Full Length Research Paper

Microsite: A campus networked library resource search: A study of Manipal University Health Sciences Library, Manipal

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User is the key person in any library. The success of any library depends considerably on how best the system design is based on a close and accurate understanding of the users. The user is not only the important aspect but is also paradoxically a dynamic component of the library. The internet is a highly complex network that interconnects millions of computers around the world. In a medical college hospital campus, all the doctors and students are not able to come to the library to search the library resources, which are available; it may be print materials or online materials or non book materials. So, it is necessary to design/develop their own intranet microsite or campus network of the library, which could be connected to the LAN (local area network) and make available to all the network computer terminals of the campus/hospital; this microsite should deliver/give all the facilities available in their library. The Manipal University Health Sciences Library also developed/designed and made access of library microsite for their users. Our study showed that 96.7% of respondents have awareness of microsite developed by the library; 66.7% of the respondents were accessing the internet resources through the library microsite and they are satisfied with the library resources.

Key words: Internet, intranet, health sciences library, microsite.

INTRODUCTION

Today, the users have met their information needs via a number of options. They need not come physically to the library to use print formats or to know the availability of library resources, but they can stay at home or the department/office and access the library resources via microsite of their institution/college library.

It is certainly true to say that any research normally requires the use of a wide variety of printed literature and electronic sources. The proliferation of medical websites is good news for the researcher. It is fortunate that the internet provides free access to a great deal of the medical literature, either in full text or citation/abstract format, and that it offers search capabilities good enough to fulfill most information needs. Through the library microsite, link can be given to access different websites in a single platform.

The evolution of the "information age" in medicine is mirrored in the exponential growth of medical web pages, increasing numbers of databases accessible on line, and expanding services and publications available on the internet. The handful of computers linked by the predecessor of the internet in 1969 has grown to more than 5 million websites today. In spring 1998, the World Wide Web had at least 320 million web pages of general content (Lawrence and Giles, 1998).

Electronic resources have exploded in popularity and use. They can, and do enable innovation in teaching, and they increase timeliness in research as well as increase discovery and creation of new fields of inquiry (Henderson and MacEwan, 1997).

INTERNET

Internet is a very popular term used in every walk of life in

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these days. Though, internet is novel concept of accessing the information yet not completely understood by those using in their day-go-day life. The internet is computer network that connect millions of computer around the world and provide worldwide communication to business, homes, schools and government. The internet is a tool that libraries can use for communication and accessing of information globally and it is a global collection of people and computers all linked together by many miles of cables and telephone lines, all able to communicate (Singh and Bharti, 2006). The internet is clearly the modern vehicle with the potential to improve information dissemination and perhaps change the way health care is delivered (Silberg et al., 1997).

Podichetty et al. (2006) reported that internet use and web based medical information is widely popular among health care professionals; and the widespread availability of medical information on the internet and its effects on health care has exponentially increased over the past decade (Podichetty et al., 2006). They reported that internet use by physicians has grown from 89% in 2001 to 96% in 2002. Over 90% of physicians use the internet to research clinical issues, making it the most common professional internet activity for physicians (Knoop et al., 2003; Podichetty et al., 2004). Additionally, 70% of doctors claim the web has influenced treatment and assisted in the diagnosis of patients (Podichetty et al., 2004).

According to Podichetty survey, 72% respondents said they use the internet regularly for medical or professional updating. Eighty one percent of the physicians stated that they would take web based CME courses and 80% of the physicians had patients present printed web based information on their condition during the office visit and also analysed the use of the internet and its perceived effects on healthcare practice (Podichetty et al., 2006).

A survey conducted by Bennett (2005) about internet use and physician information seeking was administered by facsimile transmission to a random sample of 3,347 physicians. Among the samples, almost all physicians have access to the internet, and most believe it is important for patient care. The most frequently used is in accessing the latest research on specific topics, new information in a disease area and information related to a specific patient problem.

INTRANET

An intranet is a private computer network that uses internet protocols and network connectivity to securely share any part of an organization's information or operational systems with its employees. Sometimes, the term refers only to the organization's internal website, but often it is a more extensive part of the organization's computer infrastructure and private websites are an important component and focal point of internal communication and collaboration (www.wikipedia.com).

