Use of social bookmarking sites by research scholars of central universities in North India

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A structured questionnaire survey was carried out on a sample population of 720 research scholars in twelve Central Universities of North India. Five hundred and ninety-seven filled-in questionnaires were received and analysed. The findings indicate that research scholars usually use bookmarking tags to organize the online research-related resources. LibraryThing is the most used SBS for building a personal library with links, pages, notes, and pictures. The study recommends that university libraries should help the research scholars to locate required resources and stresses upon the responsibility of library professionals and research supervisors to motivate the research scholars to effectively use SBSs for their research work.

Introduction

Social bookmarking sites (SBSs) are the set of social media tools that may be utilized to store, organize and share online information resources. With these tools, information retrieval and social data examination can become effortless. Social bookmarking gives users means to express their viewpoints on information resources through informal organizational structures, thus giving way to communities of like-minded individuals[1].

Social tagging has captured the attention of many web researchers and developers. Tags and keywords used by an individual reveal his/her interests and hobbies[2]. This attribute of tagging system allows research scholars with similar interests locate each other as well as the resources that may be unavailable to them. They can also locate an important web resource through a suggestion from a tag-based recommendation system. This saves both effort and time of users[3]. The research scholars may also organize related documents in their personal library and access it from anywhere on any devices they are prefer. Thus, these tools allow research scholars to build information resources. Other features of SBSs include annotation, RSS feeds based on tags and user names, individual private links, and bookmarklets[4]. Additionally, apart from being fast, these tools are also cheaper, less tedious and create a platform for interacting and sharing useful information[5].

Social bookmarking sites have ushered in a new method to organize and share web pages. In recent years, SBSs have transformed into dynamic online communities where users not only share and discuss links, but form discussion groups based on mutual interests. Hence, these are incredibly useful tools for collaboration and information sharing. Specially, the SBSs contain many bookmarks of users, and users, who bookmark web pages, would frequently browse these pages in the future. Many studies have been conducted in developed countries to investigate the impact of SBSs on students. But, no research has been conducted on use of SBSs among the research scholars in India. Even though some studies exist, they do not focus on use of SBSs by research scholars. To better understand various aspects related to SBSs on research scholars, the present study has been taken up to know the current use, benefits, and problems associated with use of SBSs and its impact on the academic/research work among the research scholars in studied central universities in north India.

Review of literature

Social bookmarking, is defined variously as the classification of resources "by the use of informally assigned, user-defined keywords or tags"[6] and the classification of resources "using free-text tags, unconstrained and arbitrary values"7. "It emerged in popular practice around 2003, at the same time as social networking websites, and it constitutes an important part of the interactive, democratic nature of Web 2.0 in that it places the responsibility for the classification of web resources squarely in the hands of the users"[8].

"SBSs are new web-based tools that enable the users to manage, save and share their search results on a remote server by associating tags"[9] available to other users as a list or as a "tag cloud"[10] with them, thus, supporting the users to gather and promote their most favourite web resources and also making it easy for other people to stay current by monitoring what is being added to the sites and what others are reading on a topic[11].

Hines[12] holds that the advantages of social bookmarking utilities are apparent as they facilitate the development of communities of interest and expertise[12]. SBSs are folksonomy-based system (also known as "social tagging"), are user-defined metadata collections derived from user-generated electronic tags that annotate and describe online content[13]. Nations[14] states that SBS displays recently added lists and popular links so that users may stay current and also get relevant information[14]. Farwell and Waters[15] while listing benefits of SBSs mention that social bookmarking does not save the web resources themselves unlike file sharing systems, as they simply store links to the bookmarked page[15]. In this context, Hammond, et al[16] add that these links represent user's own personal library placed on public record that can be managed, tagged, commented upon, and published onto the Web, which and when aggregated with other personal libraries allows for rich, social networking opportunities[16].

