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Medical librarians' uses and perceptions of social tagging

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INTRODUCTION

In social tagging, in contrast to taxonomies developed by subject specialists using authorized terms (determined by professionals), people use their own keywords to describe websites for future discovery and retrieval. The resulting list of tags of information and objects is often termed a "folksonomy," a classification done by untrained individuals (folks) [1]. According to a December 2006 Pew Internet & American Life Project survey of 2,373 individuals, 28% of Americans have tagged content on Internet sites [2]. Use of tagging tools was unrelated to income, age, or ethnic group. The study reported here documents how medical librarians use and perceive this relatively new way to describe information resources.

LITERATURE REVIEW

The literature indicates that there is considerable debate among professional librarians as to whether or not social tagging can actually help users discover resources. Some authors see benefits in tagging because when a tag is assigned, the tagged object is lifted out of the deep web [3]. Tagging has also been viewed as more democratic than traditional classification methods and as an opportunity to use collective intelligence and learn from others: when users tag websites, they can make use of tags previously employed by themselves or others [4]. In a broad summary of the literature on the pros and cons of tagging, Macgregor and McCulloch found that cataloging is not adequate for online discovery and knowledge representation, as it is too costly, lags far behind the proliferation of websites, and, while too specific in some areas, is lacking in others [5]. While tagging suffers from problems with synonyms, has noise, is uncontrolled, and has limited ability to



A supplemental appendix is available with the online version of this journal.

collocate, it provides more entry points and allows for serendipity. Problems with tagging noted by other authors include the lack of a controlled vocabulary leading to duplicate terms for the same thing [6], inconsistent results, and tag spam [7]. In addition, as tagging is based on relativism, it will always produce less accurate results than traditional classification [8], and while tagging can be useful on a personal level or for a small group, in general it produces irrelevant, incomplete results that can lead to “satisficing” [7].

Some libraries report using tagging to enhance services to patrons. Examples include a site used to find physiotherapy education sites selected by librarians [3], a website in a public library (Ann Arbor) that allows users to upload photographs to the library website (keywords are applied and keywords can be searched in the title and description) [9], and HubMed, a website where “users can tag and rank PubMed citations, use RSS to deliver search results, and chart keywords over time” [10]. In addition, the Medical Library Association (MLA) offered a webcast in March 2008, “Web 2.0 Principles and Best Practices: Discovering the Participatory Web,” followed by a course on social networking that included social tagging [11, 12].

The literature includes examples of the use of social tagging to enhance user experiences in libraries. These fall into several broad categories. Snipes describes a scenario, which can be categorized as an “educational use,” in which social tagging is used in group projects for students as part of the curriculum [13]. Dye discusses using tagging on websites like Del.icio.us to find materials using one’s own or others’ tags [14]. This use can be categorized as “discovery.” “Organization” refers to the use of tagging in ways similar to book-marking in a browser. Spiteri describes what can be termed “outreach”: tagging can entice users to come to the library by allowing public library users to organize their own web space and create communities [15].

METHODOLOGY

A sixteen-question online survey, using SurveyMonkey (Appendix, online), was developed to gather data on:

- frequency of use of tagging sites and sites most often used
- reasons for use of tagging (organization, discovery, outreach, education, collaboration)
- number of years that users and nonusers have been in the profession
- demand for knowledge about social tagging
- specific uses of tagging and prevalence of creating websites using tagging

The survey was sent to a random sample of 348 librarians drawn from the current list of MLA members (about 3,400 total) who had email addresses and were not on the MLA opt-out list. The survey was piloted with professional librarians at the University of Massachusetts Medical School, and their response rate was 10/21=48%. A sample size of 351 was initially designed to achieve a 95% confidence interval and a 5% sampling error rate for the question, “Have you used

the internet to do social tagging?” [16]. However with a predicted response rate of 50%, based on results of the pilot, only a sampling error rate of about 10% would be achievable. The survey was emailed in April 2008. Initially, only 59 people (17%) responded.

To increase the response rate, several methods recommended by Dillman [16] were employed. Three reminder emails were sent, a subject line mentioning that the researcher was a Provisional Member of the Academy of Health Information Professionals was used to make the survey interesting and compelling, and a prize was given to the 100th person to fill out the survey.

RESULTS

Demographics of the respondents

Of 348 people in the sample, 167 responded and 156 surveys were completed (18 bounced, 3 opted out, and 160 ignored), for a response rate of 45% (156/348). Survey respondents were from the United States and Canada; 9 were students, none were retired. Most had been practicing over 20 years ($n=55$, 35%), but 24% had only been in the profession for 0–5 years.

Percentage using social tagging sites and which sites were used

Of 156 respondents, 73 (47%) had used social tagging (95% confidence interval: 39%–55%), and 83 (54%) had not. Five respondents did not answer question 1 of the survey, “Have you used the internet to do social tagging?” However, they were assigned a “yes” response because they said “yes” to at least one tagging site in question 3. The author feels that this should be interpreted with care: half the sample did not reply and if none of them used tagging, it would bring the percentage down to 21% (73/348). Among those who used tagging, 15 (21%) used it daily, 15 (21%) used it weekly, 10 (14%) used it monthly, 30 (41%) used it less than monthly, and 3 (4%) did not say. The 22 tagging websites used by respondents included 8 popular websites suggested by the survey: CiteULike (8 respondents), Connotea (11), Del.icio.us (60), Digg (16), Flickr (45), LibraryThing (25), Technorati (19), and Yahoo’s MyWeb (6), plus an additional 14 each used only by 1 or 2 respondents. There appeared to be an inverse relationship between years in the library profession and use of social tagging. Twenty-four percent of the sample had been in the profession 5 years or less with 63% of them being users; 11% between 5 and 10 years with 44% being users; 13% between 11 and 15 years with 40% being users; 15% between 16 and 20 years with 48% of them being users; and 35% over 20 years with 36% being users.

