

Use of Search Engines by Postgraduate Students of the University Of Nigeria, Nsukka, Enugu State, South East Nigeria

Margaret N. Ngwuchukwu,
BA, MLS, LLB

Department of Library and Information Science University of Nigeria, Nsukka

Abstract: *The paper discusses search engines and its use by postgraduate students of the University of Nigeria, Nsukka. Five research questions were formulated to guide the study while descriptive survey was adopted for the study. Data was generated using questionnaire to find out level of exposure and extent of use of search engines and its implications to the research output of post graduate students. Data was finally analyzed using frequency tables and percentages. It was found among many other things that post graduate students are not very much exposed to search engines available in the web; and so do not use it in their various literature search. This was attributed to their poor exposure to the Internet and various available search engines. On this note, it was recommended that the need for use of search engines relevant to their fields must be emphasized and therefore should be exposed to them thoroughly through lecturers, seminars, conference, etc. It was also recommended that postgraduate students should employ self help through frequent use of internet and reading of textbooks to as to be aware of different search engines relevant to their field and then have a quality research.*

Keywords: *Information technology, search engines, higher education, use for research*

I. Introduction

Postgraduate students are basically research students who are in the university to contribute to the body of knowledge existing in the country. Programmes ranging from post graduate diploma, masters and Ph.D in different research interest areas abound in the universities. It is imperative to note that information search is very essential in postgraduate studies; more so is the ability of postgraduate students to effectively search and locate information on the internet. Nworgu (2009) noted that the use of ICT is very indispensable in educational and other research as it makes for a quality research. No educational system can contribute its quota to national development if the quality of its research is poor; this is because education is the most key to the development of any nation. Ali (2004) noted that this development cannot be effectively realized without the effective use of ICT in research. Information communication technology (ICT) is the most powerful tool to carry out literature searches, gather data and write reports (Al-Ansan, 2006). Students frequently do literature based research and sometimes gather and process data so according to COL, 2000 they need to know how to get at the information they require in their various fields; this calls for a good knowledge of different search engines available in the net. It (Henry, 2005) found among many others that the factors that influence information search are emotional reaction to technology, issues of digital divide ICT literacy skills. Ngwuchukwu (2009) noted in a study on ICT use for knowledge societies that some staff who are also postgraduate students lack basic ICT skills which will help in achieving good results in the university. But chief among these is poor knowledge and where to seek for information about search engines. Sayid and Mohamood (2009) noted this during their studies on web based services in university libraries in Pakistan. These authors found out that there are libraries that are web based these ones are typically different from the traditional library. It entails libraries using their websites to provide services to users without their physical presence. The libraries do these through access to online database called search engines.

But the question is, are these searching engines used by these postgraduate students? To what extent are they exposed to these search engines? And how effective are their use to their work?

It has been observed that many postgraduate students spend up to ten years carrying out research, some find it difficult to even complete research thereby abandoning the programme such can be attributed to lack of relevant information for the research which may be associated with poor knowledge on the availability of different search engines on the net which is necessary for their different fields of study.

It was this problem that the researcher wants to address in this study, at least to assess the post graduate level of use of search engines and its relevance to the research output. The purpose of study therefore, is

- i. To find out the purpose for which post graduate students use search engines.
- ii. To find out their various source of knowledge about search engines
- iii. To ascertain post graduates level of exposure to the availability of search engines in the internet.
- iv. To ascertain the extent the use of search engines has facilitated literature search for postgraduate students.

- v. To find out problems associated with the use of search engines for literature search.
- vi. To proffer strategies for effective use of search engines for research.

II. Literature review

The term search engine is related to the internet, which is a fast and effective means of getting to the information that one needed in the web, search engines are designed to put a structure to the avalanche of information in the web otherwise a searcher will be very confused when searching for information in the web. The internet offers an important opportunity to source for materials for research, it has to some extent enlarge search scheme for students especially postgraduate students, technology has made the system of searching information easier than ever before, but it has since increased critical thought in the development of search engines and search strategies so as to enhance validity of search outcome. Ware (2001) discovered that the availability of information in the web are enormous and that anyone can author anything on the internet, so now there is need to be more aware of some search engines that has information in an organized version, some engines have well organized information so there is need to know all these search engines for effective search. Search engines are the tools used to unlock information from the internet, it is a fast and effective means of getting to the information that one needed in the web, just like the content page of a book, the catalogue a book index a journal index and a teacher library provides guide to literature search, a search engine does. But they provide services in different ways. Ware (2005) noted that ability to know and understand the use of different search engines aid students to become independent information users. She went further to say that students have problem using search engines because of lack of knowledge and skills in using them. Understanding now how search tools operate leads to more intelligent search. There are various types of search engines of peculiar nature. Bradley (2004) listed five types and they are as follows;

- i. Free text search engines.
- ii. Index directory based search engines.
- iii. Multi-meta search engines
- iv. Natural language search engine
- v. Resource-or-site-specific search engine.