Intranet is an in-house web site that serves the employees of the enterprise. Although intranet pages may link to the internet, an intranet is not a site accessed by the general public. Intranets use the same HTTP server (Web server) technology, communications protocols and HTML hypertext links as the public web. It thus provides a standard way of disseminating internal information to employees locally and in remote offices worldwide. An intranet has many other different applications that can be utilized by the institution. These include the web publishing of corporate documents, web forms and web-to-database links that allow users to access information (www.naswer.com).

Many systems provide portal-like access across an intranet, rather than on the web itself. Medical portal is an intranet-based system that defines views by user type; health system administrator, clinical care co-ordinator, intranet staff, physician and physician office staff. Each of these views provides access through a web browser to information and processes defined for that group of users. All data from the various systems are downloaded several times a day to either SQL servers or text files on one of two computers and these computers provide the intranet access for the users (Shepherd et al., 2000).

LIBRARY MICROSITE

Users rarely visit the library, and as such, discovery through serendipity is reduced. Library microsite can be used as a reference tool as it provides a wealth of up-to-date library resources. It can be used as a communication device to communicate with professional colleagues around the campus. Resource on the microsite allow libraries to provide better services to clientele by giving access to information that would be difficult to locate in any other manner. Many libraries can share their resources with other libraries of the same institution, with the help of intranet.

It is difficult to access online databases/e-journals like Proquest, MD Consult, CINAHL Plus, Science Direct, Ovid SP, Cochrane Library, etc to a user without having a membership. To get membership, they have to pay some amount to access the databases. Therefore, if the institution library get a membership of such databases by paying some amount and allow their users to access through IP address or user name-password through their library microsite, it can be used by many users in a single platform.

To serve the information on library resources to the users, library must design/develop their own microsite through LAN, which should have information on all the information available to library resources. Therefore, microsite will reduce the time spent for the students, faculties, etc, where the institution have a big campus area.

Other library microsites

The following are the microsites developed for information by the different organizations/institutions:

Cook medical

It announced the launch of www.MensHealthPD.com, an informational microsite dedicated to educating physicians, men and their partners about the symptoms, treatment options and latest researches. MensHealthPD.com will serve as a single source where physicians from around the world can access the latest peer-reviewed researches (http://www.medicalnewstoday.com/articles/95867.php).

Pantethine (www.pantethine.org)

A microsite that was designed to provide medical professionals and clinical researchers with easy access to the clinical science from human and animal studies in which pantethine was administered (http://www.netconcepts.com/tag/microsites).

Pantesin (www.pantesin.org)

A microsite for Pantesin, a high-quality pharmaceutical-grade brand of pantethine. Pantesin is manufactured by Daiichi Pharmaceutical Co., Ltd. and has been recently introduced as an ingredient to the North American dietary supplement market through its subsidiary company, Daiichi Fine Chemicals, Inc (http://www.netconcepts.com/tag/microsites).

Medical library association encyclopedic guide to searching and finding health, hemlock society (USA)

Through this, people often seek information at two different levels. One, tell me everything I need to know; or two, just give me one quick answer. Because they expect people to use the book for both of these types of searching, the links are organized in two ways. For the person who is working through a topic in depth, the web site has the links arranged by chapter, with all links from that entire chapter arranged alphabetically on that web page. As we work through that chapter, we can find any link which interests us from any section of the chapter, simply by browsing the alphabetical listing on that one page. For the person who just wants one link, but does not want to type it in or work from the CD-ROM, there is a master alphabetical list provided of all the web sites listed in the book. These are arranged alphabetically, not by the URL or web site address, but by the site description as it

was given in the book (www-personal.umich.edu/~pfa/mlaguide/urlsubj/mh22.html).

MANIPAL UNIVERSITY

Manipal is tucked away in the rocky hinterland of the fabled Malabar Coast of southwest India. A Mecca of education and health services, also the centre of a comprehensive network of community health services and of numerous rural development projects. But a few decades ago, Manipal was a barren wasteland, a laterite hilltop covered with scrub and brush. It was the untiring, unrelenting perseverance of one man which transformed this rocky plateau into a bustling community. The late Dr T. M. A. Pai, physician, educationist, banker and philanthropist, was the founder and builder of Manipal. He established educational, medical, banking and industrial enterprises of national importance and repute. Manipal is an eloquent testimony to the vision, motivation and labour of Dr T. M. A. Pai. His zeal, dedication and infinite energy inspired others, motivating them to collective effort. This was the spirit of Dr T. M. A. Pai. This is the spirit of Manipal. Manipal is located on the coast of South Karnataka, 5 km from the temple town of Udupi and 60 km from the port city of Mangalore, close to Kerala-Karnataka border.

