Students of tomorrow: Agricultural students’ use of selected social media

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Abstract

The Internet has evolved from a medium through which others’ content was received into a medium for creating content and participating in social exchanges, resulting in a growth of social capital available for personal and business uses. Understanding students’ use and preferences for social media is an important step in developing agricultural communications curricula that will better prepare students to face social and workplace demands, as personal and professional use of social media continues to grow. Students enrolled in an upper-level agricultural communications service course were surveyed to determine their participation in selected social media, including Facebook, LinkedIn, Twitter, and blogs, and their preferences for using those media in the classroom. Students’ reported use of social media was consistent with previous studies and with the categories described by the social technographics profile concept, with a majority of students reporting use of Facebook but no or few students reporting use of LinkedIn, Twitter, and blogs. Students’ low levels of preference for use of the selected media in the classroom also were consistent with previous studies. This study supports previous research showing that social media should be incorporated into course curricula in moderation, with the preferences of students in mind. However, instructors should be prepared to help students effectively equip themselves for their careers.

Keywords: agricultural communications, social media, Facebook, LinkedIn, Twitter, blogs, social capital
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**Introduction**

The use of social media has grown significantly over the last decade, and interaction within electronic environments has become a mainstream mode of interpersonal and mass communication (Kerawalla, Minocha, Kirkup, & Conole, 2008; Lipsman, 2007; Pfeil, Arjan, & Zaphiris, 2009; Smith, Salaway & Caruso, 2009). This shift in communication has been aided by handheld devices that allow for fast and reliable access to social media sites such as Facebook, LinkedIn, and Twitter (Smith, 2009; Smith et al.). Businesses across multiple industries have taken notice of this rise in the use of electronic communication and have responded by focusing on social media as a valuable marketing and public relations tool (Li & Bernoff, 2008). In addition, instructors at higher education institutions have begun incorporating social media and other technologies into the classroom at an ever-increasing pace, both to prepare students for the workplace and to meet their needs and expectations as digital natives (Baird & Fisher, 2005-2006; Kerawalla et al.; Pfeil et al.; Smith et al.).

Social media awareness and use has grown from the initial movement toward user-generated content through blogs and wikis (Instone, 2005; Kerawalla et al., 2008; Pfeil et al., 2009) into the development of extensive virtual networks that include social networking sites, blogs, customer forum, and podcasts, among other Web 2.0 technologies (Kerawalla et al.; Pfeil et al.). Through these technologies, user-generated content is not only shared but also allows multiple users to influence the development of community knowledge (Pfeil et al.). Users, including students, now rely on the Internet as a medium for receiving other users’ content, creating their own content, and participating in social exchanges (Djajadiningrat & Kyffin, 2007;
Smith et al., 2009), ultimately extending “the length of the shadows they cast” (Smith et al., p. 7).

Obtaining reliable and accurate estimates of Web 2.0 technology users, particularly those generating content, is a complex task, resulting in many studies of specific Web 2.0 technology use within finite groups (Pfeil et al., 2008). For example, estimating the size of the global blogosphere, or the number of bloggers and people participating in blog interactions, is nearly impossible due to a likely absence of data from specified and unknown platforms (Hurst, Siegler, & Glance, 2007). While statistics from social networking sites and about blogs may be available, describing the habits of users requires examining groups one demographic at a time, with most research to date conducted with younger users (Pfeil et al.) or those reachable by telephone (Fox, Zickuhr, & Smith, 2009).

When examining the use of status-update services for the Pew Internet and American Life Project, Fox et al. (2009) found that about 19% of Internet users report using services such as Facebook or Twitter to exchange updates about themselves and others. In a larger survey focused on 30,616 students from 115 colleges and universities, 90.3% of students who responded reported accessing social networking Web sites, while 37.3% reported contributing content to blogs (Smith et al., 2009). Students also reported contributing to video Web sites such as YouTube (44.8%), contributing content to wikis (41.9%), listening to podcasts (35.1%), participating in online multiuser computer games (29.0%), and participating in online virtual worlds such as SecondLife (8.1%) (Smith et al.). Students’ average time spent on online activities, including school, work, and recreation, was 21.3 hours per week (Smith et al.).

Facebook has led the revolution of social media sites, even surpassing its place as a noun to become a verb (Foregger, 2008). Since the launch of Facebook in 2004, “Facebooking
someone” or being “facebooked” has become an everyday part of the common vernacular (Foregger). Prior to the opening of Facebook to the public in 2005, 94% of students on higher education campuses with Facebook networks reported having Facebook accounts (Ellison, Steinfeld, & Lampe, 2006; Stutzman, 2006). Now, according to the Facebook Web site, more than 300 million active users collectively log more than 8 billion minutes on the site per day (Facebook.com, 2009).

