

EVALUATING ONLINE DATABASE SELECTION INFORMATION RETRIEVAL: a Study of Users of Netlibrary, Kashim Ibrahim Library, Ahmadu Bello University Zaria

BY

John A. Ikwe,

Kashim Ibrahim Library, Ahmadu Bello University, Zaria

Abstract

The paper examined the problems associated with selection and access to online databases by users of Net library, Ahmadu Bello University, Zaria. The survey research methodology was adopted while 250 questionnaires were used to elicit information from respondents who consisting of both undergraduate and post graduate students. The conclusion of the study show-cased, not only the importance of databases as a relevant component of the economy, but as a means to tracing information by users. It recommends the reduction of the cost of printing from ten naira to five naira, allowance for the use of storage devices, as well as provision of more physical facilities.

Introduction

A database is a collection of interrelated information managed and stored as a unit of usually on some form of mass storage system such as magnetic tape or disc. Databases contain the information that application packages use. Server databases contain collection of tables, views, indexes and stored procedures. Each application is typically designed so that it connects to

its own database. A single server system can support multiple databases up to as many as 32,767 databases per Server. The maximum size of a database is 1,048,516TB, (www.windowstpro.com).

A database is structured to facilitate the search and retrieval of information contained in it, (www.svindowmindwrap.com/infoblurbs/htrn). Each database has its own search engine and one cannot access

un-related database through a common search engine like Google or Alta vista.

Brief on A.B.U. Netibrary

The NetLibrary, Ahmadu Bello University, Zaria is a product of MTN-Nigeria Foundation Project. It is a way of paying back to the community what support and patronage the company has received from the Nigerian community. To facilitate the implementation and

actualization of this objective, the company is said to earmark a continuous one percent profit after tax solely dedicated for that purpose. Besides education, other areas in which MTN has stretched its hand in helping the Nigerian community include the health sector, poverty alleviation, and social enhancement etc.

In the educational sector the "Schools Connect" and "Universities Connect" are such typical projects embarked upon by MTN in order to aid sound education delivery through access to digital resources world wide .The establishment of the Netlibrary in Ahmadu Bello University through the University Connect Project marks the second of its type in Nigeria. The first project was the University of Lagos whose Net Library was commissioned in December 2005. The Ahmadu Bello

University, Zaria Netlibrary Project became functional after staff and student's induction was completed between February and April 2007.

Statement of the Problem

The collection and dissemination of information has always been an important element in all aspects of education including research, teaching and learning. It has not however always been possible to afford or easy to obtain up-to-date information. With the development of cheap and powerful micro-computers, the situation is changing rapidly. Online access to micro-based databases is growing as well as the trend to micro-based databases which have all combined to make information available to professionals, learners, researchers and trainers.

The problems associated with this activity are growing too, both for the creators and users of the databases. This paper focuses on the users of databases in their selection-processes, especially on how to navigate the right databases through search from appropriate search engines at their disposal.

Research Aim and Objective

The aim of the research was to identify how database selection was undertaken by Internet users at the Net library of Kashirn Ibrahim Library, Ahmadu Bello University, Zaria. To achieve this, specific objectives were outlined to:

- i. Determine which databases were chosen by Internet users when browsing.
- ii. Evaluate their satisfaction in the use of specific databases so selected
- iii. Determine how relevant their selected databases are with respect to their information needs.
- iv. Examine the problems faced in the course of their choice of databases.

Methodology

The survey research methodology was adopted while 250 questionnaires were used to elicit information from respondents consisting of both graduate and undergraduate students. Stratified random sampling technique was adopted for the study it is estimated that 600 students use the Net library everyday. Going by the Morgan and Kreijice model estimated sample size of 250 is ideal for the study.

The scope of the study is limited to postgraduate and undergraduate because of time and financial constraints.

Literature Review

Education is concerned to a large extent with obtaining, appraising, and conveying information." Thompson *et al* (1982). Office work is 'about getting hold of information and using it" WHICH Computer? (1983).

These definitions are contemporary but information has been important ever since, and perhaps before man discovered fire. However our ability to store and use it has never changed dramatically as it has in the last few years. This inevitably brings us to the concept of information storage, the all important factor for the emergence and use of databases which facilitate storage, retrieval and use of information.

