

## REVIEWS

### Online Social Networking Issues Within Academia and Pharmacy Education

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Online social networking sites such as Facebook and MySpace are extremely popular as indicated by the numbers of members and visits to the sites. They allow students to connect with users with similar interests, build and maintain relationships with friends, and feel more connected with their campus. The foremost criticisms of online social networking are that students may open themselves to public scrutiny of their online personas and risk physical safety by revealing excessive personal information. This review outlines issues of online social networking in higher education by drawing upon articles in both the lay press and academic publications. New points for pharmacy educators to consider include the possible emergence of an “e-professionalism” concept; legal and ethical implications of using online postings in admission, discipline, and student safety decisions; how online personas may blend into professional life; and the responsibility for educating students about the risks of online social networking.

**Keywords:** online social networking, e-professionalism, Facebook, MySpace, technology

#### INTRODUCTION

The 21st century continues to usher in technological advances that change the nature of communication, socialization, and private versus public information. One such change is the prominence that social networking web sites currently enjoy, especially among the younger generations. Social networking software has been defined as “online spaces that allow individuals to present themselves, articulate their social networks, and establish or maintain connections with others.”<sup>1</sup> While there are numerous types and variations of social networking web sites, the 2 most common are Facebook (<http://www.facebook.com>) and MySpace (<http://www.myspace.com>). Among other things, social networking sites allow members to post personal information and photos, communicate with each other, and connect to users with similar interests, all within an online environment. Generally speaking, online social networking allows for individuals to remain in relatively close social contact with others through the use of these web sites. These sites have been described as “relationship facilitators” that help individuals build connections with others.<sup>2</sup>

This article examines the existing literature on the issues of newer online social networking technologies

pertaining to higher education in general and pharmacy education in particular. Although there has been a plethora of newspaper and magazine articles confronting the many issues of online social networking, actual scholarly research is sparse. No literature (scholarly or otherwise) was found that pertained directly to pharmacy students and/or pharmacy education. This review synthesizes the lay press reports on online social networking and couples that with the existing academic literature to identify key questions that pharmacy educators need to address.

#### ONLINE SOCIAL NETWORKING

The popularity and growth of social networking web sites has been phenomenal. MySpace is the membership leader among social networking sites, but Facebook is adding a reported 100,000 new users per day.<sup>3</sup> While MySpace and Facebook are similar in the features offered, MySpace has been available to the general public while Facebook traditionally required affiliation with an educational institution. Although Facebook has recently expanded membership opportunities to include those outside the education realm, it is reported to be the most preferred social networking site among college students, containing profiles for an estimated 80%-90% of US college students.<sup>4</sup> Since its inception in 2004, Facebook has attracted more than 22 million active users<sup>5</sup> and as of February 2007, Facebook was the sixth most-visited web site in the United States as measured by average visits

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per visitor.<sup>5,6</sup> Over one third of all unique visits to Facebook.com sites were from users in the 18-24 year old age range<sup>7</sup> and Facebook was the most frequently visited site in the world for the 17-25 year old demographic.<sup>8</sup> Representatives for Facebook state that the average user signs on to the site 6 times a day.<sup>9</sup> Although the topics surrounding online social networking sites apply to numerous different sites, this review will center primarily on Facebook because of its origin within higher education and because of its predominant use among college students.

### **Facebook Features**

Facebook and other online social networking sites require users to register themselves online and create a personal profile. A valid e-mail address is the only requirement to join Facebook. Once a user has joined, then he/she can join a regional and/or school network. Valid school e-mail addresses are required to join a specific school network. Users can search for anyone on Facebook and view the user's photo, but by default can only see profiles and photo albums of other users in their own network. Within a profile, users can share interests, list work and education history, post photos, publish notes, share personal details, and communicate with others by posting on "the wall." A news feed section shows all actions such as photos, profile changes, and wall posts of other users that have been added as "friends." "Tagging" the names of other users in photos enables those photos to also show up on the profiles of the "tagged" individuals. Facebook also has a set of optional privacy features which allow the user to restrict access to portions of their profile.<sup>10</sup> These privacy features enable the user to control what is seen by the wider Facebook public.