Reasons for use of tagging

Respondents were asked to select one or more purposes for which they used tagging: organization, discovery, outreach, educational, collaboration, personal, or other (Table 1). “Other” responses included

Table 1
Reasons why respondents used tagging (n=73)*

Purpose	Number of users	Percent
Organization of resources respondents have already found (bookmarking)	49	(67%)
Discovery (finding information for respondents' own use)	44	(60%)
Outreach (used to provide requested services for patrons)	8	(11%)
Educational (supporting the curriculum)	15	(21%)
Collaboration (using it to share information with others)	30	(41%)
Personal or use at home only	35	(48%)
Other, please describe	3	(4%)

* Respondents could choose multiple options, so totals do not sum to 100%.

the MLA Web 2.0 course that had just been given (1 respondent), an "addicting game" (1 respondent), and "I have integrated this into my daily routine" (1 respondent).

In answer to the open-ended question, "If you use it at work, please describe *how* do you use it?", most (n=43) responded with one of the reasons listed in the question described above. A few exceptions included, "Library Thing—to catalog a small consumer health collection," "We use it to teach MeSH," and "I have created a blog for my patrons and feed material in through a del.icio.us account."

Among the 83 nonusers, 70 provided reasons for not tagging. "I don't see any need" (n=44, 53%) was the most common reason expressed. Three respondents attributed lack of use to firewalls ("I am unable to do it on my computer"). Responses specified in the "Other" category (n=32, 39%) included lack of time (n=12, 14%), no need to use them (n=6, 7%), not interested (n=2, 2%), and not familiar with them (n=8, 10%).

Motivations to use tagging

Responses to the question, "How did you first become interested in using social tagging?" were conference presentation (n=11, 15%); reading (books, journals, or online) (n=8, 11%); colleagues (n=11, 15%); self-taught (n=26, 36%); class (n=15, 21%); and other (n=1, 1%). In responding to the question, "Who motivated you to starting using tagging?", respondents most frequently selected "Yourself or other staff wanted to use it" (n=52, 71%) or "Other" (n=19, 26%). Answers in the latter category included the MLA Web 2.0 class (n=3, 4%), the MLA webcast (n=3, 4%) (both of these were in process at the time of this survey), or class for graduate or library school (n=2, 3%). No respondents selected the choice, "Patrons or library users asked for a service that uses it."

One hundred fifty-four respondents answered the question, "If you work with patrons, how many times in the last month has a patron asked you a question about a social tagging website?" In the last month, 112 (72%) had no patron questions, 9 (6%) had 1–5 patron questions, 2 (1%) had more than 5 questions, and 31(20%) did not work with patrons.

DISCUSSION

These results indicate that social tagging is still not a technology widely used by medical librarians. Less

than half of respondents (47%) have used it (including infrequently). User demand is not motivating librarians to learn about tagging. Only 6% have had user questions related to tagging directed to them in the previous month (March 2008). Many of the nonusers state they have not yet heard of the phenomenon or are simply not interested. However, responses also indicate that librarians may only recently have been introduced to tagging; many report learning about tagging from the recent MLA webcast. Perhaps in time, with more exposure in the literature and in conferences, coupled with the influx of newer graduates into the field, tagging will become more widely used.

The most commonly reported use of tagging was to organize resources that respondents had already found, followed by use for discovery, and a great many users only used it at home or for personal reasons. However, thirty respondents employed tagging for collaboration, showing perhaps the perceived value of the collective intelligence provided by tagging [4]. Also, thirteen of the free-text responses indicated that librarians were using tagging to enhance user services by helping patrons find information either by sharing tagging sites with individuals or creating content for patron use with one of these tools. One library used LibraryThing to catalog a collection.

The sites that were most commonly used were the most well-known sites, Del.icio.us and Flickr. Interestingly, sites developed or promoted for the academic setting (CiteULike and Connotea) were not popular. The use of so many different tagging sites [17] may partially defeat the benefit of sharing intelligence. Possibly some sites will die and others will become the standards.

STUDY LIMITATIONS

The population samples included only those with email addresses and only those willing to take an online survey, so the sample may have been biased toward those with more computer skills. Only half of the invited sample chose to participate. The author believes that nonrespondents were less likely to be taggers, and if they had been counted, the percentage using tagging could have been as low as 21%.

In this study, only social tagging sites were considered. Social networking sites, such as Facebook or Myspace, were not. The introduction to the survey tried

to make the distinction clear, but from the responses, it seems some people did not understand the distinction.

CONCLUSION

Del.icio.us has been in existence for five years, since late 2003 [18], and by this measure, user tagging is still a relatively new phenomenon. The survey reported here suggests that some members of the medical library profession are adopting tagging at the moment. Others appear to be waiting to determine if this technology will truly move the profession forward. With over twenty-five social tagging sites to choose from, the collective intelligence features of tagging will not be realized until a consensus emerges as to which sites will be used.

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