Information Storage

Adding to the brains ability to store and recall information is obviously not new. This has resulted in the use of several communication media for the storage of information. A reasonable justification is the decreasing costs of storing and manipulating information, while the speed of communicating the results of searches for items increases

(Rushby, 1987). From the 1990s until now, the cost of storing information has moved in favours of electronic systems rather than paper-based systems. And from the 1990s to date, electronic storing has been the cheapest way to accommodate full colour that offer random access and motion.

On-Line Access

Online distribution of databases began at the end of the 1960s as part of time sharing systems. The 1970s saw the beginning of their growth. The first search systems such as STAIRS, RECON and ELHILL/ORBIT are still recognized names. The National Library of Medicine and NASA were pioneers in the field. The systems were at the time limited by poor telecommunication and the prohibitive storage costs (www.unu.edu/unupress/unuhooks).

Nevertheless the market began to emerge, as did the idea of hosts, organizations that take responsibility for the distribution of databases by others. These hosts provide search systems, storage media, networks and user training in general in collaboration with the producers. The hosts can be classified either as super-markets or as specialists. Thus the historical origins of a

database have implications for its accessibility. Many databases have developed from manual information systems for use by several interest groups and the information may later be made available at a price. Database like PRESTEL and BLAISE are more unusual because they were set up as public service right from the start. (RUSHBY, 1987). Typical on-line databases in MTN Netlibrary include: Sabinet SA Databases, Science Direct Library On-line, Law Library On-line, Virtual library, link to Linguistics Databases On-line, EBSCO host Databases, Link to goggle search engine etc

CD-ROM

The CD ROM (Compact Disc Read Only Memory) is a database distribution medium that was introduced some years ago for the storage of texts and graphics. It exhibits much the same advantages as the microfiche of earlier decades. The discs are relatively easy to produce and to duplicate. They are also easy to skip from place to place, and can therefore be used for local storage of databases and for local retrieval activities; Rosen (1990).

Floppy Disks

The Floppy Disks information delivery medium is emerging as an option for personal computers. Disks are easy to manufacture and can be produced in house. They can also be produced for a variety of operating systems ([http://en.wikipedia.org/wiki/floppy disk](http://en.wikipedia.org/wiki/floppy_disk)).

Criteria for Database-Selection

Quoting Josephine Maxon-Dadd of Dialog information services, in Schipper and Unruh (1990), an ideal database should have:

- Currency
- Clean data
- An easy link to full text
- Graphics
- Controlled vocabulary (hierarchical) maintained and updated over the whole file.
- Uncontrolled vocabulary too, perhaps for trade names, proper names or synonyms.
- Titles, a reasonable number of authors, a good abstracts.
- Bibliographic data fully identified and searchable.
- Complete coverage of every journal title included.
- No internal duplicate.
- Subject classification scheme, text and code searchable.

- Cited references.
- Numeric indexing.
- User- friendly scientific notation.
- Multilingual indexing.

Potentials of Electronic Access to Information

There are two main advantages of using electronic handling and transmission of bibliographic data.

- 1) There is no restriction on browsing through vast mountains of data. Browsing involve cognitive process of over viewing, evaluating and judging data with forward and backward scanning. It is the electronic equivalent of a scan through a book designed to get the flavour of the information without regard to detail (Rushby, 1987).
- 2) The accessibility of a documentation source can be defined in two ways. First of all, its physical accessibility which may be based directly on the place where it is located. Secondly, the intellectual accessibility which may depend on the subject at hand, how it is handled or presented and the language it is written (Moureau and Girard, 1976). Data bases lead to increase in the

availability of on line texts (Olden, 1987).

Problems Associated With the Use of Data Bases

Both the "creators" and "users" of databases are faced with a number of problems each with a range of solutions. As soon as choices are made, some information is located within a system where it may not be available to others for a variety of reasons. For example, the creator will make a choice of format from several formats for cheaper rate. The creator must have an audience in mind, where they are located, what is the possible maximum and minimum capacity needed to store the data now or in a few years time. How many people might likely use the database at the same time; Wagnari (1983).