### **Private Information in Public Spaces**

Social networking sites such as Facebook are mediated public sites (ie, places in which mediating technology allow people to gather publicly.) Persistence, searchability, replicability, and invisible audiences are 4 unique properties of mediated publics.<sup>11</sup> The "conversations" may be recorded indefinitely, can be searched, replicated, and altered, and may be accessed by others without the knowledge of those in the conversation.<sup>11</sup> Pictures or comments may remain linked with an individual long after the user's attitudes and behaviors have matured. Furthermore, individuals conversing on social network sites imagine their audience and speak to the generally accepted norms of that audience. What they may not understand is that there may be multiple audiences, including those with some type of power or authority over them. Those other audiences may hold completely different views on what is socially acceptable.<sup>11</sup> Face-

book profiles are based within a culture and can lend themselves to misinterpretation, partially because of unidentifiable audiences that are inherent in online social networking environments.<sup>12</sup> What students perceive as perfectly normal and harmless expressions among friends and classmates (their audience), may be perceived entirely different by parents, faculty members, and current or potential employers. The ability to define the audience through privacy features is an important component of Facebook; however, that ability "does not necessarily imply an understanding about the ways – both good and bad – that the information might be used."<sup>4</sup> Relatively few users invoke the privacy features available to them.<sup>13,14</sup>

### **FACEBOOK AND ACADEMIA ISSUES**

Facebook is a tool that aids students in developing their identities and finding their "fit" within a college community. Helping students connect and stay in contact with old and new friends is touted as one of the significant benefits of Facebook. Making connections on campus which help them feel that they belong may be an important factor in student retention. These capabilities along with the many facets of communicating with their friends make social networking sites very appealing.<sup>2</sup>

Although extremely popular, especially among younger generations, social networking sites are not without their issues. Controversy surrounds the use of these sites, specifically in terms of privacy, safety, and attitudes toward revealing personal information to the world. Most of the press concerning these sites has been negative in focus. Newspapers and magazines related to higher education are replete with cases of college students who experienced negative repercussions from questionable activities that were made public online.<sup>9,15-26</sup> The list of incidences are long and revolve around a myriad of issues related to photos, posts, and/or personal profiles.

Students have been suspended or expelled from respective universities for threats of crime<sup>27</sup> and for racially insensitive remarks posted on Facebook.<sup>21</sup> Other students have been reported or disciplined for alcohol/drug violations that were discovered through Facebook postings.<sup>25, 27-29</sup> Facebook has been used in investigations of campus brawls<sup>16</sup> and for identifying students who illegally stormed a football field.<sup>25</sup> Students have been expelled from class,<sup>30</sup> called before the dean of students,<sup>23</sup> lost positions on the school newspaper staff,<sup>20</sup> and even investigated by the Secret Service,<sup>22</sup> all because of ill-advised postings on Facebook. One student was refused an education degree with the accompanying teaching certificate because of her MySpace photograph, which was deemed "unprofessional."<sup>24</sup> Issues surrounding

Facebook are not limited entirely to students. A university president encountered substantial criticism from a photo at an annual Halloween party that was placed on a student's Facebook account.<sup>31</sup>

In addition to incidences involving illegal or disreputable acts, other students have suffered due to encroachments upon their personal privacy and/or safety. Students have been harassed and stalked<sup>18,25</sup> and have encountered uninvited strangers at home.<sup>26</sup> These abuses at least partially resulted from the availability of personal information on Facebook. A new wave of "identity" information is being published on these online social network sites that is different in nature from the classic name, address and phone number. Vast disclosure of photographs, political views, sexual orientation, etc, by students warrants further discussion of identity information protection on higher education campuses.<sup>32</sup>