Allam[17] refers social tagging as a system of social classification, collaborative tagging, crowd indexing, social indexing, social bookmarking or folk categorization[17]. The availability of social bookmarking tools gives researchers new ways to discover, share and store and manage research related information. They also save time as well as increase access to new information and help the students to develop their skills in finding, sharing and (re)organising online information[18]. Social bookmarking has been introduced in higher education institutions[19] and many universities and individual professors have begun to use social bookmarking because of their enormous potential in research and education[20] and also their ability to share reading materials than using closed course management systems[15]. Social bookmarking may increase learner interaction and lead students to find more interesting and relevant articles and also assist the instructors in managing the out-of-class reading[20].

Universities in different parts of the world have adopted the tagging system as a way of enhancing faster transfer and retrieval of information[5], but universities in India are assumed to be lagging behind in this context. Keeping in view the benefits of SBSs in research and education, this study was undertaken to find the use of SBSs by research scholars in studied central universities in north India.

Objectives of the study

- To find out the use of social bookmarking sites (SBSs) by research scholars in Central Universities in North India;

- To identify the benefits to the research scholars using SBSs ; and

- To identify problems associated with the use of SBSs.

Methodology

A structured questionnaire was prepared and personally distributed among 720 research scholars, pursuing Master of Philosophy (MPhil), Doctor of Philosophy (PhD) and Post-Doctoral (Post Doc.) in twelve Central Universities in North India. The selection of Central Universities was based on the availability of research degree programmes (M.Phil., PhD and Post Doc) and the regular enrolment of students. Out of 720 distributed questionnaires, 597 (82.92%) filled-in questionnaires were personally collected (Appendix-I). The responses received from the research scholars were analyzed and the implications of the findings are discussed in relation to past research.

Analysis

Awareness of SBSs

A ubiquitous feature of social bookmarking system is tagging. When a link is selected for bookmarking, the user can specify keywords called tags, with which the link will be associated. A dichotomous question was asked to know their awareness of SBSs.

It was found that 35.51 per cent research scholars (212) are aware about social bookmarking sites. Three hundred and eighty five respondents (64.49 per cent) use browser bookmarking to store online resources for future reference. This finding that more research scholars use browser bookmarking over social bookmarking is in line with the finding of an earlier study[21] that also found that "research scholars lacked knowledge about SBSs".

SBSs allow the researchers to access others bookmarkings thus saving on time and effort to search for resources in an area. Since the usage of SBSs is low, it reduces the sample size from N=597 to N=212. Further, in this regard, problems encountered while using browser bookmarking were also analyzed where N=385. A supplementary multiple-choice question regarding the use of SBSs access tools was asked to those research scholars who were having knowledge of SBSs. The responses received are presented in Figure 1.

LibraryThing (38.68 per cent) is widely used SBSs among research scholars, followed by Knowledge Plaza (20.28 per cent), CiteULike (6.60 per cent), Bisonomy (5.66 per cent) and Diggo (5.19 per cent) (Fig. 1).

Purpose of using SBSs

SBSs have a wide variety of uses like share and recommend sites and information, import or export bibliography, tag for easy searching, save, organize and discover interesting links on the Web, build personal library with links, store web pages for future use, etc. The major reasons why research scholars use SBSs are given in Fig. 2.

Research scholars are found to use SBSs for building personal library with links, pages, notes, pictures, etc. (47.16 per cent), storing web pages for future use (46.70 per cent), using annotation tools, handy digital highlighters for easy reading (41.04 per cent) and share and recommend sites and information (40.09 per cent) (Fig. 2).

