Web Resource Selection Behavior Patterns of Social Media Users in Health: A Comparison of Yahoo! Answers and Delicious

Sue Yeon Syn
School of Library and Information Science
Catholic University of America
620 Michigan Ave. NE, Washington DC 20064
syn@cua.edu

Sanghee Oh
College of Communication and Information
Florida State University
142 Collegiate Loop Tallahassee, FL 32306-2100
shoh@cci.fsu.edu

ABSTRACT
This study aims to evaluate the shared web resources from two social media: social Q&A and social bookmarking services. Health was chosen as a topic of interest. The URLs in answers of Yahoo! Answers and bookmarks of Delicious related to health were collected. The preliminary analysis focused on the URL host distributions and patterns. Findings could be used to develop a research framework of the use of web resources and to educate users to use various sources for information seeking and sharing in social media.

Keywords
Social media, social Q&A, social bookmarking, information seeking behavior, web resources

INTRODUCTION
Social media promote massive collaboration among people in seeking and sharing information. A number of studies have been carried out to investigate the characteristics, the values, and the influence of each social medium to people’s information seeking and sharing behaviors. There are few studies, however, which identify people’s behaviors commonly recognized within multiple types of social media and attempt to investigate the influence of the social media. Thus, the main focus of the current study is assessing the use of web resources in the contents of two social media, social Q&A (i.e. Yahoo! Answers) and social bookmarking (i.e. Delicious) services. The two media have in common that the contents are dynamically created by users as they create answers or bookmarks. More importantly, users select and share web resources with others. This study was designed under an assumption that the web resources selected and cited by the users have received credit as being valuable sources of information. Comparisons of the popularity of web source citations or bookmarks let us examine how much users from the social media have agreed upon the value of the resource. The main research question of the current study is to investigate “what are the common patterns of the web resource citations among social media users?” The topic of health is chosen because it is one of the most critical topics of concern among situations experienced in everyday life (Chen & Hernon, 1982) and requires credible information sources for the information that users are looking for.

BACKGROUND
Social Q&A is an online service which allows people to ask and answer questions among themselves. Researchers have put efforts into identifying different types of questions and answers (Harper, Raban, Rafaeli, & Konstan, 2008), evaluating the quality of answers (Agichtein, Castillo, Donato, Gionis, & Mishne, 2008), and investigating the role of users collaborating while seeking information (Gazan, 2007). In order to create good answers, answerers cite a variety of resources, such as personal experiences, professional expertise, or web resources in their answers (Oh, Oh, & Kim, 2008).

Social bookmarking is a service that allows users to store their bookmarks online and share user’s bookmarks with others. Research has been carried out more to analyze and use user input tags in tag patterns (Golder & Huberman, 2006), information discovery (Heymann, Koutrika, & Garcia-Molina, 2008) and information organization (Macgregor & McCulloch, 2006) rather than to understand the nature of the bookmarked web pages. Bookmarks can be considered as a selection of web resources that are stored with users’ judgment on good web resources.

This study focused on the topics in health since it is a common interest to people of various ages, genders, and backgrounds. According to the most recent survey from Pew Research, 61% of American adults look for health information online (Fox & Jones, 2009). For this study, the shared web resources of health topics are compared from two social media, Yahoo! Answers and Delicious.

METHOD
Data have been collected from Yahoo! Answers and Delicious during the four weeks between April 13th and
May 11th, 2011. A total of 15,099 unique URLs from the answers within the 21 health Yahoo! Answers categories that were posted during the period of the data collection were extracted. In Delicious, 21,081 unique URLs that were bookmarked during the period of data collection from the 21 health category labels defined by Yahoo! Answers were crawled. For data analysis, we first compared the popular web sources of the information by looking at the hosts of the collected URLs. Second, to compare the popular information sources from the two social media to general web resource usage, we compared the popularity of the information sources to the ranks of the visits from ALEXA (http://www.alexa.com/).

RESULTS

A unit of analysis of the information source is the host of a URL. Among 15,099 unique URLs from Yahoo! Answers, 5,936 unique hosts were identified. Among 21,081 unique URLs from Delicious, 10,889 unique hosts were identified. 797 hosts appear from both social media (13.43% of Yahoo! Answers hosts and 0.07% of Delicious hosts). It was not surprising to observe a long tail of the hosts distribution by the popularity. The purpose of the current study is finding frequently used web sources and their credibility. For a better analysis, we made a threshold of hosts that overlap more than 1%. We were able to identify 24 frequently used hosts by two social media users. The most popular information source in Delicious was the New York Times (www.nytimes.com)(12.88%), on the other hand, Wikipedia (en.wikipedia.org) was the most popular in Yahoo! Answers (11.04%). The popular Delicious web sources were known as credible resources in general such as Google and BBC. Different from Delicious, Yahoo! Answers frequently cited web sources were from authoritative institutes in health such as Mayo Clinic, WebMD, and NIH. Another interesting aspect was that Yahoo! Answers frequently cites existing answers of Yahoo! Answers, which reflects the FAQs.

The hosts were further compared with ALEXA traffic rank. The ALEXA traffic rank is calculated using a combination of average daily visitors to and page views on the website over the past three months. Thus, the website that is ranked high can be considered as a popular website, visited by many users. We gathered the traffic ranks of the 24 popularly used hosts from the two social media from the snapshot traffic ranks of ALEXA as of June 9th, 2011. The 24 hosts were relatively popular websites ranked within 3,510 in ALEXA. The popular hosts from Delicious tend to include websites that are more highly ranked, that are more visited websites with search results and with up-to-date information. On the other hand, the popular hosts from Yahoo! Answers included more informative and explanatory websites, e.g. health agencies. The comparisons on the popularity of information sources from Yahoo! Answers and Delicious and the traffic ranks from ALEXA can be viewed from our data result web page at http://faculty.cua.edu/syn/research/socialmedia/data.html.

DISCUSSION AND CONCLUSION

The current study provides a preliminary analysis of the use of health resources in the two social media. The results demonstrated that popularly shared Delicious bookmarks are from the websites that provide information with novelty such as news articles, whereas frequently cited websites in Yahoo! Answers are the websites that provide information with better credibility such as encyclopedias. Based on the comparison with ALEXA traffic rank, it was revealed that social media users tend to select websites that are frequently visited by general web users, meaning that, the web sources shared by social media users can be considered as good information sources although the tendency of the information source selection may vary according to the types of services. The findings can be used to better serve users in social media. Informational professionals need to lead users to be exposed to more various and useful web resources than they may find in social media. A follow-up study will be conducted to evaluate the quality of web resources shared in social media and their impacts on health decisions. We will also expand the scope of the research beyond health and develop a research framework for the use of web resources in social media.

REFERENCES


