THE USE OF INTERNET SEARCH ENGINES AS PRECUSORS FOR EFFECTIVE COMMUNICATION OF KNOWLEDGE

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Abstract

This paper examines the use of internet search engines as precursors for effective communication of knowledge. It discussed how internet as one of the ICT tools can be explored using search engines for effective communication of knowledge. The quest to search for literature and information for academic and research purposes has increased the use of search engines. As a mechanism for effective operation of internet and easy retrieval of information, allows knowledge managers to serve users better. This article define internet, communication of knowledge and search engines. It identifies various categories of search

engines and some helpful sites. It discussed the need for knowledge of search engines. It identified challenges and prospects of using search engines for effective communication of knowledge.

Introduction

Internet is a computer system that allows millions of computer users around the world to exchange information on the net. In the view of Daniel (1999) Internet is a meta-network, a constantly changing collection of thousands of individual networks intercommunicating with a common protocol. However Madu and Ezeani (2010) defined it more explicitly in two related ways thus: it is the communications network, which is interconnected local and wide area networks, telephone lines, cables, fibre-optics and satellite links which provide the medium for the transfer of information around the internet and the computers, it involves also computing sites which actually hold and process the data which is available to be transmitted across the network. The internet is a communication system that creates room for internetworking of millions of individuals in millions of places. Once you are internet connected, you are on to global information networking. This could be right in your house, office or wherever; in this way Internet allows users to communicate with each other on a variety of subjects ranging from recreational, academic, corporate, and for personal purposes. The information on the internet is so vast on all subject areas and from many sources and these information appear also in different formats which can be dispersed to anybody anywhere in the world. Information delivery here is done through electronic mails (e-mails).

Aina, Mutula and Tiamiyu ((2008) explained that the Internet provides many facilities including world wide web. The web refers to the collection of information that is accessible on the Internet. The information is in form of text, pictures and sound which are arranged logically and stored on computers known as web server. The web is a very popular service on the Internet. Internet applications such as the web are based on the concept of client/server architecture, some applicationprogramms act as information receivers (clients).

Utilizing the World Wide Web in the most efficient manner is a necessity in today's information age. Udensiand Akor (2014) stated that internet search engines are tools used to search for the location of information on the internet. Locating the right information from the net is a herculean task for anybody. The information manager needs to be equipped with these tools so as to be able to help the library and information centre user locate his or her desired information from the internet. The search engine searches for information from the World Wide Web which contain multitude of different subject database search engines. Using the search engines users can make different enquires on different subjects and a number of related subject areas will be displayed; the user then selects the right subject or title desired. The search engine connects the user and the database and this affords the user the opportunity to type in his or her search term or word. This is then submitted and families of items are relayed as stated above and a choice is made by the user.

If used properly, internet search engines can be a valuable asset to a knowledge manager. It is incumbent upon the knowledge manager, however to learn as much about these engines as possible. And to convey this information to his or her clients, many of whom may still not be aware of the proper use of these engine.

Communication of Knowledge Using the Search Engines

Communication of knowledge can be described as how information resources generated can be packaged, delivered and retrieved from any source irrespective of time and space from any information Centre. Atuh (2009) aduvocated that, communication of knowledge is the strategy that any information centre can employ to carry out its functions.Abubakar (2008) explains that, communication of knowledge referred to a mechanism that can be employed to send various copies of information resources from one location to another and it can be through electronic or non-electronic means as the case may be. Ellis (1975) in Atuh (2010} maintains that, communication of knowledge has given an active, imaginative support to the instructional and research needs of users. Therefore, it is the core responsibility of knowledge managers to assist their users to access information through search engines to ensure effective communication of knowledge. The search engines cannot operate independently except with the help of internet.

The first search engine to use is a "spider" to roam the Web searching for pages that actually indexed the full text of a page was WebCrawler in 1994. Several search engines followed, including Lycos, Infoseek, and AltaVista(sonnenreich and Macinta, 1998). Neil (2010) evaluated six major search engines, and the six selected are agreed upon by almost every writer on search engines to be the major players in the business of indexing the web. The six chosen are: AlterVista; Excite; HotBot; Infoseek; Lycos; and Northern Light. The introduction of the latter in 1997 helped to only further blur the distinction between finding free Internet resources and fee-based resources since, in addition to indexing the Web. Northern Light also sells copyrighted articles from various sources for fees ranging from one to four dollars. However, it did serve to inform the less informed of a basic premise that most librarians have known for some time: Information is not free, and "everything" is not available on the internet.

