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AWARENESS AND USED OF SEARCH ENGINES BY UNDERGRADUATE STUDENT IN DELTA STATE UNIVERSITY, ABRAKA NIGERIA

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ABSTRACT

The study investigated the awareness and use of search engines by undergraduate students in Delta State University, Abraka. Case study design was used for the study. The population comprised one thousand five hundred and thirty nine (1,539) students in the Faculty of Social Science in Delta State University. The sample of the study was 154. Five research questions guided the study and two hypothesis tested at 0.05 level of significant. One instrument titled search engine use questionnaire (SEUQ) was used for the study. Percentages and mean rating were used to answer research questions. Chi Square and Anova were used to test hypotheses. The major findings of the study include: Undergraduate Students level of awareness of search engines was low in Delta State University. The test for hypothesis shows that there was a significant difference from the respondents awareness of search engines according to their departments. Google was the most frequently used search engine by the undergraduate students in Faculty of Social Science. The features of search engines used more by undergraduate students were five from the ten items listed. The benefits undergraduate students derived from search engines were all the listed benefits showing that search engines have great assistance to them. The greatest problem faced with undergraduate students was information overload. Based on the findings, the implications of the study were pointed out, and it was recommended that : more practical aspect of search engines

should be employed through institutions bulletins and workshop; efforts should be made by the university authorities to minimize the challenges faced by undergraduate students with reference to search engines.

CHAPTER ONE

INTRODUCTION

The Internet is one of the most significant technological developments of the 20th century and it is the world's most efficient means of communication (Burton, 2011). Since the inception of the Internet, more information is available to people. The Internet is seen as the network of inter connected computers. In the Internet, files from website(s) are contained, every website is also identified using an address for easy location of the website. For instance Google (www .google.com), is a search engine. The search engines crawl through the websites for information, and then through special algorithm provides organized results for search queries.

According to Ross (2012), search engine is a computer software, designed to help users locate information available on the web by selecting categories from a keywords or

phrase. Search engines are good for finding specific information. It assists one to retrieve a lot of relevant sites, because there are so much information on the web.

Several authors have given number of search engines in the Internet. Karl (2012) stated that there are 100 search engines, to Lauren (2012), there are 100 search engines, to Reith (2011), there are 40 search engines while to Kim (2013), there are 25 search engines. Hence there is no agreement on the number of search engines.

Paul (2014) noted that there are 7 major search engines. These are: Google, Google scholar, Bing, Yahoo, Blekko, Ask and web crawler. Each of the major search engines, on which the researcher will focus provide some characteristics that enable users get peculiar benefits. In using the major search engines according to Paul (2014), Google is very useful for online shopping, location and posting of articles on different subjects. Google scholar helps an individual to search through, thousand of guaranteed scholarly articles and research report. Bing contains more of concepts. Yahoo helps to get fast access to

translation on institution. Blekko contains information on government sites, as well as different postal codes. Ask contains a lot of magazines, and also provide free social media sites. Web crawler contains more of scientific journals, articles and also different scientists (Paul, 2014).

These major search engines According to Zhou (2005), contain some features like e-mail which will enable users to get information. They also contain local and international news, as well as health information, news and jobs. The features of search engines are also used for other purposes like flashy advertisement and entertainment.

Gile (2001) noted that search engines are used by huge range of people, for a wide variety of purposes, and they have different perception of search engine nature. Moses (2012) stated that undergraduate students are not aware of the other major search engines apart from Yahoo and Google as well as the benefits contained in them. This will reduce the use of the other major search engines (Moses,2012).

In using a search engine, an individual is not searching the entire web, but a portion of the publicly available pages on the web. Search engines are very important when it comes to communication, and has even broken the barriers of distance. According to Brabozon (2001), an academic institution can communicate with its students with their website that are picked by search engines.

Jagboro (2003) opined that search engines serve as source of information to students, researchers and lecturers in higher institutions of learning. This will be an avenue, through which researchers can access past and current research publications and make adequate use of them. Students can also access information on various courses offered to them in the institution. This will make them have different information materials for their assignments and research work. Search engines also provide easy access to some government documents, and legislative materials like journals, magazines and newspapers. Search engines provide e-print in details and other types of digital works by

authors in an academic department, school or institutions which comprise of electronic theses and dissertations and presentations by authors of different institutions. This has enhanced the potential for wide spread online search and retrieval of electronic content easily.

