Integrating Facebook in the classroom: Pedagogical dilemmas

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ABSTRACT

Social networking sites (SNS) such as Facebook remain prolific on college campuses across the country and touches on various aspects of collegiate life, including the classroom. This case study examines student usage of Facebook, its potential impact on faculty interaction, and institutional policy. After providing a literature review and context for the case study, the case study delineates a situation where the integration of an SNS can complicate the pedagogical environment when used as a communication median for not only administrators and faculty, but various stakeholders in higher education. How would an institution handle such complications, such as student appeals in cases where a faculty member integrated a non-university supported SNS as a pedagogical tool in the classroom? Although a large number of college students are using Facebook, it remains a social, not academic, median, enabling them to communicate with friends, relatives and other students. SNSs like Facebook show no indication of lower popularity. Given the dynamics, faculty may be tempted to meet students on their turf to facilitate engagement, but at what costs and liability?

Keywords: Facebook, faculty, students, academic appeal, liability

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INTRODUCTION

College student use of social networking sites (SNS) like Facebook continue to grow in popularity on college campuses across the country (Gosling, Gaddis, & Vazire, 2007), making the interaction with academic policy inevitable. In fact, Facebook remains a facet of modern collegiate life, permeating throughout various layers of academia, from students themselves to faculty and staff. This case study sheds light on the pedagogical use of Facebook and its potential impact on faculty interaction and institutional policy. First, a literature review examines the impact on Facebook on academia and providing context for the case study. Next, it provides information on a situation that demonstrates how the integration of an SNS can complicate the pedagogical environment when used as a communication median. Lastly, the case study concludes with questions to consider for not only administrators and faculty, but various stakeholders in higher education.

PROLIFERATION OF COLLEGE USE OF SOCIAL MEDIA

The use of SNSs enjoys mainstream status today's society in most age groups. One of the most well-known SNSs, Facebook, enjoys widespread popularity especially among college student populations. A project at the University of Leicester found that 95% of British undergraduates regularly use SNSs on a daily basis (Madge, Meek, Wellens, & Hooley, 2009). Similar data collected by the EDUCAUSE Center for Applied Research (ECAR) from 36,950 U.S. students at 127 institutions showed that 90% of the students use SNSs and of that SNS-utilizing population, 97% used Facebook. In an institutionally-focused study, 78.66 % of the student population of Iowa State University had registered Facebook accounts (Bugeja, 2006). The high percentage of college student usage has been documented in other studies (Bart, 2009; Kolek & Saunders, 2008; Smith, 2010), but also the frequency of their usage. Smith and Caruso (2010) found that 97% of the population in their study were actively engaged on the site every day. Even after many years since its debut, the popularity of Facebook remains staple in the fabric of collegiate life, and research in educational technology and higher education have examined various aspects of its effect on undergraduates and academia as whole.

Although widely seen as social in nature, some students have used SNSs for academic reasons in some shape or manner. Salaway and Caruso (2008) found that 49.7% of U.S. students in the survey used SNSs to communicate with classmates about course-related topics. Moreover, the number of college students using SNSs for this purpose increased on a yearly basis; there were 26% more college students using SNSs in 2011 compared to 2010 (Dahlstrom, 2012).

However, logistical reasons may arise when professors used SNSs like Facebook for pedagogical reasons. Despite the fact that most students have an account with a SNS (Bugeja, 2006; Kolek & Saunders, 2008), a minority of students deliberately avoid Facebook. While these students might not have a problem in creating a Facebook account, they may also prefer to use another SNS or avoid them all together. Student who use SNSs have distinct views on how these medians should be used in respect to their comfort levels (Hewitt & Forte, 2006; Madge et al., 2009; Mazer, Murphy, & Simonds, 2007, 2009). According to Hewitt and Forte (2006), one-third of the students surveyed said they were uncomfortable with faculty's presence on Facebook. Some students view SNSs like Facebook as hollowed student territory, and any interaction between faculty and students violate the sanctity of their online, social refuge. However, participants in another study (Mazer, Murphy, & Simonds, 2007) viewed Facebook as

a social environment where faculty can communicate with students. Students were interested to know more about faculty via their Facebook profiles, but believed that faculty presence on Facebook should be professionally appropriate and preferred faculty to not lecture them in their virtual environment.

Furthering this sentiment, research findings (Madge et al., 2009) suggested that nearly three quarters of the student participants think the use of Facebook is important for social reasons, but not for formal teaching purposes. For this reason, students preferred to be contacted for formal teaching purposes by their tutors via the university communication systems rather than via Facebook.