Further complicating the situation, many students have difficulty believing that the online expression of information intended for their peers may be viewed and even sought out and used by others.<sup>23</sup> What should be of great concern to students is that employers, law enforcement officials, and administrators are increasingly using these sites to obtain information about individuals that is not necessarily included in resumes or uncovered by general background checks.<sup>33</sup> Some students reject the idea that "outsiders" should be able to use information posted on a social networking web site and feel that basing judgments on and making inferences from a user's comments or photographs on Facebook is unfair.<sup>29</sup> The attitude expressed is that Facebook postings are intended for the general audience of other students and that faculty members and administrators should not be viewing them.<sup>34</sup>

### **Institutional Considerations**

Online social networking sites are beginning to garner more attention from higher education institutions. Educating students about the risks associated with social networking services was introduced by Educause as a new item in its Current Issues Survey, which addresses the critical information technology issues of 1785 higher education institutions.<sup>35</sup> Institutions are taking steps to educate students regarding issues of online privacy,<sup>9,19,25</sup> potential dangers to students, responsibilities for controlling access to online profiles, legal issues concerning libelous remarks and privacy invasion of others, and school policy on monitoring sites.<sup>36</sup> One law school has begun educating students regarding the "public" nature of Facebook postings and the need to project a professional online persona to avoid repercussions in the legal profession.<sup>37</sup>

Many other institutions have taken a proactive stance in terms of dealing with student use/abuse of online social networking sites. The number of institutions in which the athletics department has developed policies regarding social networking profiles is growing.<sup>38</sup> Several universities have either mandated "sterile" profiles or banned student athlete Facebook profiles completely for the stated purpose of protecting student identities, privacy, and university image.<sup>38-41</sup> Advocates for education and communication about online social networks suggest that warnings should address the threat of legal actions against behavior, student safety and identity, violations of codes of conduct, and repercussions from potential employers.<sup>42</sup>

Administrators struggle to what extent, if at all, Facebook should be monitored.<sup>17</sup> Some administrators have felt compelled to respond to social networking issues due to the sheer volume of online activity by their students and on their campuses. Colleges are facing increasing pressure and possible litigation in proving they have done enough to protect students from drug abuse, suicide, etc.<sup>43</sup> However, the surveillance and/or regulation of students' social networking profiles raises concerns of free speech and privacy, which may simultaneously conflict with schools' commitments to student safety. Differences in rights of students at public and private schools, conflicting laws, and complications related to regulating "cyberspace" blur the boundaries in which schools can and/or should operate.<sup>19,44</sup> If a college monitors social networking sites to ensure that students abide by codes of conduct or act in accordance with the school's mission, they could be creating a "duty of care" toward the students. In the legal sense, this heightens the responsibility of the school to prevent harm and increases the likelihood of lawsuits.<sup>42</sup> In respect to the Fourth Amendment and the right to privacy, there has yet to be a clear-cut ruling on the legality of law enforcement officials using Facebook postings for investigations. However, Facebook users would generally have difficulty proving the inherent assumption that material posted to a publicly accessible site was intended and expected to be private.<sup>45</sup>

### **Research Review**

The peer-reviewed literature concerning online social networking sites and issues that they present to academia is sparse. No literature exists concerning online social networking and pharmacy education. However, there have been a few research studies that address some of the pertinent questions in this area.

A 40-question survey by Acquisti and Gross<sup>13</sup> focused on Facebook membership, information sharing, awareness, and privacy issues of college students

(n = 294). The study found age was a significant predictor of Facebook membership. The mean age of nonmembers was 30 years versus a mean age of 21 years for members. Undergraduate students were also more likely to have accounts than non-undergraduate students. Among non-undergraduate students, privacy concerns were significant in predicting non-membership. One of the major findings was that members' privacy concerns did not necessarily coincide with their behaviors on Facebook. No significant difference emerged when the researchers compared responses concerning the perceived privacy threat of supplying personal information and the actual listing of private information such as birthday, sexual orientation, partner's name, and cell phone number. Also, a substantial percentage (30%) of students was unaware of the privacy controls that users have over information sharing. One limitation of this survey was that it was administered to students at only one institution. The researchers did not include any information concerning survey validation.