These search engines work in different forms for example Ware (2001) noted that free text search engines accepts any term a user wishes to search for a free text based search engine gives information broadly on certain search terms for example information seek is a natural language kind of search engine while Hobot gives information on proper names.

Knowledge of search engines in a detailed manner will actually aid a post graduate student into having a qualitative research and also facilitate and increase the rate of research in output in institutions of higher learning and finally adding value to the student's educational career.

III. Methodology

The study was conducted in university of Nigeria, Nsukka Enugu, State, southeast State of Nigeria. A random sampling technique was used to get at the respondents in their hostels and examination classes; 100 questionnaires were distributed while 56 questionnaires were returned; the poor returning of questionnaires was due to time complaint from the postgraduate students and their reluctance in filing out the questionnaire. Data was analyzed using frequency tables and percentages. For purpose of clarity option VME, ME, LE, NE means

- VME - very much extent
- ME - much extent
- LE - less extent
- NE - no extents

IV. Findings and Discussion

Table 1: Purpose for which postgraduate students use search engines

Purpose	Frequency	Percentage (%)
Checking mails	35	62
Sourcing information for research	55	98
Chatting with friends	23	41
Reading news	34	61
Trading	3	5
Entertainment	13	23
For publishing	8	14
Seeking jobs	25	45

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Table 1 above shows the respondents different purpose for using the internet. It further shows the most pressing need for internet use. In the table 98% of the postgraduate students which represents the highest number (55) of postgraduate students indicated that they use the internet to source information for research. This was followed by 62% who use it for checking or reading mails 61% of the postgraduates use it for reading news and seeking for jobs (25). Only 3 representing (5%) out of the 56 respondents use the internet for trading and for publishing.

Table 2: Source of knowledge about search engines

Source of knowledge	Frequency	Percentage (%)
Through information from books	18	32
Through friends	32	57
Through workshops, conferences and seminars	17	30
Through frequent use of internet	36	64

Table two sought to ascertain where the postgraduate students got to know about search engines available in the internet. From the response, it was clear that they get information about search engines more through frequent use of the internet (64%) while the next that rated highest was through friends (57%). The lowest number of respondents (30%) indicated that they get information about search engines through information from books or conferences and seminars.

Table 3: Extent postgraduate students are exposed to these search engines?

S/n	Search engines	Websites	VM E	M E	L E	N E
1.	Electronic libraries Elib	http://www.Elib.org	9	17	10	15
2.	Hum-bul	http://www.hum-bul.ac.uk	1	5	14	30
3.	Alpha search	http://www.alphasearch.com	2	6	13	29
4.	Pinakes	http://www.hw.ac.uk/libwww	2	4	10	31
5.	Bubl Link	http://www.bubl.ac.uk	2	6	7	33
6.	Vlib.org	http://wwwvlib.com	4	7	9	29
7.	Alta vista	http://altavista.com	3	6	14	25
8.	Yahoo	http://yahoo.com	40	10	5	1
9.	All-in-one-search	http://www.all-in-one-search.com	6	7	13	20
10.	Search.com	http://www.telecom.or.Jp/search/searching/com	7	9	10	21
11.	Ask Jeeves	http://www.askJeeves.com	8	4	11	27
12.	Google	http://www.google.com	42	8	-	4
13.	Net-find	http://net.find.com	3	11	13	22
14.	Galaxy trade ware	http://www.galaxay.com	2	5	10	30
15.	Hotbot	http://www.hotbot.lylos.com	3	4	13	28
16.	Lycos	http://www.lycos.com	1	2	14	30
17.	Northern light	http://www.northernlight.com	1	1	11	33
18.	People finder	People search	3	1	15	29
19.	No search	http://www.nosearch.com	3	-	11	33
20.	Web crawler	http://www.webcrawler.com	1	7	11	28
21.	Infoseek	http://wwwgo.com	3	5	13	26
22.	Looksmart	http://www.looksmart.com	3	3	11	31
23.	Go to	http://www.goto.com	3	14	10	23
24.	Excite	http://www.excite.com	1	2	12	32
25.	Dog pile	http://ww.dogpile.com	-	5	19	34
26.	Infenice find (now infind)	http://www.infind.com	-	6	8	35
27.	Meta crawler	http://www.metacrawler.com	2	3	12	32
28.	Inteliseek	http://www.intelliseek.com	3	5	9	31
29.	Savvy search	http://wwwsavvysearch.com	2	5	10	32

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The response on table 3 revealed the extent to which postgraduate students are exposed to different search engines available in the internet.

The response indicated that a very many number of postgraduates are not very much exposed to these search engines except yahoo and google.com (40 and 42 respectively) which has the highest number of respondents. Again on the table, it could be deduced that the postgraduate student are just exposed to two out of twenty-one search engines brought out in the course of the research work.

