Information Seeking through Social Media: Impact of User Characteristics on Social Media Use

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ABSTRACT
The study investigated how college students, including both undergraduate and graduate students, use different social media platforms for the purpose of information seeking in the academic context. A Web survey was used to collect data. A total of 1,286 students participated in the study. It was found that most of the social media platforms were used for the purpose of information seeking, although Wikis was the one most frequently used. Significant differences between undergraduate and graduate students were found in the use of social media for information seeking. In the academic context, the undergraduates used Social Q&A, Media-sharing sites, and Wikis frequently. On the other hand, graduate students used Blogs more often than the undergraduates. Significant gender differences were also found. Male students tended to use Wikis and Internet forums more often than female students. Furthermore, significant differences in disciplines were found. Students in science and engineering tended to use Wikis and Social Q&A more often, and Blogs and Microblogs less often, than did students in humanities and social sciences. Humanities students used Online reviews more often than students in science and engineering. Implications of the findings were discussed in light of information literacy and user services for college students.

Keywords
Social media, information sources, source use, gender, class level, discipline, college students.

INTRODUCTION
Social media has become increasingly popular among individuals, especially among young adults (Duggan & Brenner, 2013; Lenhart et al., 2010). Although their purpose is mainly to support social interactions, various social media platforms seem to be used for finding information (Brenner, 2012; Lenhart et al., 2007; Pew, 2012). Studies show that some social media platforms are used as information sources even in the academic context - for writing research papers, for example (Head & Eisenberg, 2010, 2011). While there exist many studies on social media use, most of them focused on the use of social media for social networking or marketing purposes (Berthona et al., 2012; Ellisson et al., 2007; Lampe et al., 2006; Xiang & Gretzel, 2010). Little attention has been given to the roles that social media play as information sources. So far, most of the recent research addressing the informational value of social media seems to have captured the general trends, but not individual differences, in using social media as information sources (Head & Eisenberg, 2010; Kim et al., 2011). This study aims to bridge the gap.

A Web survey study was conducted to reveal why and how different social media platforms are used by university students with different backgrounds in the academic context. Of particular interest are user variables affecting individual differences in the use pattern. Findings of the study shed light on social media sources that are preferred by, and potentially useful to, users with different backgrounds. This will help educators and academic librarians to refine information literacy programs and user services for college students.

METHODS
A Web survey method was used to collect data. Data were collected in spring 2013. As a non-probability sampling method was applied, the sample used in the study may not be representative of the college student population. Generalization of the findings should be done with caution.

Participants
A total of 1,286 students from a public university completed the survey. Their participation was voluntary, and gift cards were awarded to those selected via random drawing. About 62% (n=793) of the participants were female and 38% (n=493) were male students. Over 90% (n=1168) were under 30 years of age. About 72% (n=929) of the sample were undergraduates and 28% (n=357) graduate students. Regarding participants’ major fields, students in arts and humanities, social sciences, and science/engineering constituted 11% (n=140), 39.5% (n=508) and 38.5% (n=495) of the sample, respectively.

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FINDINGS

Purpose of Social Media Use
What is the main purpose of using different social media platforms? Drawn from uses and gratifications literature (McQuail, 1994), four different purposes for using media – information seeking, personal identity, social interaction & integration, and entertainment – were used in the survey. It was found that most of the social media platforms were used for information seeking, although Wikis (e.g., Wikipedia) was the most frequently used for this purpose. On average, Wikis was used at least few times a week for information seeking, whereas others were used more than a few times a month. Social networking sites (SNS) and Microblogs (e.g., Twitter) were used mainly for social interaction & integration and for nurturing personal identity. For entertainment, SNS, Media-sharing sites (e.g., YouTube), Microblogs, and Social bookmarking (e.g., CiteULike, Reddit) were among the ones frequently used.

Social Media Use for Information Seeking in Academic Contexts
As using quality sources in the academic context is a main concern among educators and information professionals in colleges and academic libraries, findings related to the social media use as information sources in the academic context are presented here.