LinkedIn, a social networking site for professional and career development, also has surged in popularity (Adamic & Adar, 2005). Founded in 2003, LinkedIn started as a localized networking site with 4,500 members (LinkedIn.com, 2009). As of 2009, LinkedIn’s membership includes more than 50 million professionals in 200 countries. Among these members are executives of all Fortune 500 companies (LinkedIn.com). Searching for a proper fit for career and professional goals through acquaintances is natural and advantageous, and LinkedIn assists people in such networking (Adamic & Adar).

Rising in popularity since its creation in 2006 has been Twitter, a social networking site focused on status updating. Currently, Twitter is ranked behind Facebook and Myspace as the third most-visited social networking site (Fox et al., 2009). The number of active Twitter users increased from 2 million users per month in December 2008 to more than 17 million users per month in May 2009 (Fox et al.). The same study also reported that college-age students, defined as people 18 to 24 years old, accounted for 37% of all Twitter use (Fox et al.). Internet users who also use social networking sites such as Facebook and LinkedIn make up 35% of Twitter users, compared to only 6% of Twitter users who do not participate in other social networking sites (Fox et al.).
In addition to social networking sites, blogging is an integral part of Web 2.0 technology and social media (Kerawalla et al., 2008). A 2007 study found that 25 percent of Americans surveyed read blogs on a regular basis, and 11 percent of respondents published, maintained, or updated a blog (Bernhoff & Li, 2008). About 9% of Americans surveyed about Internet use during the current economic recession indicated they contributed to blog content (Smith, 2009). Student use of blogs has increased steadily, with blogging site LiveJournal now ranked sixth among college students’ top 10 Web sites (Smith et al., 2009). In addition, Smith et al. found that students are four times as likely as other adults to blog, despite 38.8% of college students reporting they do not add user-generated content to the Internet through blogs, wikis, or video sites.

The increase in usage and popularity of social media can be described using concepts from Li and Bernoff’s (2008) book *Groundswell: Winning in a world transformed by social technologies*. In *Groundswell*, the authors attribute the growth of social media to the social technographics profile (STP). Grouping people based on their activities is the central point of the STP concept (Li & Bernoff), which uses a similar structure to Roger’s (2003) theory of adoption to explain participation in technology. In Rogers, adopters are categorized as innovators, early adopters, early majority, late majority, and laggards. In STP, all participants are placed into one of six groups: creators, critics, collectors, joiners, spectators, and inactives (Li & Bernoff).

Creators produce electronic media, such as stories, articles, blogs, videos, or music, while critics comment on creators’ content or contribute to forums. Collectors tag or save media created by others. Joiners visit social networking sites and maintain a profile on at least one social media site. Spectators watch, read, or listen to electronic media without producing their own content or providing feedback for others (Li & Bernoff, 2008).
Among college-age adults, classified by Li and Bernoff (2008) as 18 to 27 years old and referred to as Generation Y, the highest percentage of participants fall into the spectator category, with 67% of men and 60% of women using electronic media without producing content or contributing to existing content. Spectators are followed closely by joiners, with 59% of men and 58% of women maintaining social media profiles. Critics include 45% of men and 37% of women, while creators account for 41% of men and 37% of women (Li & Bernoff). Collectors and inactives account for 29% and 16% of men, respectively, and 22% and 28% of women, respectively.

The data supporting the Groundswell concept (Li & Bernoff, 2008) suggests people are adopting social media faster and in greater numbers, in agreement with other studies of social media use (Foregger, 2008; Fox et al., 2009; Pfeil et al., 2009; Smith, 2009; Smith et al., 2009). These trends can be attributed to several reasons for using social media, including maintaining friendships; making new friends; yielding to social pressures; paying it forward; and following creative, altruistic, prurient, inquisitive, and social impulses (Li & Bernoff; Kerawalla et al., 2008; Pfeil et al.; Smith et al.). The use of social media for these and other reasons reflects fundamental human needs to connect (Li & Bernoff) and desires for social capital, or the resources created in social networks that benefit members of the networks (Ellison et al., 2006).

The purpose of this study was to describe agricultural students’ use of selected social media as a basis for examining agricultural communications course curricula to move toward better preparing students for evolving social and workplace demands. The study was guided by five objectives:

1. To describe students’ use of Facebook, including levels of activity, network members, and use for college courses.
2. To describe students’ use of LinkedIn, including levels of activity and network members.

3. To describe students’ use of Twitter, including levels of activity and network members.

4. To describe students’ use of blogs, including amount of time spent blogging and reading other blogs.

5. To describe students’ preferences for use of selected social media in an agricultural communications course.

Methods

Students enrolled in an upper-level agricultural communications service course at a southwestern land-grant university were selected for this study. The population included 60 students, 55 of whom volunteered to participate in the study.