The results are in agreement with DesRoches[9], who also found the use of "SBSs by teachers and students is to store, classify, share, and search links, all of which are gathered by many users. Social
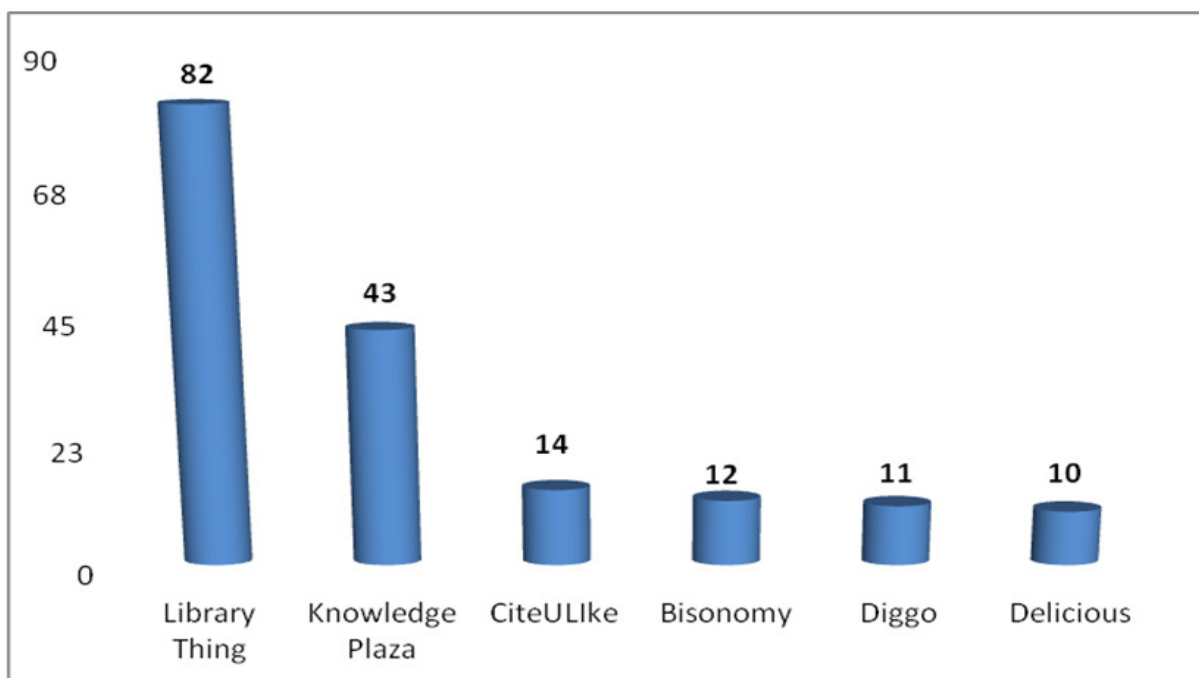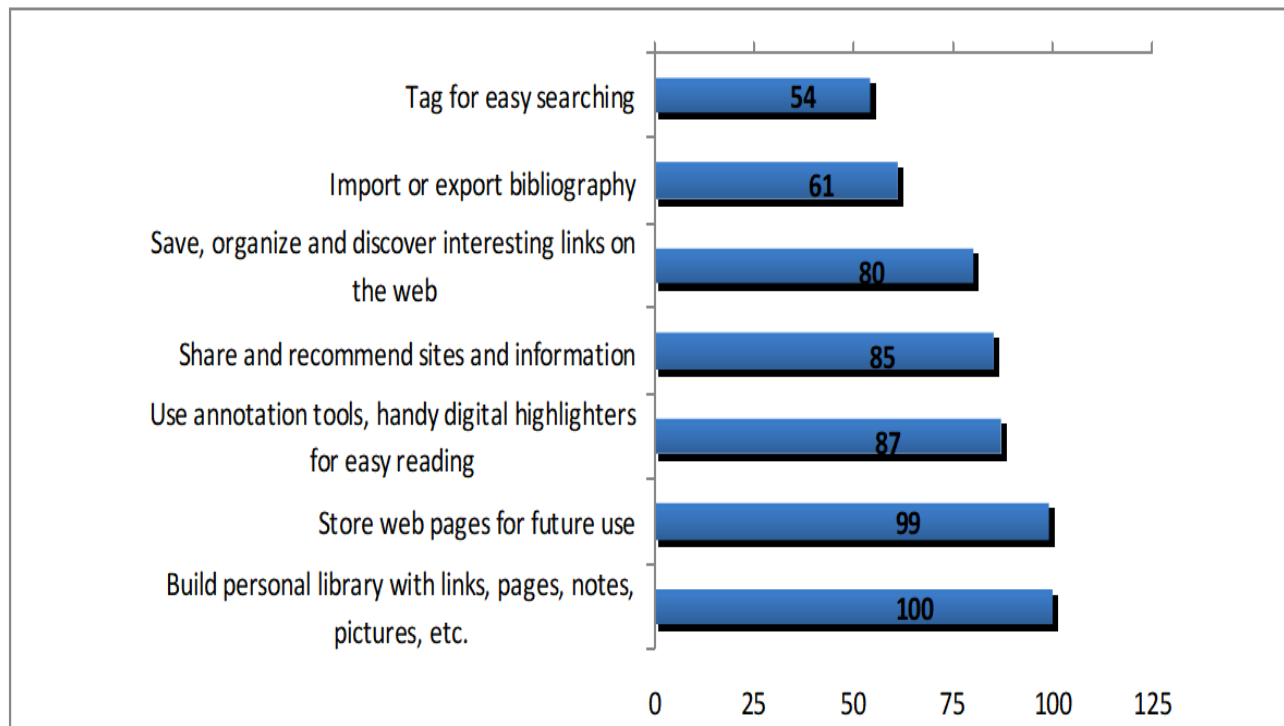