Another study by the same researchers involved downloading and analyzing Facebook profiles (n = 4540) at Carnegie Mellon University.<sup>14</sup> Less than 1% of Facebook users changed the default privacy settings, while many provided large amounts of personal information including phone number (39.9%) and current residence (50.8%). The researchers concluded that Facebook users are primarily unaware or unconcerned with limiting access to private information on their profiles.<sup>14</sup> This study was conducted at only one institution, limiting the ability to generalize the results to other institutions.

Researchers<sup>46</sup> at the University of Dayton used the results of a survey of students (n = 1968) at 4 different higher education institutions and employers (n = 326) to describe a gap between what students and employers perceive as fair in regards to using Facebook in hiring decisions. After filtering out those who were unaware of Facebook, 1784 student responses and 53 employer responses remained. Only 28% of employers felt that Facebook content should not be used in hiring decisions as opposed to 60% of students. Students also were more likely than employers to think potential employer usage of Facebook in hiring decisions was unethical (32% versus 17%) and a violation of privacy (42% versus 21%). Major limitations of this study include the low response rate (6.5%) of employers and no significance testing reported on the study. The researchers concluded that students and employers view the use of Facebook differently and that students should exercise caution and use privacy restrictions when posting.

College students (n = 136) in 2 courses completed a survey concerning student-faculty relationships on Facebook. Researchers reported that students had mixed

reactions to faculty presence on Facebook with many (33%) feeling that the student-faculty relationships should remain purely professional and that Facebook was not an appropriate venue for communications. Reasons given for opinions against faculty Facebook participation included privacy issues in written comments, unfair perceptions of students in a social environment, and Facebook as a venue for social interactions free from faculty judgment.<sup>47</sup> This survey was limited by the sample consisting only of students in 2 courses at 1 institution.

A large scale analysis of Facebook message headers (n = 241,000,000) among college students revealed that the majority of messages on Facebook are between friends (90.6%), within the same school (54.9%), and share distinct temporal patterns. One of the conclusions the researchers drew from the analysis was that Facebook usage is not relegated to leisure time, but rather part of natural social interaction that is intertwined with other school-related activities within a week.<sup>48</sup> Results of the study should be generalized only to undergraduate students due to the relatively small non-undergraduate population participating on Facebook.

Vanden Boogart<sup>49</sup> studied the social impact of Facebook on college campuses by surveying students (n = 3149) at 4 different institutions. There was a significant relationship between heavy Facebook usage and lower grade point averages (GPAs). However, frequent Facebook visitors also reported a much closer connectedness to their school than those who accessed the service less frequently. In response to the survey statement "I feel addicted to Facebook," 31.3% agreed or strongly agreed. The researcher concluded that although heavy Facebook usage is correlated with lower GPAs, this same usage helps build and maintain social connections and creates a connectedness with the campus. The study was limited to students living in on-campus housing at institutions listed in the Carnegie Classifications and who had access to university e-mail accounts during the survey period.

Researchers at Michigan State University utilized survey research to gain greater understanding of the relationship between social networking sites and college life and socialization. The survey<sup>1</sup> of 800 random Michigan State University undergraduate students revealed that 94% of the undergraduate students surveyed were members of Facebook. Age and year in school were significant predictors of membership, with younger students and undergraduate students more likely to belong to Facebook. Higher intensity Facebook usage significantly predicted higher bridging social capital, higher bonding social capital, and high school social capital. The researchers concluded that Facebook usage helped students maintain and strengthen relationships and build social

capital. Limitations to the study included that it was conducted in only one college community. The low numbers of non-members prevented any analysis of the effects of Facebook.