Problems for users may manifest on the structure of the database as one level difficulty (O'Shea and Self 1983). Familiarity with one database is in no way a suggestion that the user will be instantly successful with another database which may have a completely different structure or search technique. The user is faced with additional problems besides that of hard ware and software. As a potential user or searcher for information, how can I locate relevant sources for my needs? How can I check that the information displayed is up to date? How can I get help searching the system Without getting into the database and therefore spending money? How can I get a good idea of what is available?

Discussions and Results

Table 1 Status of Netlibrary users

Statement	Frequency	%
Undergraduates	214	86
Post graduates	20	8
Staff	16	6
Total	250	100

Table 1 above indicated that 250 persons were investigated throughout the period this study lasted. Out of this number, undergraduate students recorded the highest number as users of the NetLibrary, 214(86%). Post graduate students were

20(8%) while staff has the least number in the range, 16(6%). The reason for undergraduate students recording the highest number of users is perhaps attributed to the overall number of students in the campus when compared to the rest of the categories of

the population of the university community.

Table 2: How often users visit the library

Statement	Frequency	%
Everyday	105	42.0
Once in a week	85	34.0
Once in a month	00	00
Only for assignment	60	24.0
Total	250	100

Table 2 above shows 105(42.0%) respondents who said they used the net library everyday. 85(34%) indicated that they used the library once a week while the least 60(24%) said they made use of the library only when faced with

assignment or had reasons to update their projects. The preponderance of those who use the net library daily over the other options is in line with the effectiveness of the emerging new methods of access to online information.

Table 3: From which of these sites do you normally access and retrieve your information?

Statement	Frequency	%
From the Google site	225	90
From database of other sites	25	10

Table 3 above shows that 225(90%) respondents access and retrieve their information from Google site, while 25(10%) access and retrieve their information from specialized database of other sites. The reason for this may be attributed to the fact that they are either unfamiliar with

other specialized data bases or may also be due to the wider coverage of search results from Google which is a computer-created search site that uses software "Spider" that crawl all over the web and send back reports to be collected and organized (not by subject, anyway) for use.

Table 4: Successful Search

Statement	Frequency	%
Occasionally	173	69.2
Rarely	00	00
All of the time	77	30.8

In table 4 above 173(69.2%) respondents said they occasionally get successful results and only 77(30.8%) said they get successful results all of the time. The foregoing is sequel to the fact that connectivity in Africa is poor unreliable and expensive. African Tertiary Institutions Connectivity Survey (ATICS) indicates that universities in Africa are on average pay of about US \$4.50 per kilobits per second.(Kps) per month while some institutions pay as much as 36per kps for band width. These figures are very high compared to users in North America who are on megabit and gigabit speeds and pay less i.e. \$10 per month. (Ahuoch , 2006).

The following analysis also constitutes the reactions of the students. 200(80%) of respondents said the cost of printing should be reduced from N10 per page to N5 per page. Normal printing in business Cafés outside the library is N20 per page, hence the demand to reduce its printing price to five N5 per page may not go well with the organization because it is also out to reduce the operating cost as much as possible. Similarly, 50 (20%) of the respondents are not bothered whether the cost of printing is reduced or not.

Again 185(74%) as against 65(26%) of the respondents

observed that the physical facilities should be increased, noting that even if the library were to run 24 hours for seven days, the facilities seem inadequate for the university population. It will however be noted that there are one hundred and twenty (120) computers in the library and each student is given about two hours access per day. This means that only about 600 students can use the library if it is open to students from 9.am to 6.pm as observed here. The reaction of the student is justified because of the large number of students in the campus.

Also 190(76%) as against 60(24%) of the respondents show that the use of storage-devices such as flash, C.Ds and diskettes should be allowed. Ordinarily the use of these devices is not allowed. This is justified because of the security threats to the installations.

Conclusion

The role and importance of databases as a component of the economy and as a tool for research and industry, are highlighted. This field is in continual technological evolution and in its spectacular growth can not be left in isolation. There must be thought on how to organize the production and development, in order to be always up to date with the technologies. This