Overall, Wikis was found to be the most frequently used information source in the academic context (e.g., for writing papers, course projects), followed by Media-sharing sites, and Social Q&A (e.g., Yahoo!Answers). It is interesting to note that Media-sharing sites were among the top three information sources. Analysis of follow-up questions revealed that such sites were often used for getting updates or news and for finding solutions or how-to instructions.

Individual differences by class level

To find out if different user variables influenced the social media use pattern, a series of bivariate analyses were carried out. Independent t-tests were used for testing the effect of class level (undergraduate vs. graduate) on the use of social media platforms.

Significant class level differences were found in the use of the various social media platforms (See Table 1). It was found that undergraduate students used Media-sharing sites (p < .001), Social Q&A (p < .001), and Wikis (p < .001) more frequently than graduate students. Wikis (e.g., Wikipedia) is known to be popular as the first place to go for a quick overview or fact checking (Head & Eisenberg, 2009a, 2009b). The popularity of Wikipedia among undergraduates was also found in other studies (Head & Eisenberg, 2010, 2011; Lim, 2009). Graduate students, on the other hand, tended to use Blogs (p < .001) more often than the undergraduates. This seems to make sense because graduate students might need to actively seek new and useful ideas and resources in a highly specialized topic area for their research. Blogs seems to be a logical place for those who want to get new information from individuals or groups highly interested and specialized in a particular topic area.

Individual differences by disciplines

To find out if students’ disciplines affect their use of social media, one-way ANOVAs were conducted with discipline areas (including humanities, social sciences, science and engineering) as an independent variable.

Students’ major fields or disciplines were found to have significant impacts on the use of different social media platforms. Students in science and engineering tended to use Wikis (p < .01) and Social Q&A (p < .001) more often than those in humanities or social sciences. Students in humanities and social sciences, on the other hand, used Microblogs (p < .001) more frequently than those in science and engineering. Humanities students were also the most frequent users of Blogs, followed by social science students (p < .001); also the humanities students used Online reviews more frequently than those in science and engineering (p < .05).

It is apparent that some social media platforms were favored and frequently used by students from certain disciplines (See Table 2). Wikis and Social Q&A, for example, are known to be used for quick overview, fact checking, and solutions (Head & Eisenberg, 2009b; Kim et al., 2011). In this study, they were found to be more popular among science and engineering students. It is possible that information tasks in science and engineering might often require quick overviews, fact checking, and solutions, compared to those in other disciplines. Blogs and Microblogs are usually favored by those interested in new information about particular topics, events, or individuals. Students in humanities and social sciences seem to have found Microblogs as useful sources for their academic work, compared to those in science and engineering. More
research is needed to further investigate types of information tasks encouraged in different disciplines.

<table>
<thead>
<tr>
<th>Social Media Platform</th>
<th>Disciplines</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blogs</td>
<td>Humanities</td>
<td>1.97</td>
<td>1.038</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td>1.64</td>
<td>.948</td>
</tr>
<tr>
<td></td>
<td>Science/Engineering</td>
<td>1.43</td>
<td>.781</td>
</tr>
<tr>
<td>Microblogs</td>
<td>Humanities</td>
<td>1.51</td>
<td>.910</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td>1.39</td>
<td>.822</td>
</tr>
<tr>
<td></td>
<td>Science/Engineering</td>
<td>1.23</td>
<td>.633</td>
</tr>
<tr>
<td>Online reviews</td>
<td>Humanities</td>
<td>1.61</td>
<td>.846</td>
</tr>
<tr>
<td></td>
<td>Science/Engineering</td>
<td>1.39</td>
<td>.763</td>
</tr>
<tr>
<td>Social Q&amp;A</td>
<td>Humanities</td>
<td>1.75</td>
<td>.997</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td>2.03</td>
<td>1.176</td>
</tr>
<tr>
<td></td>
<td>Science/Engineering</td>
<td>2.51</td>
<td>1.299</td>
</tr>
<tr>
<td>Wikis</td>
<td>Humanities</td>
<td>3.36</td>
<td>1.101</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td>3.34</td>
<td>1.181</td>
</tr>
<tr>
<td></td>
<td>Science/Engineering</td>
<td>3.70</td>
<td>1.098</td>
</tr>
</tbody>
</table>

Table 2. Social Media Used by Students in Different Disciplines: Frequency of Using Social Media Platforms

Note. Only the statistically significant results (at the .05 level and below) are presented here. Scale used: 1 (never) to 5 (almost always).