Manipal University, formerly known as Manipal Academy of Higher Education or MAHE for short, is a deemed university in Manipal, Karnataka, India and is ISO 9001:2000 certified. It has over 96,000 students from 51 countries in the main campus located in Manipal as well as sister campuses in Sikkim (India), Nepal and Melaka (Malaysia). It has several constituent colleges. Manipal offers programs in medicine, dentistry, nursing, pharmacy, biotechnology, allied health sciences, architecture, engineering, management, hospitality, jewellery design and management and mass communication.

MANIPAL UNIVERSITY HEALTH SCIENCES LIBRARY

Manipal University has an excellent health sciences library, perhaps the best among all health sciences libraries in India. The state of the art library stretching over 1.5 lakh square feet, on six floors is a domain for information seekers; be it students, faculty or researchers. It has the capacity to accommodate 1300 students at a time. The library is fully air-conditioned. The library is kept open from 8:30 am to 11:30 pm on all week days. Besides comfortable seating and reading environment, facilities such as photocopying, fax, word processing, internet kiosks, color laser printing, color scanning, CDs/DVDs, audio and video cassettes have been provided. There is a separate audio-visual room, computer lab, e-learning centre, study cubicles, group

Figure 1. A view of library microsite of Health Sciences Library, KMC, MU, Manipal.

study area and private study area in the library.

The mission of the library is to acquire, manage, provide and disseminate all health sciences information to students, faculty and research scholars of the constituent health science colleges of the Manipal University at Manipal. Currently these include Kasturba Medical College, Manipal College of Dental Sciences, Manipal College of Nursing, Manipal School of Nursing, Manipal College of Pharmaceutical Sciences and Manipal College of Allied Health Sciences. The library aims to provide timely, accurate and current information and materials to its users for education, teaching and research.

There is a vast amount of health science information available in electronic databases. Many health science journals are now published online. There are different types of electronic databases available in the world today, including bibliographic databases, full text databases, statistical databases, image databases, and others. Bibliographic databases contain citations and/or abstracts (a short summary of the article). The full-text databases contain complete articles. The library is providing access to both CDs and online databases to its users. Pubmed, Proquest Medical Library, Cochrane Library, DELNET are some of the important electronic databases available in the library micro site for literature search.

Library has their own building and is functioning in five floors, each floor have different discipline of subject materials. The library has actively participated in the orientation programs organized for new undergraduate and postgraduate students and made presentations about library facilities, resources and services.

MANIPAL UNIVERSITY HEALTH SCIENCES LIBRARY MICROSITE

The Manipal University Health Sciences Library Microsite have been developed and published in the year 2005 August. Before developing library microsite, the users used to visit library for solving their problems regarding information on diseases, treatment, diagnosis etc. At the time of the visit to the ward/department, if the clinicians would like to obtain information about the particular illness/disease it was difficult for them to come each time to library and get solution for their queries on patient illness etc. Therefore, the library developed a web site called Library Microsite, which deliver all the in-house facilities of the library for 24 x 7 hours to the college campus users (Figure 1).

Modules of library microsite

The microsite is composed of the following modules at

the Health Sciences Library, Manipal. Most of the databases can be searched using library microsite http://www.maheinfo.edu/lib/ index.asp. Users could access the following by clicking on the respective links.

Library access

1. Catalogue: Catalogue is a most essential tool in the library to search library resources, e.g. books, journal, non-book materials etc.
2. Back volumes of journals: By clicking this icon, users can view the list of back volume journals available in the library.
3. Print journals: In this, users can see the current subscribed journals of the library. The total number of current journals for the year 2008 - 2009 is 645.
4. New acquisitions: Users can get information on newly accessioned books by month wise.
5. CDs: Through this, users can check the list of available CDs/DVDs in the library.

Important links

Though this link, users can get the information on Manipal University news, link to e-learning, Kasturba Hospital, Manipal to see the patient reports of different disciplines and hospital information and HR Manipal to check leave statement etc.

Other links

This gives information on Health Sciences Libraries, Health Sciences Publishers, important web sites for Librarians, WHO, Clinical Trials, Useful Websites, Herbal sites and Online Survey software to get the user data.

Search engines

Users can go to different useful search engines like Google, Yahoo, Khoj, Askjeevees, Lycos, Altavista, Amazon etc by clicking on related icons to search information.