Watson, Smith, and Driver<sup>50</sup> conducted an analysis of Facebook central profile photos of 150 random students across 50 states to determine to what extent alcohol usage was portrayed in Facebook photos. The researchers concluded that the media reports of alcohol prevalence in Facebook photos were over exaggerated because only 9.3% (n = 14) of the central photographs in their study revealed instances of alcohol consumption. Limitations included the researchers' inability to access in-depth demographic information of students outside their home university, which prevented them from determining how many of those students were not of legal drinking age. The inability to access information from students outside the home institution also prevented them from viewing the internal "photo albums" of users. This could potentially have revealed much higher incidences of alcohol use among students.

## **DISCUSSION AND QUESTIONS**

Reports in the lay press and the academic literature reveal that as a whole, students in higher education do not fully understand the importance of protecting their privacy or identity in online social networks. While Facebook usage seemingly allows for students to build, strengthen, and maintain social capital with other users, a potential downside of usage exists that many are unaware of or choose to ignore. While the bulk of the literature in both the lay and scholarly press focus on undergraduate students, many of these major issues related to online social networking sites could apply to pharmacy students. "Understanding social networks has become a must for information-fluent students, staff, and faculty. Issues of trust, risk, copyright, liability, and privacy may be as important as understanding how the Web works. . . ."<sup>51</sup> Knowledge and attitudes toward online conversations being viewed by individuals outside of their peer group is an important component of online literacy. Protecting one's personal identity for the sake of safety and privacy should be of importance to all students. Projecting an online persona that is characteristic of a young professional has the potential to affect both academic and professional careers.

From the perspective of colleges and schools of pharmacy, what are the legal and ethical implications involved with using and/or ignoring public postings on social networking web sites? Should actions in the cyber arena on personal time be left alone? To many colleges, administrators, and faculty members, the disturbing point is the

disconnect that many students have in thought and attitude regarding the nature of online communications. Gardner<sup>52</sup> states that it is our responsibility as educators to provide a curriculum that addresses the needs of students in order to prepare them for the future workplace. The question becomes "Is it incumbent on pharmacy colleges/schools to educate students regarding the issues surrounding social networking sites which could have a negative effect on their future career as a pharmacy professional?"

At least one leader in the higher education field advocates that at a minimum, institutions should consider the following questions. "How do we help students balance free speech with responsibility? . . . What kind of image does our students' use of Facebook present to employers, alumni, parents, and other students? Should this be our concern? . . . Can we afford to not alert our students to the consequences of ill-informed use of Facebook?"<sup>33</sup>

The nature of Internet technologies allows for the blending of public and private life. Is another facet of professionalism emerging. . . an "e-professionalism" that pertains to behavior and communications in online settings? Where does professional life end and student life begin? Should it be of interest to a pharmacy school if a student posts material depicting unprofessional attitudes or behavior away from school that is viewable by members of the school, patients, or other healthcare providers? How, if at all, do colleges/schools of pharmacy address the online professionalism of students? These e-professionalism principles apply not only to online social networking, but also to e-mail, personal web pages, Internet discussion groups and a variety of other electronic venues in which professionals and aspiring professionals may have a presence.

No research has been published on the extent to which pharmacy students use social networking sites, nor the types of private information that they reveal. Do social networking sites such as Facebook permeate the educational and professional lives of the Millennial generation of pharmacy students? From a generational standpoint, Millennial students have grown up with technology and it is viewed as a natural part of the environment.<sup>53</sup> Additionally, research is needed on pharmacy students' attitudes toward authority figures judging character, professional attitudes, and employability based on one's online persona.

Another serious question that could arise and should be handled delicately is "Should colleges/schools of pharmacy consider using online social networking activities as material in admissions and/or disciplinary actions?" Profiles may provide additional information about potential or current students that is not found in

interviews, resumes, and transcripts. From a philosophical standpoint, what circumstances, if any, warrant a school's use of information contained within a student's online social networking profile?