The aim of search engines according to Butters (2009), is to search and navigate, meaning that a successful search engine should support its users in an efficient search for contents, and bring detailed information resources with ease to various undergraduate students. Mark (2012) noted that the search engines available are very many but due to lack of awareness, students do not exploit them. To know about various search engines is very important because no two search engines are exactly the same in terms of size, speed and content, and not every search engine offers you exactly the same search options. Therefore a search is going to be different on every search engine an individual or student uses. Hence for a researcher or student to get the best results for information search, he needs to know and be conversant with various search engines.

The search engines will be useful to students in Delta state university. Delta State University, Abraka campus, has many business centers connected to the Internet that will be of great help to students in terms of information for their course work and research and be of great importance to students in faculties. Faculty of Social Science was used for the study and it contained seven departments, this will help students know the other major search engines and it usefulness.

Jonan (2010) stated that Internet and the various search engines, have brought information explosion, which means that there is large scale, rapid and spectacular expansion of information. These too much information may confuse students and other researchers on the information to use.

An important factor in the use of search engines is awareness. According to Taiwo (2009), awareness means knowledge. Lack of awareness hinders the use of the various search engines. Lack of awareness of the various search engines, among undergraduate students in higher

institution will bring to its non-usage (Taiwo 2009). Doris (2012) noted that a good rule of awareness is that someone needs to be expose to services, several times before he/she is fully aware of the service. Though some researchers have carried out studies on awareness and use of search engines by undergraduate students in developed countries, according to Mark (2012), undergraduate students in developing countries like Nigeria, students are only aware of Google and Yahoo, and little has been done on the awareness and use of other major search engines by undergraduate students. It is against this background that this research is based on determining the awareness and use of search engines by undergraduate students in Delta State University, Abraka.

Statement of the Problem

Search engine makes it possible to find specific information, amongst the huge mass of information available on the web. According to Paul (2014), the major search engines include; Google, Google scholar, Bing, Yahoo, Blekko, Ask and Webcrawler.

Each of the search engines provide some features, and enable the user to derive peculiar benefits. Many years ago, Haubitz (2012) opined that search engines have been effectively utilized by students and researchers in developed countries. In countries that are developing like Nigeria, Mark (2012) asserted that, many students and researchers are aware of only two search engines such as Google and Yahoo. Users depend solely on them for whatever information they need in their academic work, than explore better options from other search engines.

Observation and interaction with undergraduate students in Faculty of Social Science, Delta State University, Abraka campus shows that significant proportion of students still consult the staff in DELSU portal (Internet centre), to assist them in searching for information. This suggest that they might not be sufficiently aware of these search engines and consequently may not be exploiting their features and the benefits that come from the search engines. This work therefore seeks to determine the level of

awareness and use of search engines by undergraduate students in Delta state university.

Research Questions

The following research questions were formulated to guide the study.

1) What is student's level of awareness of various search engines?
2) How frequently do undergraduate students in faculty of social science use the different search engines?
3) What features of search engines do the students use?
4) What are the benefits students derive from the search engines?
5) What are the factors limiting the students' use of search engines?

Hypotheses

The following hypotheses were formulated to guide the study.

1) The mean rating of students' level of awareness of the various search engines does not vary significantly among the various departments in the Faculty of Social Science.

2) The percentage (%) of students who use search engines on weekly basis in the various departments does not vary significantly.

Research Design

The research design used for this study is a case study. According to Nworgu (2006), a case study involves only a single unit or very few units for study. This design is considered appropriate for the study because, it concentrates on a faculty that is, faculty of Social Sciences in a university. Indebt data will be collected from only the students of the faculty of social sciences, Delta state university, Abraka.

Population

The population for this study consisted of 1,539 undergraduate students from the Faculty of Social Sciences and all the seven departments in it, in Delta state university, Abraka. Accounting and Finance has population of two hundred and thirty one (231), Economics two hundred and six students (206), Business Administration two hundred and fourteen students (214), Geography and Regional Planning two hundred and twenty seven (227),

Mass communication two hundred and forty three (243), Political science two hundred and twenty nine students (229) and Sociology and Psychology students one eighty nine students (189), in the 2013/2014 academic year.