Descriptive survey methodology was used to determine students’ use of selected social media, including Facebook, LinkedIn, Twitter, and blogs. Survey responses were gathered through a paper-based questionnaire developed from a review of the course curricula and literature describing social media concepts. The course curricula included career development activities, concepts of effective writing, grammar and punctuation, and crisis communication. The survey was reviewed by a panel of experts to establish face and content validity. A post-hoc reliability analysis performed on the scaled items in the instrument produced a Cronbach’s alpha of 0.90.

The survey was conducted during a 15-minute period of one course lecture, and all 55 students who volunteered to participate in the study completed the survey.
Quantitative data were analyzed using the Statistical Package for Social Science 17.0. Descriptive data, including frequencies, percentages, means, and standard deviations, were used to interpret the data and to describe students’ responses. Scaled items were interpreted as follows: 1.0-1.4, very low; 1.5-2.4, low; 2.5-3.4, neutral; 3.5-4.4, high; and 4.5-5.0, very high.

Findings

Demographics of agricultural students

Demographic information reported by the respondents included primary major, undergraduate credit hours earned, and gender. The respondents were 40.0% female and 60.0% male. Based on undergraduate credit hours earned, the majority of respondents (86.7%) were classified as juniors or seniors, with majors in animal science (34.5%), agricultural education (29.1%), agribusiness (20%), agricultural economics (5.5%), natural resource ecology and management (5.5%), agricultural leadership (3.6%), and food science (1.8%).

Students’ use of selected social media

Respondents were asked to report their use of social media, including Facebook, LinkedIn, Twitter, and blogs, and their previous experiences with Facebook and LinkedIn in coursework. The majority (85.0%) of respondents indicated they have an account with Facebook. However, all respondents indicated they did not have accounts for LinkedIn (100.0%), and nearly all respondents reported they did not have Twitter accounts (92.7%) or blogs (96.4%).

About 31% percent of the respondents reported taking courses in which the instructor used Facebook to communicate with students, and 12.7% of respondents indicated instructors had used Facebook to post course materials. No respondents reported instructors in other courses encouraging the use of LinkedIn for professional networking.
Students’ use of Facebook

Respondents were asked a variety of questions regarding their use of Facebook, including the length of time they had an account, levels of activity for a variety of functions, and whether selected types of organizations were members of their networks.

Eighty percent of respondents who reported having a Facebook account indicated having an account for more than one year, with the length of time ranging from 2 years to 5 years. Specifically, 10.9% of respondents indicated maintaining a Facebook account for two years, 32.7% for three years, 23.6% for four years, and 12.7% for five years.

Respondents reported their levels of activity for a variety of Facebook functions (see Table 1), including accessing Facebook from a mobile device, updating profile information, uploading photos, posting notes, viewing friends’ profile updates, viewing friends’ photos, reading friends’ notes, sending messages and/or writing on friends’ walls, viewing updates to fan pages, viewing updates to group pages, taking quizzes, playing games, and using other applications. Respondents reported a high level of activity for viewing friends’ photos ($M = 3.49$, $SD = 1.14$), with the levels of activity for all other functions either neutral or low. Following viewing friends’ photos, next four most-used functions were viewing friends’ profile updates ($M = 3.36$, $SD = 1.33$), sending messages and/or writing on friends’ walls ($M = 3.34$, $SD = 1.34$), uploading photos ($M = 2.62$, $SD = 1.28$), updating profile information ($M = 2.46$, $SD = 1.19$), and reading friends’ notes ($M = 2.46$, $SD = 1.28$).

A majority of respondents indicated broadcast media outlets (97.9%), print media outlets (91.5%), other news services (89.4%), university news services (74.5%), professional contacts (66.0%), and professional development organizations (55.3%) were not part of their Facebook networks.
Table 1