Table 4: Extent the use of search engines has facilitated literature search

S/n	Search engines	VME	ME	LE	NE
1.	Electronic libraries Elib	9	12	14	16
2.	Hum-bul	1	2	17	29
3.	Alpha search	1	3	12	32
4.	Pinakes	1	2	11	31
5.	Bubl Link	1	4	9	33
6.	Vlib.org	1	7	10	30
7.	Alta vista	-	6	11	28
8.	Yahoo	32	9	6	5
9.	All-in-one-search	5	8	7	25
10.	Search.com	6	4	14	24
11.	Ask Jeeves	5	4	11	27
12.	Google	39	9	2	6
13.	Net-find	4	7	10	28
14.	Galaxy trade ware	2	3	8	35
15.	Hotbot	1	6	8	33
16.	Lycos	1	3	8	36
17.	Northern light	1	-	11	34
18.	People finder	1	4	10	33
19.	No search	2	1	8	36
20.	Web crawler	3	5	8	31
21.	Infoseek	3	7	10	30
22.	Looksmart	1	3	10	33
23.	Go to	3	7	9	30
24.	Excite	2	3	8	35
25.	Dog pile	-	3	10	34
26.	Infenice find (now infind)	1	2	7	37
27.	Meta crawler	3	2	12	31
28.	Inteliseek	2	4	7	34
29.	Savvy search	2	3	12	30

The response on this table is a consequence of table 3 results. Since the students are only exposed to yahoo and Google. Then it is only these search engines that they use to a very great extent in their research activities (32.39), respondents use yahoo and google while the highest number of respondents do not use al other search engines.

Table 5: What problems inhibit your effective use of search engines?

s/n	Strongly agree	Strongly Agree	Agree	Disagree	Strongly agree
1.	Lack of exposure to the availability of search engines	28	7	12	3
2.	Lack of skills on using the internet	7	15	17	13
3.	Lack of skills on websites search	9	16	13	9
4.	Problem accessibility to internet	16	21	8	6
5.	Incessant power supply	19	21	4	6
6.	Slow servers	22	22	4	4
7.	Any other specify				

Table 5 is on problems that inhibit the use of search engines for literature search. It is revealed that lack of exposure to the availability of search engines is the highest problem that inhibit postgraduates students use of

search engines for internet search as 28 of the students agree to that while 22 students strongly agree that slow server inhibit the use of internet followed by incessant power supply and problems of accessibility to search engines. This is indicated by the number of students that responded to the questions.

Table 6: Strategies to put in place to ensure the effective use of internet

S/n	Option	Frequency	Percentage (%)
a.	Exposing students to various search engines through lectures and seminar, conference	46	82
b.	Self-help through frequent use of the internet.	33	59
c.	Self studying of ICT related textbooks	31	55
d.	Discussion with research colleagues on search engines	33	59
e.	Making internet services available and free in the university	8	14

According to the 82% response of postgraduate students, Table 6 shows that the best strategy to use in making sure that postgraduate students use search engines very often is by exposing these students to the availability of search engines through lectures, seminars and conferences, the next is by self help and through discussion with research colleagues which represents 59% of the respondents view. This was followed by self studying of ICT related textbooks and lastly making Internet available & frees the university.

V. Discussion and Implications

A web search engine is designed to search for information on the worldwide web so says Tim Berners in Wikipedia (2010). It is meant to aid research and that is the reason postgraduate students need to use it extensively in order to make research progressive.

The result presented on the tables reveals that the most pressing purpose of using the internet by postgraduate students is for research; this indicates the need for these students to know how the different search engines existing in their various fields of study. Questioning further on the level of knowledge and exposure to search engines, the study reveals that their highest point of knowledge about search engines is through friends and through frequent use of the internet. This implies that the universities in their courses on use of ICT for research does not include this aspect as a way of helping these students, this according to Ngwuchukwu (2009) is very important for the growth of research in various fields.

The consequence of not getting information from appropriate means is enormous as it leads to poor exposure to the available search engines in the net. In fact, due to the fact that information is got only through friends a greater number of respondents are exposed to a very much extent yahoo and google which is two (2) out of 29 search engines in this study. Bradley (2002) was of the view that there are over 20,000 search engines that one can use to get available information yet in the university only two search engines are popular, this implies that research work will be delayed. Furthermore, due to the fact that they are not well exposed to these search engines they are not effectively used in carrying out research work; this has implication for a postgraduate studies. Ware (2005) noted that ability to effectively use search engines aid students to become good and effective researchers. On asking, the best way to handle the problem on poor knowledge about use of search engines, the postgraduate students recommended that the university should expose students to these search engines through lectures, seminars, conferences and advise the postgraduates to adopt self help approach through frequent use of interest and discussion with research colleagues, this was in line with Henry (2005) and Ngwuchukwu (2009) who understood that that ICT literacy skills is very important for use of internet and should be got through seminars, lectures and conferences or even self help.

The ability to search and locate information is very important skill for postgraduate students; the number of information in the net has been arranged by experts to help researchers so there is need for its full utilization by these researchers. If the issues rose in this research work is addressed then postgraduate students will be happy and efficient researchers.

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