ACADEMIC AND STUDENT CONDUCT ON FACEBOOK

Despite the reluctance of some students, Junco (2011) states that social networking sites can still serve important educational purposes and increase student engagement in higher education given their high popularity. Studies focusing on use of social networking sites and student engagement have found a relationship between time spent on these sites and student engagement. For instance, a higher percentage of those using SNSs participated in and spent more time with peers and in campus organizations and increased student-teacher interaction, compared to those who use SNS less often or not at all (Heiberger & Harper, 2008; Junco, 2012; Teclehaimanot & Hickman, 2011). In addition, as students living off campus have limited opportunities to socialize with other students, SNSs like Facebook facilitates social communication with other students. In a study of 375 undergraduates at the University of Leicester, students living on campus and those using SNS showed a stronger sense of belonging than those living off campus (Dorum, Bartle, & Pennington, 2010). This result suggests that SNSs can help students who do not live on campus socially integrate with other students. And lastly, there are peripheral benefits of Facebook for particular student populations, such as international students. To interact in Facebook, students need to write and understand written English. As they have the motivation to use English every day, they can improve their language skills. In addition, by using Facebook, these students experience authentic and relevant social interactions (Kabilan, Ahmad, & Abidin, 2010).

Although studies have found positive relationships between the use of SNSs and student engagement, increased use of social networking sites may also have negative repercussions such as diluted privacy (Acquisti & Gross, 2005; Ellison, Steinfield, & Lampe, 2007; Gemmill & Peterson, 2006; Gross, Acquisti, & Heinz, 2005; Kolek & Saunders, 2008; Patil & Kosba, 2005; Tufekci, 2008). Issues with privacy may be exacerbated by arrogance of privacy issues. Many users of SNSs maybe lack knowledge of the security features offered (Tukefci, 2008). In general, students disclosed a disturbing amount of personal information (Kolek & Saunders, 2008), particularly given that they may share information that may be detrimental to their future employment opportunities (Gosling, Gaddis, & Vazire, 2007).

Adding to the temptation, Junco (2011) states negative effects of social networking sites stem from lack of face-to-face contact and may lead to very little ego investment when posting inappropriate pictures or subject matter of a threatening nature. Lenhart (2007) states that approximately 32 % of all teenagers who use the Internet say they have been targets of threatening or menacing activities, all of which could be categorized as cyber-bulling. In response, some higher education institutions have implemented student social media policies that give campus communities guidance in acceptable behaviors that are expected online in the

same way that institutions have policies that provide guidance and delineate expectations about academic honesty (Junco, 2011). Although institutions have policies that address student conduct and academic honesty, there is very limited research to suggest that higher education institutions have policies to address issues related to academic honesty within the use of social networking sites.

Current research on use of social networking sites and student conduct suggests that increased use of social networking sites for pedagogical purposes could increase opportunities for students to violate academic honesty codes due to the lack of face-to-face interaction (Roblyer & Wienke, 2004) if appropriate measures are not taken.

Despite the rapid growth and use of social networking sites, it is still unclear whether use of these networking sites within an educational context increases incidences of academic dishonesty. Roblyer, McDaniel, Webb, Herman, and Witty (2010) and Junco (2011) suggest that higher education administrators and faculty have an opportunity to help students use social networking sites in a way that is beneficial to their engagement and to their overall academic experience. However, it is important for those working in higher education to familiarize themselves with the opportunities for academic dishonesty within a social networking environment and to design policies with expectations similar to those in traditional face-to-face environments.

PROLIFERATION OF COURSE MANAGEMENT SYSTEMS

Course Management Systems (CMS) are "learning management systems or virtual learning environments, are software systems designed to assist in the management of educational courses for students, especially by helping teachers and learners with course administration" (Simonson, 2007, p. vii). Although some literature uses learning management systems and classroom management systems interchangeably, Betrus (2008) sees the former the corporate version of the latter which is a \$1.8-1.9 billion dollar industry by some measures (Bersin & Associates, 2012). In addition, compared with Facebook – which is an effective tool for students to discuss with each other about their learning (Madge et al., 2009), CMSs are more directly involved in the learning process itself, providing an online learning environment that allows the instructor to post course content on the Web. They also allow students to download and upload files, participate in discussion boards, take quizzes, view grades, and communicate with the instructor and other students. An effective CMS makes it easier for the instructor to manage the course and facilitates students in achieving the objectives of their courses. CMSs are commercial products of professional designers although some institutions develop their own CMSs, although some faculty have made public arguments for using SNSs such as Facebook as a CMS (Parker, 2012), although their institution may have a usage contract with a CMS.

How faculty use CMSs to create a pedagogical environment?

