

INFORMATION SEEKING PROCESS AND USE OF INTERNET SEARCH ENGINES BY UNDERGRADUATE STUDENTS IN UNIVERSITIES IN BAUCHI STATE

BY

MAHMUD MAMMAN MUSTAPHA Abubakar Tafawa Balewa University, Bauchi, Nigeria email: mahmud112@yahoo.com Phone: 08055349298, **MUHAMMAD ETUBI** University Of Jos, Plateau State, Nigeria email: etubimk@unijos.edu.ng Phone: 08036146457, **SHEHU ALLAHDE** Bingham Univserity, Kuru, Jos Campus, Nigeria email: allahdefaith@gmail.com Phone: 08033839359

Abstract

This study investigated the information seeking process and use of Internet search engines by Undergraduate students in Universities in Bauchi State. A quantitative research methodology with a Co relational design was used to collect and present a statistical analysis of findings from 242 sample respondents. The sample itself was drawn from a population size of 664 Undergraduate students from the 2 (two) Universities in Bauchi State the instrument for the study is a questionnaire which was administered using a simple random sampling technique. The main finding of the study is that the information needs of Undergraduate students in Bauchi State are information on class assignment, next lecture topic, entertainment and leisure. The main factor militating against information seeking process in Internet search engines among Undergraduate students in Universities in Bauchi State is fluctuating internet connectivity.

INTRODUCTION

Information is power. It is a vital source for human beings for living a prosperous life on the earth. Information is all around and is utilized in all walks of life right from purchasing a pin to writing a research article by human beings irrespective of caste, creed, and gender, rich, poor, educated and uneducated. Thus, information helps against social imbalance. Ukachi (2011) opined that information is the supreme asset than all other movable and immovable asset that the people hold on earth, In the contemporary world people are valued as rich and poor not because of their assets; but they are valued as information rich and information poor. The information rich people are those who are highly skilled in identifying their

information needs and apply seeking behaviors so as to access the information from both online and traditional resources successfully and satisfying their information needs. The information poor people are lacking in the skills in getting their information needs satisfied.

Understanding the information-seeking process are central goals of satisfying and achieving objectives in both individual and organizations. Krikelas (1983) has observed that the interactions among, individual physical, cognitive, and affective subsystems and the external world are defined by the juxtaposed boundaries where these physical and conceptual constructs meet. Defining interfaces that support information seeking is thus a

fundamental problem in information search and use. The centrality of user interface for the information seeking is very vital as users need to have bases for accessing resources using search engines on the internet and other computerised devices. In various academic institutions such as the universities, efforts are being made to find possible ways of providing information seeking interfaces and platform that more user friendly and in a standard form just like their foreign counterparts abroad. Computers and other electronic and digital devices are introduced both within and around the school environment to contribute to the development of standard education for students.

According to Marchionini & Komlodi (1995), Information seeking is a process in which humans engage to purposefully change their state of knowledge and experience. The process is inherently interactive as information seekers direct attention, accept and reflect on progress, and evaluate the efficacy of continuation. Kingrey (2002) added that Information seeking is a process in which knowledge state is changed through inputs, purposive outputs, and feedback. Information seeking is, however, a strictly human process that requires adaptive and reflective control over the afferent and efferent actions of the information seeker. Solving problem related to the challenges encountered in the Information Seeking Process and use of Internet search engine is complex in our today's world. The field of Librarianship has witness great

paradigm shift from traditional to digital with various process of seeking information as topic of discussion.

Librarianship and other field of knowledge have being undertaking studies to ease the difficulty of closing the gap in knowledge using good Internet search engines such as Google, Tubidy, Mozilar and others. This is to reduce the factors affecting the Information seeking process of students and enable access to information resources in a manner well standardized for effective usage. Wilson (2000) defines information seeking as the purposive seeking for information as a consequence of a need to satisfy some goal. Marchionini (1995) has given a definition from the point of view of problem oriented approach, which describes it as a process in which humans purposefully engage in order to change their state of knowledge and which is closely related to learning and problem solving. A more restrictive definition was offered by Johnson (1997) which indicated information seeking can be defined as purposive acquisition of information from selected information careers.

Why do we study the Information seeking Process and use of Internet search engines? With optimism, search engine has become a very important retrieval tool used for accessing variety of files, documents, images and other symbolic representation of information used for decision making. The need for this study is to close the gap in knowledge and satisfy the needs of the user which cannot be over emphasized.

This study is conceptualized because of the inherent need to help to identify Information seeking processes used by Undergraduate students of tertiary institutions. Undergraduate students in Universities are the potential future of tomorrow professional world with the view of developing and harnessing the skills and talent available for propagation of societal growth. Therefore, it will be something left behind if their Information seeking process and use in the area of Internet search engines are not assessed.

