challenges	Frequency	Percentage
Slow Connection	142	70.3
Information Overload	28	13.9
Difficulty Locating Information	52	25.7

6.5 Evaluation of Information Sources for Academic Purposes

The study evaluated search engines, scholarly databases and educational blogs in accessing undergraduate students' information seeking behavior for academic purpose. Results in Table 5 on the evaluation of Search Engines showed that 60.9% of undergraduate students considered information on search engines as authoritative while 49.5% of students considered it accurate and more than 50% of undergraduate students considered search engines as accessible. Only 39.1% of students rated information sources on search engines high with 39.1%

Table 5: Evaluation of Information Sources on Search Engines

Evaluation Criteria	Low	Medium	High
Authority	7.9%	27.7%	60.9%
Accuracy	8.4%	40.6%	49.5%
Accessibility	13.4%	31.2%	54.5%
Currency	17.3%	41.6%	39.1%
Relevance	12.4%	40.6%	45.5%

6.6 Evaluation of Information Sources on Scholarly Databases

In accessing information on scholarly databases, results from Table 6 showed that 52.5% of students rated scholarly databases high in authoritative information, 46% of undergraduate students considered information on scholarly databases very relevant in their information search. However 21.3% of undergraduate students rated accessibility of information on scholarly databases low.

Table 6: Evaluation of Information Sources on Scholarly Databases

Evaluation Criteria	Low	Medium	High
Authority	13.4%	31.7%	52.5%
Accuracy	14.4%	40.6%	43.6%
Accessibility	21.3%	43.1%	35.1%
Currency	18.3%	36.1%	45.0%
Relevance	19.3%	33.7%	46.0%

6.7 Evaluation of Information Sources on Educational Blogs

In evaluating information sources on educational blogs results showed that only 36.1% of undergraduate students considered information on educational blogs very accurate and 43.6% considered information on educational blogs authoritative while 47.0% of students consider information on educational blogs as relevant

Table 7: Evaluation of Information Sources on Educational Blogs

Evaluation Criteria	Low	Medium	High
Authority	15.3%	37.1%	43.6%
Accuracy	15.8%	44.6%	36.1%
Accessibility	17.3%	46.5%	32.7%
Currency	13.4%	41.6%	41.6%
Relevance	16.3%	33.2%	47.0%

6.8 Relationship between Level of Study and Criteria for Evaluating Information Sources on the Web

Results from Table 8 showed a positive and significant relationship ($p=0.002$) between level of study and considering the Author of an information source in evaluation.

Table 8: One Way ANOVA of Level of Study and Criteria for Evaluating Information Sources

Evaluating Criteria	F	Significance
Accuracy	0.583	0.675
Accessibility	0.966	0.427
Author	4.286	0.002
Currency	0.299	0.878
Relevance	1.380	0.242

Discussion of Findings

The study examined the web information seeking behavior of undergraduate students in Landmark University. Results showed that the major factor that determined the students' choice of an information source is relevance to the search need with 72.8% of students indicating Relevance as the major criteria for selection. Results also showed that 23.8% of students considered accessibility as criteria and only 5.9% of students considered the author in selecting an information source. This corroborates findings by Hirsh that younger information seekers focus more on the relevance and accessibility of an information source. The study also revealed that 55.9% of undergraduate students engage in keyword searches while 42.1% typed their search need directly; these results reveal the poor search skills of undergraduate students. Students further revealed challenges in slow internet connection and difficulty locating information source as major challenges affecting the information seeking process

The study evaluated undergraduate students perception of information sources on Search Engines, Scholarly Databases and Educational Blogs for academic purpose, results reveal that 60.9% of undergraduate students considered information on search engines as highly authoritative while more than 50% of students considered search engines very accessible. However, in the evaluation of scholarly databases by undergraduate students 52.5% of students

rated scholarly databases as authoritative while only 35.1% of students were certain of its accessibility. These findings corroborate studies by Drabensott which reveals students heavy dependence on search engines. This study however shows that preference for general search engines may be due to the perceived low accessibility of scholarly databases by undergraduate students. In the evaluation of academic blogs, only 43.6% of students considered information on blogs authoritative and 32.7 % of students were certain of its accessibility. The summary of findings show students preference for search engines is dependent on their perception of authority and accessibility of information sources on search engines.

The study further showed a significant relationship between an undergraduate student's level of study and evaluation of the Author of an information source. This implies that the level of study determines evaluation of the author of the information source in the information seeking process.

Conclusion

The study revealed students preference for general search engines while seeking information on the web. Results showed that the major criteria for evaluation of information sources on the web are relevance to the information need, only few students gave consideration to the currency and the author of the information source. Results further showed that students preference for general search engines was dependent on the perception of authority and accessibility of information sources. The study also showed that Level of study significantly influences evaluation of the author in the information seeking process. This study has implication for information professionals in improving information literacy skills of undergraduate students in Nigeria..

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