Fig. 1—Access to SBSs (N=212)

Fig. 2—Purpose of using SBSs (N=212)

bookmarking allows multiple users to save their favourite sites, articles, and even podcasts on the Web rather than inside the browser making them accessible from home, school, library, or anywhere with Internet access"[9].

Benefits of using SBSs

SBSs are useful for more than storing bookmarks; they are also valuable tools for building lists of topical resources on the fly and sharing those lists with others. Cooperative tagging involves using a common word or phrase among a group of people who have similar interests[22]. Therefore, SBSs are becoming essential for researchers to collaborate, exchange and develop research ideas, create new ties and promote their research. In view of this, a multiple-choice question with eleven options was asked to the respondents to mention the benefits for which SBSs are used. Tabular representation of various perceived benefits of SBSs is shown in Table 1.

It is evident from Table 1 that respondents find easy retrieval through tags (99.06 per cent) as the main benefit of SBSs, followed by anytime anywhere access (98.11 per cent), resource discovery (96.70 per cent), collaboration and sharing (96.23 per cent), and up-to-date information (94.81 per cent).

Problems with SBSs

SBSs have brought in a revolution in "share digital resources and are incredibly useful tools for collaboration and information sharing, but librarians have not generally embraced them as tools for building information resources"[22]. Apart from numerous benefits offered by SBSs, there are few problems associated with their use. A list of five main problems were identified and suggested to the respondents to choose from, with an option 'Other' providing flexibility to respondents to locate other problems that research scholars face while using SBSs (Table 2).

Table 2 clearly indicates that out of the 6 choices provided in the question, the most common problem cited was that it was finding good bookmarks (97.17 per cent), followed by difficult to use interface (94.81 per cent), bookmark management (94.34 per cent), and locating appropriate bookmarks (80.19 per cent). Spamming is the least cited problem by research scholars about use of SBSs (77.83 per cent).

Problems of using Browser Bookmarking

Browser bookmarking allows users to bookmark their favourite websites on their browsers (like Google Chrome, Mozilla Firefox, Internet Explorer,

Table 1—Benefits of using SBSs (N=212)

Sl. no.	Benefits of using SBSs	No. of respondents	Percentage
01	Easy retrieval through Tags	210	99.06
02	Anytime anywhere access	208	98.11
03	Resource discovery	205	96.70
04	Collaboration and sharing	204	96.23
05	Up-to-date information	201	94.81
06	Easy recall	200	94.34
07	Store information while browsing	170	80.19
08	Storing online bibliographies	169	79.72
09	Classification	150	70.75
10	Social activity	148	69.81
11	Professional recognition	145	68.40