While trying to counter the misinformed argument that "everything is on the web" when attempting to convince his/her CEO that a value-added service, such as The Dialog Corporation of Reed Elsevier's LEXIS-NEXIS, is necessary for a corporate library, a librarian is also faced with the task of deciding when, indeed, Web search is appropriate for a query. By the time a question reaches the librarian, it is very likely that the questioner already given a search engine or two to try. And who could blame them? Thanks to shrewd marketing agreements with both Microsoft and Netscape, searching the Web is as easy as clicking a search button on one's favorite browser. Even without that temptation, the average user is likely to already know about search engines just based on advertising. Most of the major engines now advertise either in print or on commercial television, and thanks to Yahoo!'s incorporation of the AltaVista engine into its site, a user could start a search of the entire Web (or, at least, AltaVista's index of the Web) without leaving the Yahoo! Site (Sonnenreich and Macinta, 1998). (As of the writing of this article, Yahoo!Later shifted to using inktomi engine, which is the back-bone of the HotBot service.) Considering that Media Metrix , The PC meterCompany, placed Yahoo! On top of its listings as the most visited search-related site while at work (1998), even users who go nowhere except for Yahoo! In order to start an Internet search will likely stumble into a major engine like AltaVista sooner orlater.

Public awareness engine is likely to grow. A spring 1997 research study by CommerceNet/Nielsen Media shows that among "frequent Web users, seventy-one percent most often use search engines to find Web sites, according to a press release posted on theWeb (CommerceNet research center, 1997). Therefore, since the question is not if but when a corporation's employees start using the search engines to find information on the Web, how can a knowledge manager hope to properly harness use among workers? The key is communicating the proper usage of search engines to all likely users, which is easier said than done.

If anything, the sheer number of articles on using search engines creates more chaos than assistance. Review any popular computing magazine and you will likely find that within the past year at least one article appeared in each magazine on using search engines. The problem with such articles, not to mention books on the topic, is that they are quickly dated since the search engines change at dramatically fast rates in their constant attempts to outdo the others. The two largest search engines have undergone some changes, albeit cosmetic rather than functional. AltaVista changed the look of its opening page entirely in early June 1998 by adding one using the LookSmart service. HotBot introduced a new look in May 1998, finally jettisoning the familiar green screen for a somewhat more subdued look. Although materials in books will certainly be helpful for a general understanding of search engine technology an basic techniques common to all of them (such as putting a + before a term to guarantee the engine will include the term in its results), it is unlikely you will convince any of your casual users to read a book on searching the Internet.

Some Helpful Sites

Fortunately there are several sites on the internet itself that do an admirable job of differentiating the search engines and give proper strategies to use. Among them are Greg Notess's "Search Engine Showdown" site at http://imt.net/~notess/search/index.html and the "Internet Search Engines" page at theHekman Library of Calvin College at http:/wwwcalvin.edu/library/ghsearch.htm. Both use tables to compare the search engines, including their use of Boolean operators, filed searching capabilities, and other factors. More importantly, both sites have, so far, have remained updated. (I prepared two similar comparison charts for the Dominican University Library beginning in 1996.

Larger sites have not been blind to the importance of searching the Web, either. The popular About.com (formerly the mining company) site has a frequently updated "Web Search" site devoted to engines and other Internet searching tools at http://websearch.about.com, as does the Ziff-Davis "Web Search User" site at http://www.zdnet.com/products/searchuser.html. Although users may not be interested in the site, every knowledge manager who wants to remain abreast of the ever-changing world of search engines should be required to check the very valuable information at Danny Sullivan "Search Engine Watch" page at http://www.searchebginewatch.com, which is affiliated with Mecklermedia.

Knowledge of Search Engine

Knowledge managers owe it to their constituency to help them become as accurate as possible using search engines. Let them know the difference between Alta Vista's simple search mode and advanced search mode. For broad searches where a few good hits will do just fine, the built-in relevancy ranking in the simple search work, but using the advanced search page for field searching and Boolean operators is important too. Do they realize using Boolean operators will turn offExcite's concept-concept based relevancy? The "More Search Options"bottom in HotBot (formerly labeled SuperSearch until the resent revamping) Should be a required click of the mouse before inputting any terms to open a myriad of options. Do the people researching events realize that HotBot and Infoseek have the ability to restrict searches specific domains? Are people doing competitive intelligence? Rather than going to a competitor's Web site and aimlessly clicking away, do they know AltaVista's and HotBot can have searches limited to a specific company's Web site using the "host" or "domain" search in AltaVista and the "domain" search in HotBot? (This won't reveal any trade secrets of course but can still save some time wandering around a site that doesn't have its own search engine.) All of these techniques can be found on help screens, and the old internet