## CONCLUSIONS

Social networking sites such as Facebook provide individuals with a way of maintaining and strengthening social ties, which can be beneficial in both social and academic settings. These same sites, however, also pose a danger to students' privacy, safety, and professional reputations if proper precautions are not taken. Colleges and schools of pharmacy would be advised to consider how these issues might affect their students. At a minimum, schools should take appropriate steps to educate students about these matters. Research is needed on professional students' usage and attitudes toward online social networking sites. Monitoring and usage of these sites by institutions venture into legal grey areas concerning the Fourth Amendment, the right to privacy, and duty of care, and should be approached with caution. Discussion is warranted on how, if at all, material found on student social networking sites should be used in colleges of pharmacy admissions decisions and/or matters of a disciplinary nature. Further research is needed on how best to address the issues surrounding online social networking.

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## REFERENCES

1. Ellison N, Steinfeld C, Lampe C. Spatially bounded online social networks and social capital: The role of Facebook. Paper presented at: Annual Conference of the International Communication Association; June 19–23, 2006; Dresden Germany.
2. Educause. 7 things you should know about Facebook. Educause Learning Initiative; 2006. <http://www.educause.edu/ir/library/pdf/ELI7017.pdf>. Accessed May 25, 2007.
3. Vara V. Facebook opens its pages as a way to fuel growth. Wall Street Journal. May 21, 2007. <http://online.wsj.com/article/SB117971397890009177.html>. Accessed May 28, 2007.
4. Educause. 7 things you should know about Facebook II. Educause Learning Initiative; 2007. <http://www.educause.edu/ir/library/pdf/ELI7025.pdf>. Accessed May 25, 2007.
5. Facebook overview. Facebook.com. <http://www.facebook.com/press.php>. Accessed May 21, 2007.
6. comScore releases worldwide rankings of top web properties. comScore.com. <http://www.comscore.com/press/release.asp?id=1370>. Accessed May 21, 2007.
7. More than half of MySpace visitors are now age 35 or older, as the site's demographic composition continues to shift. comScore.com. <http://www.comscore.com/press/release.asp?id=1019>. Accessed May 21, 2007.
8. Guynn J. Yahoos! SFGate.com. [http://www.sfgate.com/cgi-bin/blogs/sfgate/detail?blogid=19&entry\\_id=15036](http://www.sfgate.com/cgi-bin/blogs/sfgate/detail?blogid=19&entry_id=15036). Accessed May 21, 2007.
9. Hass N. In your Facebook.com. The New York Times. January 8, 2006. <http://www.nytimes.com/2006/01/08/education/edlife/facebook.html>. Accessed May 21, 2007.
10. Facebook site tour. Facebook.com. <http://utk.facebook.com/sitetour/>. Accessed May 24, 2007.