Individual differences by gender

Some gender differences were also found to be significant (Table 3). Male students tended to use Wikis (p < .001) and Internet forums (p < .001) more often than female students.

<table>
<thead>
<tr>
<th>Social Media Platform</th>
<th>Gender</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wikis</td>
<td>Male</td>
<td>3.77</td>
<td>1.052</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.33</td>
<td>1.163</td>
</tr>
<tr>
<td>Internet forums</td>
<td>Male</td>
<td>1.89</td>
<td>1.047</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1.64</td>
<td>.988</td>
</tr>
</tbody>
</table>

Table 3. Social Media Used by Students of Different Gender: Frequency of Using Social Media Platforms

Note. Only the statistically significant results (at the .05 level and below) are presented here. Scale used: 1 (never) to 5 (almost always).

While the numbers of female (n=267) and male participants (n=228) in science and engineering were comparable, they were not in other fields. That is, the number of female participants (n=427) was much higher than males (n=220) in humanities and social sciences. To find out whether the gender difference found here was compounded by disciplines, further analyses were carried out. Results showed a consistent gender difference in all subcases except one. While male students tended to use Wikis and Internet forums more frequently than females, such gender differences disappeared in humanities students’ use of Internet forums.

Evaluating Information from Social Media

Obviously, acquiring quality information is important in the academic context, as it may have significant impact on students’ academic performance. How to evaluate the quality of information has been a central focus of information literacy education.

A number of different actions may be taken in order to check and verify information gained from social media. Such actions can be related to the verification of author information, the content posted, physical characteristics of the post, references/resources provided, other users’ reactions, and so on. When the frequency of taking different evaluative actions was considered, participants in general tended to take more actions to evaluate information from Wikis, followed by Blogs, Social Q&A, Media-sharing sites, and Internet Forum.

Individual differences in use vs. evaluation

The study found that frequent users of a certain social media platform tended to take more evaluative actions when using information from the corresponding platform for their academic tasks. For example, students in humanities or social sciences tended to use Blogs and Microblogs more frequently than those in science and engineering. They were also found to take more actions to evaluate information from Blogs (p < .01) and Microblogs (p < .05) than the science and engineering students did. Undergraduate students were found to use Media-sharing sites and Social Q&A more frequently than the graduate students. They also tended to take more evaluative actions when using Media-sharing and Social Q&A sites (p < .01) than the graduate students. However, such a positive relationship between the level of use and the level of evaluation was found in most but not all the cases.

Additional analysis of evaluative actions was conducted to compare the results in two different contexts: academic vs. everyday life information-seeking contexts. Results from the everyday life context did not confirm the positive relationship between the use and evaluation. In the everyday life information-seeking context, no clear relationship between the frequency of use and the level of evaluation was found. Further research is needed to find out whether any significant relationship exists between the use and evaluation behavior in different contexts.
CONCLUSION

The study has revealed that most social media platforms are used by college students not only for social interactions or entertainment purposes, but also for information seeking in the academic context. It also sheds light on how users’ backgrounds and characteristics affect their use of social media. Findings suggest that depending on their class level, disciplines, and gender, students may use different social media platforms to acquire information. In addition, a certain relationship between the level of use and evaluation was suggested. More research is needed to examine types of information tasks encouraged in different levels of programs and different disciplines. This will help identify more suitable social media sources for students with different backgrounds and needs. It will also help design social media sources to better serve students’ information needs.

The study was the first step to explore individual differences in social media use as information sources. Educators and academic librarians would find class level and discipline differences revealed in the study to be of interest, as it implies that their information literacy programs and information services for students may need to be refined to better serve students with different backgrounds. More research is called for to examine the complex relationships among user characteristics, tasks, contexts and social media use and evaluation.

ACKNOWLEDGMENTS

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REFERENCES