Note: Percentage exceeds 100 percent because respondents were allowed multiple answers

Table 2—Problems of using SBSs (N=212)

Sl. no.	Problems of using SBSs	No. of respondents	Percentage
1	Finding good bookmarks	206	97.17
2	Difficult to use interface	201	94.81
3	Bookmark management	200	94.34
4	Locating appropriate bookmarks	170	80.19
5	Spamming	165	77.83
6	Other	00	00

Note: Percentage exceeds 100 percent because respondents were allowed multiple answers

etc.). Almost all the browsers have the feature of bookmarking. They are easy to use and allow instant saving. Since there are many research scholars (N=385) who use browser bookmarking, the survey included a close-ended question asking research scholars to portray any problems of browser bookmarking, including any on their research (Table 3).

Table 3 enlists the top most problems related to use of browser bookmarking. It is clear from the responses received that lack of organization of bookmarks is the main concern of respondents (98.44 per cent), followed by no categorization (97.40 per cent), lost links (96.10 per cent), device and browser dependence (88.31 per cent), difficulty in retrieval (87.79 per cent) and virus (81.82 per cent).

Conclusion

SBSs are very beneficial for research scholars. These tools help research scholars in organizing, categorizing and sharing the research related online information resources with the help of tags and accessed with the help of RSS feeds, mobile phones and PDAs for increased mobility. Thus, giving

Table 3—Problems of using browser bookmarking (N=385)

Sl. no.	Problems	No. of respondents	Percentage
1	No organization	379	98.44
2	No categorization	375	97.40
3	Lost links	370	96.10
4	Device and browser dependence	340	88.31
5	Difficulty in retrieval	338	87.79
6	Virus	315	81.82
7	No social structure	305	79.22

students another way to collaborate with each other and make collective discoveries or even connect with instructors and information specialists[23].

This study highlights the concern regarding the lack of knowledge about the benefits and availability of SBSs among research scholars. The results emphasize the need for study libraries to share new resources among research scholars. It was observed during the course of study that none of the universities is providing links or using any SBSs for information dispersal. The study recommends that university libraries should help the research scholars to locate required resources to save their time and incorporate these tools into their websites so that related resources may be recommended to research scholars. It also stresses upon the responsibility of librarians and research supervisors to motivate the research scholars for effective use of SBSs for their research work because, "they offer the ability to create bibliographies and easily share information with citation management tools like Mendeley and Endnote. This is an excellent way to keep up with new resources on specific topics of interest"[22]. This study, like others, suffers from some limitations of the methodology. The results reflect the opinions of research scholars in central universities in North India. Further research should investigate in-depth aspects of individual social bookmarking sites with a larger sample size and the designers' perspectives.

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Appendix - I

Participating Central Universities of North India and Distribution of Questionnaires

Sl. No.	Name of University & Place (State)	Sample size		Percentage
		Distributed Questionnaires	Received Questionnaires	
1	Jawaharlal Nehru University, Delhi (Delhi)	60	60	100
2	Hemwati Nandan Bahuguna Garhwal University, Garhwal (Uttarakhand)	60	53	88.33
3	Central University of Punjab, Bathinda (Punjab)	60	52	86.67
4	University of Allahabad, Allahabad (UP)	60	51	85
5	Jamia Milia Islamia University, New Delhi (Delhi)	60	51	85
6	Aligarh Muslim University, Aligarh (UP)	60	50	83.33
7	Baba Sahib Bhimrao Ambedkar University, Lucknow (UP)	60	50	83.33
8	Banaras Hindu University, Varanasi (UP)	60	50	83.33
9	University of Delhi, Delhi (Delhi)	60	49	81.67
10	Central University of Himachal Pradesh, Dharamshala (HP)	60	47	78.33
11	Central University of Jammu, Jammu (J&K)	60	43	71.67
12	Central University of Haryana, Mahendergarh (Haryana)	60	41	68.33
	Total	720	597	82.92