Conceptual Framework

In any study, there should be a theory or model to support and guide the research process to a logical conclusive understanding and arriving at the findings. This study adopts a guide from the Information seeking process model developed by Carol Colher Kuhlthau. The model involves 6 (six) steps which are Initiation, Selection, Exploration, Formulation, Collection and Presentation. Kuhlthau in (1992) developed Information seeking process as follows: the Initiation stage which will guide the study on how Undergraduate student should come to know the lack of knowledge or understanding of his or her Information Seeking Process and use of search engine. The Selection stage is the uncertainty the information seeker depicts on the area, topic or problem of study, and with a brief optimism gets ready for exploration of the information. Exploration stage provides information but people will get doubt on the consistency of the information,

confused on the compatibility and get frustrated in the process. Formulation stage is when the person gets focused perception which leads to clarity and the process of seeking for information gets continued. Collection stage is the process of information seeking when the information seeker senses the right direction, information related to the focused perspective is gathered and it minimizes the ambiguity of the information. While, the Presentation/ Assessment stage is the completion of the search; the seeker gets new knowledge which the person can present to others and put the knowledge to use. When the information seeker attains the required knowledge, the seeker gets a sense of accomplishment and self awareness increases. In Universities in Bauchi, the internet cafe and digital library is been used as the location in which Internet search engines are being access on the internet regularly by students for assignment, research and other academic purposes. It aids the easy access to global village enormous information resources

Statement of the Problem

It has been established that Internet search engines are important feature in seeking and using information in Universities in Bauchi State, Nigeria. It is likely that man: undergraduate students tend to waste time when using search engines without having of get what they want. If undergraduate students do not know how to use Internet search engines in a manner best to fill in their

gap in knowledge, then the level of satisfaction will be minimal. They also need to know the reasons they seek for information in the search engines. The researchers see the importance to conduct this study in order to find out the intentions of undergraduate students while seeking and using information internet search engines, their behaviour and how necessary Internet search engines are to undergraduate students in Universities in Bauchi State, Nigeria.

Objective of the Study

The main objective of the study is to investigate the information seeking process and use of Internet Search Engines by Undergraduate students in Universities in Bauchi State. The specific objectives are as follows:

1. To determine the information needs of Undergraduate students in Universities in Bauchi State.
2. To find out the types of Internet search engines used by Undergraduate students in accessing information in Universities in Bauchi State?
3. To examine the factors militating against the information seeking process in a Internet search engines by Undergraduate students in Universities in Bauchi State.
4. To determine the level of competency in using Internet search engines by Undergraduate students in Universities in Bauchi State?

Research Questions

The following are the research questions for the study:

1. What are the information needs of Undergraduate students in Universities in Bauchi State?
2. What are the types of Internet search engines used by Undergraduate students accessing information in Universities in Bauchi State?
3. What are the factors militating against the information seeking process in a Internet search engines by Undergraduate students in Universities in Bauchi State?
4. What is the level of competency in using Internet search engines by Undergraduate students in Universities in Bauchi State?

Hypotheses

Ho 1. There is no significant relationship between students search skills and use of Internet search engines.

Ho2. There is no significant relationship between availability and use of Internet search engines.

Significance of the Study

The significance of this research is to determine the information seeking process and use of Internet search engines by Undergraduate students in Universities in Bauchi. This will aid the development of resources and services that will encourage the accessibility and usability of information in both search engines located within and around institutions.

The study is also important in determining the information needs of Undergraduate students so as to close the gap in knowledge concerning using Internet search engines for Learning, research and other purposes.

Scope of the Study

The study focuses on information seeking process and use of internet search engines by only Undergraduate students in Universities in Bauchi State.

LITERATURE REVIEW

Fasola and Olabode (2013) indicated in their studies that information needs of students In AJayi Crawther University, Oyo State, Nigeria are for academic, current affairs, industrial attachment, recreation, and social purposes. This also conforms to Ajiboye and Tella (2007) findings that undergraduate information needs include academic information. Increasing information output has led to the emergence of various information sources for undergraduate students to seek and make use of the information they need. Okoh and Ijiekhuamhen (2014) posit that when undergraduates are searching for information to meet their needs, they use different sources of information.

Ahmat and Kamarudin (2014) opined in order to satisfy an information need, the process started from the Information Seeking Behaviour will lead the user to search for formal or informal information sources which result in success or failure to find relevant information.

Cavus and Alpan (2011) studies revealed Google and Yahoo search engines are most used by university students. Baro, Onyenania and Obi (2010) also indicated majority of undergraduate students occasionally use internet search engines to retrieve information resources. In Ahmat and Kamarudin (2014) studies internet search engines ranked the highest information source of students. Deursen and Dijk (2008) classified skills required for internet search in to operational, formal, and strategic and information skills. He stressed that operational skill is the skill to manage computers, formal skills are the skills to handle the structures of computers, information skills are the skills needed to locate information, and Strategic skills are the skills to employ the information contained in internet towards personal (and professional) development. They added that for purposes of learning or training, operational and formal skills appear to be obligatory.