Students’ Levels of Activity for Facebook Functions

<table>
<thead>
<tr>
<th>Activity</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing friends’ photos</td>
<td>3.49</td>
<td>1.14</td>
</tr>
<tr>
<td>Viewing friends’ profile updates</td>
<td>3.36</td>
<td>1.33</td>
</tr>
<tr>
<td>Sending messages and/or writing on friends’ walls</td>
<td>3.34</td>
<td>1.34</td>
</tr>
<tr>
<td>Uploading photos</td>
<td>2.62</td>
<td>1.28</td>
</tr>
<tr>
<td>Updating profile information</td>
<td>2.46</td>
<td>1.19</td>
</tr>
<tr>
<td>Reading friends’ notes</td>
<td>2.46</td>
<td>1.28</td>
</tr>
<tr>
<td>Accessing Facebook from a mobile device</td>
<td>2.04</td>
<td>1.49</td>
</tr>
<tr>
<td>Playing games</td>
<td>1.91</td>
<td>1.15</td>
</tr>
<tr>
<td>Using other applications</td>
<td>1.91</td>
<td>1.05</td>
</tr>
<tr>
<td>Taking quizzes</td>
<td>1.85</td>
<td>1.14</td>
</tr>
<tr>
<td>Viewing updates to group pages</td>
<td>1.74</td>
<td>0.88</td>
</tr>
<tr>
<td>Posting notes</td>
<td>1.70</td>
<td>1.09</td>
</tr>
<tr>
<td>Viewing updates to fan pages</td>
<td>1.67</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Responses to multiple questions about respondents’ Facebook use were compared to determine if patterns existed. Respondents who had Facebook for more than one year had higher levels of activities for Facebook applications or functions. Students who had Facebook accounts for less than six months rated activity levels as low or very low and did not network with print media, broadcast media, university news service, professional development organizations, or professional contacts.
Students’ preferences for use of media in the classroom

Respondents reported their preferences for the use of Facebook in previous courses and for the use of blogs and Twitter in future agricultural communications curricula. Respondents rated Facebook low ($M = 2.41$, $SD = 1.24$) as a communication tool and placed low value ($M = 1.97$, $SD = 1.09$) on course materials posted on Facebook. In addition, indicated low levels of preference for the use of blogs ($M = 2.24$, $SD = 1.18$) and Twitter ($M = 1.88$, $SD = 1.20$) in place of written assignments in the agricultural communications curricula.

Discussion

The respondents’ use of selected social media, particularly Facebook, is consistent with previous studies of college-age social media users (Li & Bernoff, 2008; Fox et al., 2009; Pfeil et al., 2008; Smith et al., 2009), although respondents’ use of Twitter and blogs was lower than use reported in two of those studies (Fox et al.; Smith et al.). A majority of respondents in this study reported having Facebook accounts, in agreement with the majority of students across numerous college campuses reporting participation in social networking sites (Smith et al.). However, about one-third of students surveyed by Smith et al. reported contributing to blogs, while only 2 of 55 respondents in this study reported producing blog content.

Respondents’ reported levels of activity with Facebook functions mostly agree with Li and Bernoff’s (2008) classifications of college-age students as creators, critics, collectors, joiners, spectators, and inactives. Li and Bernoff described most college-age social media participants as spectators, and the highest mean levels of activity on Facebook reported by respondents were for viewing friends’ photos and viewing friends’ profile updates. Respondents’ average level of activity for sending messages and/or writing on friends’ walls was nearly equal to their average level of activity for viewing friends’ profile updates, moving them into the
category of critics and possibly creators. The neutral mean levels of activity reported by respondents’ for adding content to Facebook via uploading photos and updating their profiles reinforces that more spectators and critics and fewer creators were present in this population of college-age students, as do the low and very low mean levels of activity reported for functions requiring user actions. In addition, the patterns in Facebook use based on length of time accounts were held indicated that Facebook users progress through stages of use, beginning with no use as inactives to high levels of use as creators (Li & Bernoff).

The majority of students reporting participation in at least one type of social media does conflict with Li and Bernoff’s (2008) report that about one-quarter of college-age students are inactives. In this study, 85% of respondents indicated using at least one type of social media, with three respondents indicating use of more than one medium.

The low value placed on the use of Facebook in other courses was in agreement with other college students who reported preferences for face-to-face contact and a moderate amount of technology incorporation into college coursework (Smith et al., 2009). In addition, students reported low value for the use of blogs and Twitter in lieu of written assignments in the agricultural communications course focused on in this study.

Reports about the use of Twitter in college coursework were not found, although multiple studies have examined the use of blogs in the classroom. These studies found that student reactions to and experiences with blogging can vary, as students often find it difficult to understand the educational value of participating in or producing a blog (Boyd, 2006; Kerawalla et al., 2008). Some students do embrace blogging as a medium for improving writing skills, particularly when instructors are effective in explaining the purpose of blogs (Smith et al., 2009).
The results of this study demonstrate that while college students enrolled in the selected agricultural communications course may be avid users of certain types of social media, such as Facebook, they may not yet be familiar with or comfortable with participation in other types of social media. In addition, use of social media, particularly blogs and Twitter, in the classroom should be in moderation and well-guided. To effectively use these media and to meet students’ needs, instructors should be familiar with the details of using each medium included in course curricula and with students’ preferences for using those media. However, instructors also must be mindful of the growing use of social media in various professions, as students must be prepared to contribute to the evolution of social capital as they progress in their careers.
References