axiom of RFTM applies to these search engines, but how many users really check the help screens? If nothing else, valuable time is saved when doing an accurate search, but there may be other dividends, too. Many of the same techniques learned on the major engines will work when searching a corporate Intranet that has a search engine.. AltaVista, Excite, and Infoseek all market their search engines for Intranets, and there are many others in the market. Furthermore, once knowledge of a search engine operration is known, the ability to use HTML to its greatest advantage is revealed.It is necessary, for example, to realize the importance of the <TITLE> field in HTML coding. For one thing, search engines tend to rank the title field higher in relevance bur, even more importantly nothing stands out more than a misspelled title (assuming one is able to retrieve it, since it is also the line displays most prominently in search engine results. Try a search on AltaVista for **title:management** or **title:university** and to see how many hits you get. (For that matter, try a search title: "**knowledge management**" in AltaVist.

If your site is open for all to see and search, such tips are even more important Learning to "massage" the engines has become an industry in itself: a look at **http//www.webposition.com** will show one company trying to make a business of it with the Web Position Analyzer software package. A similar package is Position Agent offered at **http://www.positionagent.com**.

The use of the +and-for inclusive/excluding terms as well as double quotation marks for phrase. Is so common today that most semi-experienced searchers know of their use.less likely in the knowledge that there is a NEAR operator in AltaVista that searches within ten word of the two terms entered. The most value time-saver however is eliminating the COM sites in engines(such as AltaVista and Hot Bot) that allow it or limitingof a site such as ORG or EDU in engines such as Info seek or Lycos pro. To eliminate a COM sites may very well

eliminate some perfectly valid hits but it will also eliminate a number of irrelevant hits of scholarly topics. Working in an academic environment, A web search on WOMEN IMAGINATION unfortunately led to some racy hits. ("More women here than in your wildest imagination!") Getting rid of the .COM sites helps considerably. Field searching in general is probably the best advice any knowledge managers can give to a client. Ran Hock (1998) gave the most recent detailed overview of field searching, and this was another case where constant checking of the help screens was in order.

Prospects of Search Engines For Effective Communication Of Knowledge

Search engines can provide opportunities to develop and improve information services. Internet search engines are drastically changing the way users search for information. In order to serve users effectively information centres are providing computers, internet and internet access as well as educating patrons on how to use search engines for their information needs. With the presence of internet facilities in information Centres , users through search engines offer opportunities for young people to access all kinds of information.

Provision of user friendly interface with high speed access to relevant and reliable content, libraries are able to keep pace with technological advancement and remain relevant to users. Google books have the potentials to offer significant new opportunities for information centres. Digitalized copies of books could serve as a replacement for lost or damaged books and accessibility for disabled users could be improved.

The popularity of the search engines has made users to be more current on issues affecting the society. This enable the patrons to know when and why, they need information, and where to find it, how to evaluate, use and communicate it in an ethical manner. Search

engines has great potentials for making users information rich and the amount of information on the internet could play an essential role in society advancement.

Challenges of Using Search Engines for effective Communication of knowledge.

In as much as search engines are very crucial in the operation of internet as well as effective communication of knowledge, they are not without hurdle as stated below:

- Online information: not all online information can be accessed through general search engines. Information Centres are equipped with services that can explore the "deep web" which is not generally covered by search engines like Google or yahoo.
- The over reliance on internet search engines for all information could negatively affect informationCentres and their services. This entails losing users.
- Lack of computer literacy: Some officers are not vast in internet knowledge therefore; do not know the importance of search engines for their work. However depend on the tedious and time consuming traditional method of rendering services to users.
- Some information officers are contented with the few search engines they know. Therefore, careless to look for more search engines to ensure effective service delivery to users.
- Most search engines exist only as encoded form, requiring specific software to bring to life and make them fully usable.
- Search engines, if not used properly, can produce an extraordinary number of irrelevant lists.

Recommendations and Conclusion

The roles of search engines are crucial for maintenance of data in electronic form. Search engines contain current information; therefore users are beneficial of all kinds of information at no cost. Based on the above discussions, the following recommendations were made.

- Information literacy classes should be organized for information officers to have practical experience using internet search engines.
- Knowledge managers should provide online instruction for good search strategies on their site or in leaflets made available to information seekers.
- Knowledge managers should learn and equip themselves with the knowledge of modern tools used in information service delivery for effective discharge of their duties. Otherwise, they may stand the chance of losing their relevancy in information service delivery.
- Information Centresshould be connected to internet to allow patrons to have easy access to current information through search engines.
- Knowledge managers should be allowed to attend workshop and conferences. This will help them to learn new skills on search engines for effective service delivery.

Conclusively, search engines are life wire in internet operation, therefore to ease and facilitate service delivery by knowledge managers they should be utilized.

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