Sample and Sampling Techniques

A sample of 154 respondents (students) were selected for this study. This represents approximately 10% of the target population of students in the Faculty of Social Sciences. The sample is suitable because Seaberg (1988) and Grinnel and Williams (1990) suggested that, in most cases a 10% sample should be sufficient for controlling sampling error.

Proportionate stratified random sampling balloting method was used for this study. The faculty that was selected from the university is Social Sciences. This faculty was chosen because it is common in every university and suitable for the study. The sample size for the faculty was got using 10% from each of the departments' population. The sample size for each department is presented as follow: Accounting and finance 23, Economics 21,Business

Administration 21, Geography and Regional planning 23, Mass communication 24, political science 23 and sociology and psychology 19. The total sample was 154.

Research Question 1

What is students' level of awareness of search engines?

Table 1. Mean Scores of Respondents Awareness of Search Engines

	N	Mean x
Level of awareness	154	2.39

Table 1 above shows the mean value of 2.39 on respondents level of awareness of search engines. This falls within the low awareness category. It was therefore decided that students' level of awareness of the search engines was low. See appendix E,p.97 on SPSS Output showing the distribution of search engines awareness scores of all

respondents. Also the SPSS output for socio demographic information is in Appendix E,p. 97.

Research Question 2

How frequently do undergraduate students in Faculty of Social sciences use the different search engines?

Table 2. Percentages Responses on the Frequency of Use of Search Engines

S/N		Never		Once a Month		Once in Two weeks		2-3 Times a week		Daily	
		N	%	N	%	N	%	N	%	N	%
1.	Google	8	5.2	2	1.3	4	2.6	18	11.7	122	79.2
2.	Google scholar	59	38.3	7	4.5	7	4.5	71	46.1	10	6.5
3.	Ask	74	48.1	8	5.2	66	42.9	6	3.9	0	0.0
4.	Bing	69	44.8	68	44.2	8	5.2	7	4.5	2	1.3
5.	Yahoo	68	44.2	16	10.4	13	8.4	33	21.4	24	15.6
6.	Blekko	72	46.8	11	7.1	8	5.2	17	11.0	46	29.9
7.	Web Crawler	64	41.6	23	14.9	21	13.6	21	13.6	25	16.2

Table 2 above shows that of the 7 search engines listed, Google was the most frequently used (79.2%). This was followed by Google Scholar which is close to half (46.1%) of the respondents who use it as many as 2-3 times per week. For the rest of the search engines, greater proportion of the respondents indicated that they never used them as shown by their respective percentage response; Ask (48.1%), Bing

(44.8%), Yahoo 44.2%), Blekko (46.8%) and Web Crawler (41.6%). It could be seen that greater proportion of the search engines were not frequently used by the respondents.

Research Question 3

What features of search engines do the students use?

Table 3. Mean Responses on Features of Search Engines Used by Undergraduate Students

S/N	Features of search engines	N	Mean x
1.	Play Game	154	1.98
2.	E-mail	154	1.74
3.	Internet Searches	154	1.57
4.	Travel Information	154	1.53
5.	Weather	154	1.51
6.	Health Information News	154	1.45
7.	Maps	154	1.45
8.	International News	154	1.44
9.	Shopping and Jobs	154	1.41
10.	Stock price chat	154	1.36

Table 3 shows the mean responses on the features of search engines used by students. The mean responses of 1.5 and above indicate that students agree that they use the features. These features include; play game (Mean =1.98);

E-mail (Mean = 1.74), Internet searches (Mean = 1.57), weather (Mean = 1.51) and travel information (Mean =1.53). However, as indicated by mean response below 1.50, students disagree that they use search engines. These include; International News (Mean = 1.44), Health Information News (Mean = 1.45) , shopping and jobs (Mean = 1.41), stock prize chat (Mean = 1.36) and maps (Mean = 1.45).

Research Question 4

What are the benefits students derived from the search engines?