Okoh and Ijiekhuamhen (2014) mentioned factors militating against searching for information to include lack of computer skills and irregular electricity supply. Jato and Oresiri (2013) revealed in their studies that slow network, the problem of inability of the internet explorer to display the web page, and unstable electricity as their major challenges to online search.

Methodology

The study uses a Quantitative research methodology using descriptive statistics to analyze the data collected. The positivist model is most used for

statistical and numerical data presentation in a study. The research design used for this research is a Correlation research design for adequate comparism and explanation of variables of the phenomenon. The area of study will cover both Universities located in Bauchi which include Abubakar Tafawa Balewa University, Bauchi and the Bauchi State University. The population size selected for the study is 664 Undergraduate students drawn from the Universities in Table-1 below. The sample size is 242

Undergraduate students which were simply randomly selected using the *krejde and Morgan* 1970 table of determining sample size of a known total population size. The sample size was drawn from the population size in which a structured Questionnaire was administered for collection of data from the study respondents. Below is the breakdown of the population size selected during the 2016/2017 Academic Session (assisted by Staff of the Universities).

Table-1

S/N	Institutions	Number of Undergraduate Students Selected
	Abubakar Tafawa Balewa University, Bauchi	443
	Bauchi State University	221
Population Size Total		664

Results

Testing of hypotheses

The hypothesis was tested using the Pearson Product-moment correlation coefficient (PPMCC). To test whether or not the hypotheses should be rejected or not; the probability (P) value and degree of freedom (df) must be appreciated. The probability value (P) is the probability that a deviation less than or greater than simply N- the number of pair. For this purpose, a decision criterion for testing and interpreting the

hypotheses was designed. **Decision criterion:** The study uses 5% level of significance for the purpose of hypothesis testing; as such we compared; degree of freedom with level of significance (0.05) in order to arrive at the critical value. Therefore, when R calculated does not exceed the value in the $p = 0.05$ column in the R table, it is said to be non significant

Ho1. Summary of Pearson Product-moment correlation coefficient (PPMCC) on the relationship between students search skills and use of Internet search engines shown in **Table 2** below.

Variables	N	X	Sd	Df(N-2)	R cal	R tab	Prob	Decision
Search skills	9	75.889	15932.889	7	0.0591	0.6664	.05	Reject
Use of Internet search engines	9	62.222	43275.556	7				

$R(7) = 0.0591, P = 0.879952$. The result is not significant at $p < 0.05$

The table above reveals that the mean (x) score for Use of Internet search engines is 62.222, while the Search skills is 75.889. There is a strong positive relationship between the variables with $df = 7, R = 0.0591, (P = < 0.05)$. The hypotheses stated was therefore, rejected on the account that a

relationship exist. Hence, there is a relationship between Use of Internet search engines and Search skills by Undergraduate students in Bauchi State, **Ho2.** Summary of Pearson Product-moment correlation coefficient (PPMCC) on relationship between availability and use of Internet search engines shown in **Table 3** below.

Variables	N	X	Sd	Df(N-2)	R cal	R tab	Prob	Decision
Availability	9	38	25892	7	0.7191	0.6664	.05	Accept
Use of Internet search engines	9	111.111	16248.889	7				

$R(7) = 0.7191, P = 0.029007$. The result is not significant at $p < 0.05$.

The table above shows that the mean (x) score for Undergraduate student use of Internet search engines is 111.111, while the availability is 38. There is a strong positive relationship between the

variables with $df = 7, R = 0.7191, (P = < 0.05)$. The hypotheses stated was therefore, accepted on the account that a relationship exist. Hence, there is no relationship between availability and use of Internet search engines by Undergraduate students in Bauchi State.

Research Question-1

What are the information needs of Undergraduate students in Universities in Bauchi State?

Table 4: Below shows the information needs of Undergraduate students in Bauchi State.

DESCRIPTION	FREQUENCY	PERCENTAGE
Information on class assignment	242	27.6
Information on next lecture topic	242	27.6
Information on project work	30	3.4
Information on higher education news	22	2.5
Information on new trends in my course of study	59	6.7
Information on entertainment and leisure	242	27.6
Information on politics	10	1.1
Others	30	3.4
TOTAL	877	100%

The above table shows that the main information needs of Undergraduate students in Bauchi State is information on class assignment, next lecture topic, entertainment and leisure which is indicated with 27.6%. Others are information on new trend in their course

of study indicated with 6.7%, information on project work and others are both 3.4%, information on higher education news is 2.5%, while information on politics is the lowest with 1.1%.