Online databases / e-journals

Our library have access to Proquest online journals, MD Consult, MD Consult – The Clinics, CINAHL Plus with Full Text, Full text online journals for print version subscription, Science Direct, Ovid SP, Cochrane Library, IDIS/Web, NetAnatomy, DELNET, British Council Online, etc. online databases/e-journals.

E-books

Like journals, our library have also activated/accessed some e-books like: MD Consult published books, Full text e-books for print version acquisition, Dictionaries and Encyclopedias.

Bibliographic databases

This icon gives link to PubMed/MEDLINE; PubMed Search – Online Training; Medline Plus; Other Bibliographical Databases like HighWire Press Journals/Articles Search, MetaPress Journals/Articles Search, Ingentaconnect Journals/Articles Search, SpringerLink Journals/Articles Search, Cambridge Journals Online, Union Catalogue and Gateway to library catalogues; IndMED; OpenMED, etc.

EPAC (ELECTRONIC PUBLIC ACCESS CATALOGUE)

Through EPAC, the users can search the availability of library materials like books, current journals, back volumes of journals, CD-ROMs, DVDs purchased and available in the library through library's online catalog – library microsite.

OBJECTIVES

The main objectives of the study are:

1. To identify the awareness of library microsite.
2. To examine the usage of library microsite.
3. To examine the satisfaction level of users.

METHODOLOGY

The study was conducted in the Health Sciences Library, Kasturba Medical College, Manipal University, Manipal. The survey participants were selected randomly and questionnaire was distributed to medical science professionals of clinical and non-clinical sciences (MD, MS, DM, MCh, MSc, Interns, Research Scholars). A pretest was done to streamline the questionnaire and to ensure that the questionnaire was easy to complete and to avoid ambiguous questions. To facilitate quantification and analysis, mainly close-ended questions were used along with checklists and rating scales. As the respondents are highly conversant with the English Language, the questions were prepared in that language. The questions were prepared in a very simple language so that users could understand them easily and could fill up them within 20 to 30 min. The following tools and techniques were employed in this study.
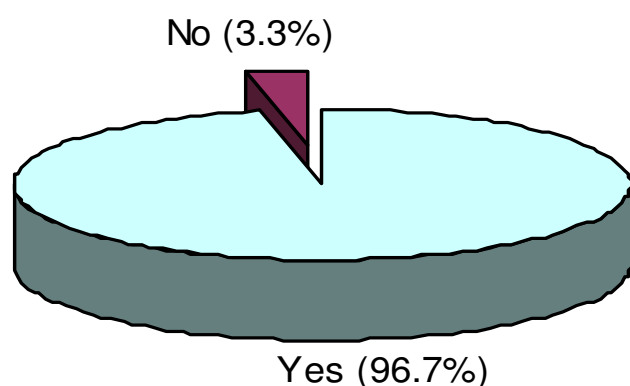
1. A questionnaire survey to elicit information from the users.
2. Observations: Besides the questionnaire the actual usage was observed for a period of time.
3. An examination of the following records maintained by the library to assess the use made of the resources.
a. Analysis of records maintained by the internet browsing centre of the library.
b. Analysis of records of the usage of library microsite.
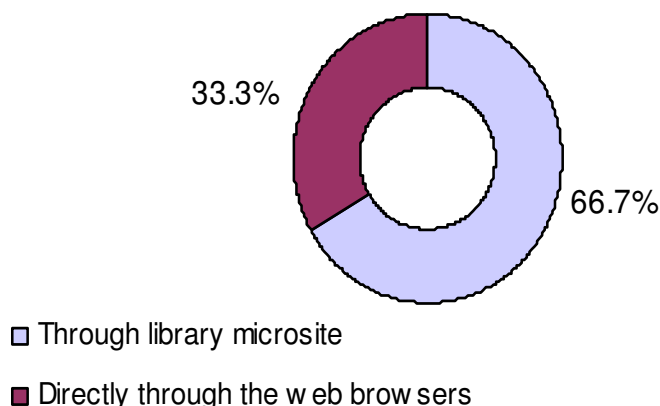
Table 1. Sex distribution.

Sex	Number	Percentage
Male	85	56.7
Female	65	43.3

Table 2. Awareness of library microsite (www.maheinfo.edu).

Awareness	Number of users	Percentage
Yes	145	96.7
No	05	3.3

Figure 2. Awareness of library microsite (www.maheinfo.edu).