11. Boyd D. Social network sites: public, private, or what? The Knowledge Tree. 2007(13). [http://kt.flexiblelearning.net.au/tkt2007/?page\\_id=28](http://kt.flexiblelearning.net.au/tkt2007/?page_id=28). Accessed May 27, 2007.
12. Boyd D, Heer J. Profiles as conversation: networked identity performance on Friendster. 39th Hawaii International Conference on System Sciences. [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=1579411](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=1579411). Accessed May 21, 2007.
13. Acquisti A, Gross R. Imagined communities: awareness, information sharing, and privacy on the Facebook. Privacy Enhancing Technologies Workshop (PET). [http://petworkshop.org/2006/preproc/preproc\\_03.pdf](http://petworkshop.org/2006/preproc/preproc_03.pdf). Accessed May 21, 2007.
14. Gross R, Acquisti A. Information revelation and privacy in online social networks. Workshop on Privacy in the Electronic Society (WPES 05). <http://portal.acm.org/citation.cfm?id=1102214>. Accessed May 21, 2007.
15. Lipkin D. A closer look: Facebook may mar even the best of resumes. Daily Bruin. <http://www.dailybruin.ucla.edu/news/2006/jan/25/a-closer-look-facebook-may-mar/>. Accessed May 17, 2007.
16. Hirschland. Investigation to look at Facebook. Columbia Daily Spectator. October 6, 2006. <http://media.www.columbiaspectator.com/media/storage/paper865/news/2006/10/06/News/Investigation.To.Look.At.Facebook-2336662.shtml>. Accessed May 25, 2007.
17. Buckman R. Too much information?: colleges fear student postings on popular 'Facebook' site could pose security risks. The Wall Street Journal Online. [http://online.wsj.com/public/article/SB113400519172816925-eM2Kd1OhzKIFRz4CJj\\_F3OM7heU\\_20060107.html?mod=tff\\_article](http://online.wsj.com/public/article/SB113400519172816925-eM2Kd1OhzKIFRz4CJj_F3OM7heU_20060107.html?mod=tff_article). Accessed May 22, 2007.
18. Sidman J. In your facebook. Colorado Springs Independent. <http://www.csindy.com/csindy/2005-08-11/cover.html>. Accessed May 21, 2007.
19. Kornblum J, Marklein MB. What you say online could haunt you. *USA Today*. March 9, 2006: 1A.
20. Rosser S. Another Facebook-related fall. Inside Higher Ed. <http://www.insidehighered.com/news/2007/03/02/facebook>. Accessed May 22, 2007.
21. Thacker PD. Free speech and punishment at Hopkins. Inside Higher Ed. <http://www.insidehighered.com/news/2006/12/01/jhu>. Accessed May 22, 2007.
22. Epstein D. The many faces of Facebook. Inside Higher Ed. <http://www.insidehighered.com/news/2006/06/15/facebook>. Accessed May 22, 2007.
23. Epstein D. Cleaning up their online acts. Inside Higher Ed. <http://www.insidehighered.com/news/2005/10/03/online>. Accessed May 22, 2007.
24. Read B. A MySpace photo costs a student a teaching certificate. Chron Higher Educ. <http://chronicle.com/wiredcampus/index.php?id=2029>. Accessed April 27, 2007.
25. Read B. Think before you share. *Chron Higher Educ*. 2006;52(20):A38-41.