Table 4. Mean Responses on the Benefits students derived from the use of search engines

S/N	Benefits of search engines	N	Mean x
1.	Vast amount of information	154	3.73
2.	Online library resources for research	154	3.71
3.	Availability of information	154	3.69
4.	Ability to work in location	154	3.65
5.	To obtain more up-to-date resources	154	3.62
6.	Individuals get connected to more and diverse items.	154	3.62
7.	Electronics resources save time in looking up information and retrieving information	154	3.56
	Valid N (listwise)	154	

Table 4 shows that all the listed benefits were accepted by the respondents as that which they derived from their use of the search engines as the mean ratings were all above the cut-point value of 2.50. However, "vast amount of information" (mean = 3.73), "online library resources for research" (Mean = 3.71) and availability of information (Mean = 3.69) were the three most highly rated benefits. This is contained in Appendix F, p. 98.

Research Question 5

What are the factors limiting the students' use of search engines?

Table 5. Mean Responses on the Factors limiting the use of Search Engines

S/N	Factors limiting the use of search engines	N	Mean x
1.	Information over load	154	3.58
2.	Produces a large mass of irrelevant information	154	3.57
3.	Download delay	154	3.53
4.	Failure to find information	154	3.53
5.	Power Outages	154	3.51
6.	Inadequate Search skills	154	3.50
7.	High cost of access	154	3.50
8.	Inaccessibility of some websites	154	3.48

9.	Lack of search skills	154	3.46
	Valid N (listwise)	154	

Table 5 shows that all the factors listed were accepted as problems limiting the use of the search engines. This is shown by the fact that all the mean ratings were greater than the mid-point of 2.50. What seems to be greatest challenge among the listed problems was information overload (Mean = 3.58) while the least was lack of search skills (Mean = 3.46). This is shown in Appendix G,p. 99.

Hypothesis One

The mean rating of students' awareness of the various search engines does not vary significantly among the various departments in faculty of social science

Table 6. Analysis of Variance on Students' Awareness of Search Engines by Departments

Sources of Variance	Sum of Squares	df	Mean Square	F	Critical F-ratio
Between Groups	8.271	6	1.379	3.87	2.27
Within Groups	52.352	147	.356		
Total	60.623	153			

*Significant

Table 6 shows that there was a significant difference in mean score of the respondents' awareness of search engines according to their department, F(6/147) = 3.87, Critical F-ratio (2.27). This Critical F-ratio was less than the stipulated significance level of 0.05, the null hypothesis was therefore rejected. See Appendix H,p. 100.

Hypothesis Two

The frequency of students' utilization of search engines across various departments does not vary significantly

Table 7. Summary Chi-square analysis on Percentage of students' use of Search Engines by Departments

Search Engines	**Departments***	**Df**	**chi-square (X^2)**	***Critical (X2)***
Google		24	88.02	36.42
Google Scholar		24	164.46	36.42
Ask		24	137.29	36.42
Bing		24	103.16	36.42
Yahoo		24	87.53	36.42
Blekko		24	47.53	36.42
Web Crawler		24	109.01	36.42

*Economics, Geography & Regional planning, Accounting & Finance, Business Administration, Mass Communication, Political Science, Sociology & Psychology **significant.

Table 7 shows that there was a significant difference in frequency of students' utilization of search engines across departments, as all the critical x^2 across all the chi-square values were less than the stipulated 0.05 significance level. Therefore, the null hypothesis was not supported. It was concluded that the frequency of students' utilization of search engines differed significantly across departments. Details of observed and expected frequencies and chi-square analysis can be found in appendix I, p.101 Showing the SPSS output.

Conclusion

From the interpretation and discussions of results of this study as they affect the research questions and hypothesis, the following conclusions were made.

- This study has shown that undergraduate students in Delta State University have low level of awareness of the major search engines and the students are confused toward the understanding of search engines and its concept.

- Undergraduate students made frequent use of Google 3 times a week due to the familiarity of Google, and also depend solely on e-resources in research and assignments. Students in Delta State University use Google very often and derived pleasure in using it. Many of them make more use of the email with their mobile phones in search for information.

Implications of the study

The results of this study have some obvious educational implications.

- The study reveals that undergraduate students have low level of awareness of search engines. It implies that more practical aspect of search engines should be employed through institution bulletins, industrial training and workshop, should be promoted to bring about greater awareness needed to improve the use of search engines in Nigeria universities.
- The study reveals the challenges faced by undergraduate students. This implies that efforts should be made by the

university authority to minimize the challenges faced by undergraduate students with reference to search engines.

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