Table 3. Methods of accessing the internet resources.

Method of access	Number of users	Percentage
Through library microsite	100	66.7
Directly through the web browsers	50	33.3

□ Through library microsite

■ Directly through the web browsers

Figure 3. Methods of accessing the internet resources.

Table 4. Gathering of information about internet websites.

Information gathering from	Number of users	Percentage
Library microsite	65	43.3
Internet	105	70.0
Print journals and magazines	25	16.7
Newspapers	05	3.3
Other sources	05	3.3

RESULTS AND ANALYSIS

The data were collected through questionnaire method, of the 200 questionnaire distributed, a total number of 150 (75%) filled questionnaire were returned back from the users. The required data collected were supplemented by observation and informal discussions with library staff and users.

In our study, the majority of the respondents are male (56.7%), which are more than the female respondents (43.3%) (Table 1). From the study, it is showed that the very high percentage of respondents (96.7%) were aware of microsite developed by the library (Table 2 and Figure 2). Further, majority of the respondents (66.7%) were accessing the internet resources through the library microsite (Table 3 and Figure 3).

It is evident from the analysis that internet itself is the best source for gathering information about websites. 70% of the respondents get information through internet itself about websites and 43.3% of the respondents get information from library microsite. 16.7% users depend on print journals and magazines and a few (3.3%) depend on newspapers and other sources for getting information about internet websites (Table 4 and Figure 4).

Majority of the respondents (86.7%) were using both print and electronic resources to support their professional work (Table 5). Majority of the respondents reported that they are satisfied with the collection of full text journal databases (50%) and bibliographical databases (30%) subscribed by the library. Only 3.3% of the respondents are very dissatisfied on the collection of full text e-books (Table 6).

CONCLUSION

Technology will undoubtedly continue to transform the ways in which we communicate and think about medical information. If current trends continue, the practice of medicine in the coming century will increasingly involve the flow of electronic information over intrahospital /campus or worldwide computer networks.

The library microsite is the online platform of information on availability of library resources. From our study, it is showed that 96.7% of respondents were
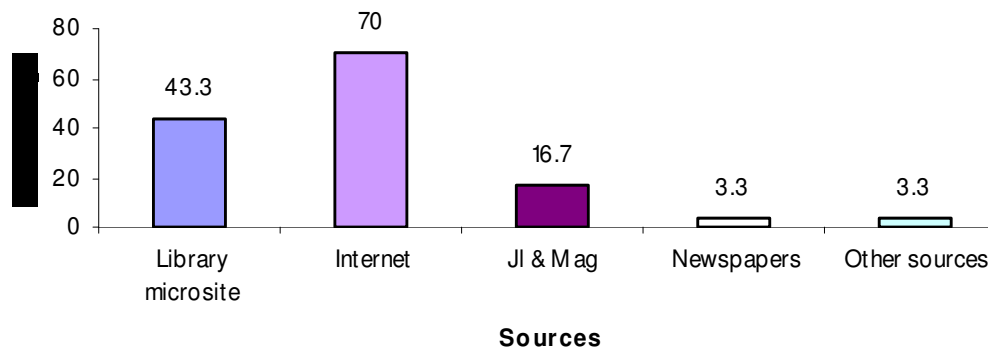
Figure 4. Gathering of information about internet websites.

Table 5. Preference of use of library resources to support the work.

Preference	Number	Percentage
Paper (books and journals)	05	3.3
Computer (internet and e-journals)	05	3.3
Both	130	86.7
No preference	10	6.7

Table 6. User satisfaction on collection of library internet resources.

Resources	User satisfaction			
	Excellent (%)	Satisfied (%)	Dissatisfied (%)	Very dissatisfied (%)
Full text journal databases	30 (20)	75 (50)	05 (3.3)	-
Bibliographical databases	10 (6.7)	45 (30)	20 (13.3)	-
Full text e-books	15 (10)	40 (26.7)	15 (10)	05 (3.3)

aware of microsite developed by the library; 66.7% of the respondents were accessing the internet resources through the library microsite and 50% of the users are satisfied with the full text e-journals subscribed by the library. So far, 170384 (as on 21-09-2008: 03:45 pm) users have visited our library microsite. Access through library microsite will decrease the time spent on searching for information anywhere from the campus through local area network (LAN).

Microsite is a tool for professional development by providing access to resources of the library. Users will find the library resources easily through microsite and to keep themselves up-to-date.

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