*American Journal of Pharmaceutical Education* 2008; 72 (1) Article 10.

26. Thomas B. Universities track student activities on Facebook. Kentucky Kernel. <http://media.www.kykernel.com/media/storage/paper305/news/2006/05/01/CampusNews/Universities.Track.Student.Activities.On.Facebook-1896982.shtml>. Accessed June 5, 2007.
27. Gianino C. Many colleges using Facebook to penalize students. Quadrangle. <http://www.mcquadrangle.com>. Accessed May 22, 2007.
28. Bugeja M. Facing the Facebook. *Chron Higher Educ.* 2006;52(21):C1.
29. Schweitzer S. When students open up – a little too much. The Boston Globe. [http://www.boston.com/news/local/articles/2005/09/26/when\\_students\\_open\\_up\\_\\_\\_a\\_little\\_too\\_much/](http://www.boston.com/news/local/articles/2005/09/26/when_students_open_up___a_little_too_much/). Accessed June 11, 2007, 2007.
30. Capriccioso R Facebook face off. Inside Higher Ed. <http://www.insidehighered.com/news/2006/02/14/facebook>. Accessed April 10, 2007.
31. Powers E. Will photo haunt Penn president? Inside Higher Ed. <http://www.insidehighered.com/news/2006/11/06/penn>. Accessed May 22, 2007.
32. Stutzman F. An evaluation of identity-sharing behavior in social network communities. Ibiblio.org. [http://www.ibiblio.org/fred/pubs/stutzman\\_pub4.pdf](http://www.ibiblio.org/fred/pubs/stutzman_pub4.pdf) Accessed June 8, 2007.
33. Oblinger D, Hawkins BL. The myth about putting information online. *Educause Rev.* 2006;41(5):14-5.
34. Abel M. Find me on Facebook. . .as long as you are not a faculty member or administrator. *ESource for College Transitions.* Vol 3; 2005:1-2.
35. Camp JS, DeBlois PB. Current Issues Survey Report, 2007. *Educause Q.* 2007;30(2):12-31.
36. Mitrano T. Thoughts on Facebook. <http://www.cit.cornell.edu/policy/memos/facebook.html>. Accessed May 18, 2007.
37. Mangan K. Etiquette for the Bar: First-year students at Drake U.'s law school learn the value of online discretion. *Chron Higher Educ.* January 12 2007;53(19):A31.
38. Brady E, Libit D. Alarms sound over athletes' Facebook time. USA Today. [http://www.usatoday.com/tech/news/internetprivacy/2006-03-08-athletes-websites\\_x.htm](http://www.usatoday.com/tech/news/internetprivacy/2006-03-08-athletes-websites_x.htm). Accessed May 21, 2007.
39. Lowe R. Kent banning athlete Web profiles. *The Columbus Dispatch.* June 22, 2006, 2006.
40. Facebook frenzy. The Phoenix. <http://media.www.loyolaphoenix.com/media/storage/paper673/news/2006/02/01/News/Facebook.Frenzy-1547185.shtml>. Accessed May 17, 2007.
41. Woo S. U. of Michigan asks athletes to pledge good conduct on social-networking sites. *Chron Higher Educ.* 2006;53(6):A46.
42. Steinbach S, Deavers L. The brave new world of MySpace and Facebook. *Inside Higher Ed.* <http://www.insidehighered.com/layout/set/print/views/2007/04/03/steinbach>. Accessed May 22, 2007.
43. Van Der Werf M. Increase in litigation may compel colleges to disclose more information, conference speaker says. *Chron Higher Educ.* September 22 2006;53(5):A27.
44. Van Der Werf M. Beware of using social-networking site to monitor students, lawyers say. *Chron Higher Educ.* March 2 2007;53(26):A28.
45. Hodge MJ. The fourth amendment and privacy issues on the "new" Internet: Facebook.com and MySpace.com. *South Ill University Law J.* 2006;31:95-123.
46. Sisson M, Wiley C. Ethics, accuracy, and assumption: the use of Facebook in recruiting. Paper presented at: National Association of Colleges and Employers Annual Meeting; May 30, 2007; New York, NY.
47. Hewitt A, Forte A. Crossing boundaries: Identity management and student/faculty relationships on the Facebook. Computer Supported Cooperative Work (CSCW 2006). <http://www-static.cc.gatech.edu/~aforte/HewittForteCSCWPoster2006.pdf>. Accessed May 21, 2007.
48. Golder S, Wilkinson D, Huberman B. Rhythms of social interaction: Messaging within a massive online network. <http://arxiv.org/abs/cs/0611137>. Accessed June 1, 2007.
49. Vanden Boogart MR. Uncovering the social impacts of Facebook on a college campus. <http://hdl.handle.net/2097/181>. Accessed May 23, 2007.
50. Watson SW, Smith Z, Driver J. Alcohol, sex and illegal activities: an analysis of selected Facebook central photos in fifty states; 2006. [ERIC Document ED493049].
51. Lorenzo G, Oblinger D, Dziuban C. How choice, co-creation, and culture are changing: What it means to be net savvy. *Educause Learning Initiative.* 2006.
52. Gardner S. Preparing for the Nexters. *American Journal of Pharmaceutical Education.* 2006;70(4):1.
53. Oblinger D. Boomers, Gen-Xers, Millennials: Understanding the new students. *Educause Rev.* 2003;38(4):37-47.