Research Question-2

What are the types of Internet search engines used by Undergraduate students in accessing information in Universities in Bauchi State? **Table 5:** Below shows the Internet search engines used by Undergraduate students

DESCRIPTION	FREQUENCY	PERCENTAGE
Yahoo	242	29.3
Google	242	29.3
Webcrawler	11	1.3
Bing	199	24.1
Ask.com	44	5.3
Info.com	0	0
AOL search	0	0
Yandex	0	0
Dogpie	0	0
Altavista	0	0
Overture	0	0
HotBot	0	0

ICQ	0	0
iWon	0	0
Javde	0	0
7 search	0	0
Others	88	10.7
TOTAL	826	100%

The above table indicates that the most used Internet search engines by Undergraduate students in Universities in Bauchi are Yahoo and Google search with 29.3%. Next is Bing with 24.1%,

Others not mentioned is 10.7%, Ask.com is 5.3%, Webcrawler is 1.3%, while 0% is indicated for Info.com, AOL search, Yandex, Dogpie, Altavista, Overture, HotBot, ICQ, iWon, Jayde and 7search.

Research Question-3

What are the factors militating against the information seeking process in Internet search engines by Undergraduate students in Universities in Bauchi State. Table 6: Below shows the factors militating against the information seeking process in Internet search engine.

DESCRIPTION	FREQUENCY	PERCENTAGE
Unknown appropriate keywords to use	101	12.4
Inability to open search results in the search result list	71	8.7
Inability to use hyperlinks	201	24.7
Fluctuating internet connection	222	27.2
Irregular electricity supply	22	2.7
Server is down	101	12.4
Others	97	11.9
TOTAL	815	100%

The above table indicated that the main factor militating against information seeking process in Internet search engines among Undergraduate students in Universities in Bauchi State is fluctuating internet connectivity with

27.2%. The inability to use hyperlinks is 24.7%, Unknown appropriate keywords to use and server down are both 12.4%, other is 11.9%, inability to open search results in the search result list is 8.7%, while irregular electricity supply is 2.7%.

Research Question-4

What is the level of competency in using Internet search engines by Undergraduate students in Universities in Bauchi State? **Table 7:** Below shows the level of competency in using Internet search engines.

DESCRIPTION	FREQUENCY	PERCENTAGE
Very high	52	21.5
High	52	21.5
Average	104	43
Very low	22	9.1
Low	12	5
Undecided	0	0
TOTAL	242	100%

In a descending order, the above table indicates that the level of competency of most Undergraduate students in using Internet search engines is average with 43%, both very high and high is 21.5%, very low is 9.1 %, Low is 5%, while undecided is 0%.

Discussion of Findings

The study found out that the main information needs of Undergraduate students in Bauchi State Universities include information on class assignment, information on next lecture topic, information on entertainment and leisure. When Undergraduate students seek to satisfy their information needs, they mostly use the Internet search engines such as Yahoo and Google which collaborates with Cavus and Alpan (2011) and Baro, Onyenania and Obi (2010) studies that Google and Yahoo search engines are most used by university students. The main factors militating against information seeking process in Internet search engines among Undergraduate students in Universities in Bauchi State is fluctuation in internet connectivity and the inability to use hyperlinks. Finally, the level of competency of most Undergraduate students in using Internet search engines is average. This means that Undergraduate students are not experts

in the use of Internet search engines and may find it difficult sometimes based on their level of competency.

CONCLUSION

In conclusion, the information seeking process and use of Internet search engine is relatively a current phenomenon in this part of the world, so the growth and influence users experience between offline and online contexts has not been explored yet in great detail. Internet search engine is one of the transformative communications technology of the present age, and one in which Undergraduate students are immersed with connecting, uploading, updating, downloading and accessing relevant information conveniently.

Most studies have been conducted in the bid to understand the whole idea and concept of Internet search engine. This can be seen in the amount of academic studies on Internet search engines since inception in so many ways

as its importance is foreseen. This indicates that the importance of the study investigating the information seeking process and use of Internet search engine cannot be overemphasized.

RECOMMENDATIONS

The following recommendations are provided:

1. As observed that more attention is given to information needs on class assignment, next lecture topic, entertainment and leisure, Undergraduate students should also explore more of their information needs on health issues, entrepreneurship, research and other relevant needs.
2. Undergraduate students should explore using more Internet

search engines so as to have more knowledge about others.

3. Better Internet facilities, power supply and server connectivity should be improved by University authorities to enable effective access and connectivity. Special training and retraining can also be encouraged for Undergraduate students so as to enable them develop knowledge on hyperlinks, search results and other Internet search engine features.
4. The level of competences in the use of Internet search engines should be improved by self learning or universities can introduce programmes to orient Undergraduate students on the need to develop the use of Internet search engines to satisfy their information needs.

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