CMSs are very useful tools for class management, and its industry is dominated by the likes of Blackboard ©, Moodle © (Modular Object-Oriented Dynamic Learning Environment) and Sakai © with Blackboard © commanding the loin's share of the market (Ketcham, Landa, Brown, DeFranco, Heise, McCabe & Youngs-Maher, 2011; Riddell, 2013). Not only do CMSs assist with classroom maintenance, but also provide a new way to enhance student learning, particularly in large or online classes. They foster communication between the instructor and

other students, enabling the instructor can post announcements related to that course, which students can view in the Announcement tab for Blackboard or the Course Home tab in Desire2Learn. In particular, users of Moodle can view news and announcements of the college and course levels. Communication is even extended to live chat in many CMSs. Students using Blackboard can click the *Chat* tab to chat in real time with other students, while the *Live Chat* tab serves the same purpose in WebCT and eCollege. A very effective function from CMSs that promote group communication is the threaded discussion board. When the instructor creates a discussion thread, students can not only see comments from other students but also join the discussion by responding to these comments. This can be done in the discussions tabs in Blackboard, eCollege and Desire2Learn, , and the *Discussion Forum* in Moodle, for example. In addition, students can send emails to other students by clicking the Mail tab in Blackboard, Mail Systems in WebCT, and Classlist in Desire2Learn.

CMSs also provide a platform for the group to have access to class documents. This feature allows students to download articles, assignments, and videos posted by the instructor. Documents can be shared in the *Course Content* tab in Blackboard, *Document Sharing* in eCollege and *Content* in Desire2Learn. Another feature of CMSs called *Assessments* in Blackboard, *Quizzes/Exams* in eCollege, and *Quizzes* in Desire2Learn allows the instructor to post quizzes and exams for mid-terms or end-of-the-course exams. As these quizzes and exams are often posted with a certain access period and for open-book tests, students can take them anywhere they like, not necessarily in the classroom. Submitting course assignments for grading is made easy when students can submit papers as attachments in the *Assignments* tab in Blackboard and the *Dropbox* tab in eCollege and Desire2Learn. CMSs can also allow the instructor to post grades in the *Grade Book* tab. Students can view their grades together with the instructor's feedback any time they see convenient.

THE CASE OF CHARLES WILLIAMSON, JR.

Charles Williamson, Jr., aged 37, is an associate professor of Political Science at the Middle State University (MSU), a 4-year regional institution that boasts of its dedication to the art of teaching with a student enrollment of 8,000. The institution services mostly undergraduate majors with some masters-level courses, but supports no doctoral programs. One of the political science courses that Williamson teaches is "POLS 4533 – Race and Politics" that serves as an elective in the program, typically averaging an enrollment of 25 each spring. However, it is noteworthy that Williamson has never taught this course previously, given that the preceding faculty member left MSU for another academic institution last year. In addition, Williamson transitioned the course to a partial online format. Professionally, he is a graduate of Columbia and has been recently awarded tenure and known for his high research productivity and willingness to teach courses in hybrid formats.

The Ominous Moment

This last fall, Williamson was assigned to POLS 4533 and the course garnered an enrollment of 24 students. The course not only met on late Wednesday morning for 90 minutes a week, but also had an online component that required students to have a Facebook account to participate in the group discussion that Williamson administered. Discussion items included topics related to the material in a given week or conversation regarding current events that were

relevant to the class. On occasion, Williamson introduced current events that had no relation to the class.

The created "group" on Facebook does not require students to friend Professor Williamson, but merely join the group. The students taking the course are not required to "friend" Williamson, but he has accepted every friend request that he has received. Although students are not compelled, some students feel that it is to their benefit to friend Williamson in other classes. After the conclusion of the course, two students appealed their final grade.

The first student, Michelle Floyd, was a 30 year old student who enrolled in POLS 4533 and was classified as sophomore with a listed major of elementary education. Ms. Floyd received a 'D' in the course and was not a Facebook user before her enrollment in the course. She did not register for an account for the purposes of the course, given that she wished to avoid contact with her estranged father who lives in a neighboring state. She did meet with Williamson on this particular issue after the first class, and he provided her a waiver, giving her alternate assignments in lieu of Facebook group discussions. However, he continued to post course material on the Facebook group webpage. Throughout the semester, Lloyd struggled throughout the course and ultimately received a 'D' for the course. She appealed the grade, contending that the Facebook group webpage may have provided others with pedagogical insight that could have helped her throughout the semester.

Another student, Tanner Bradley, is a 20 year old junior in political science and an active member on the social night life at MSU. During the course of the semester, Bradley has made some outrageous comments on the class Facebook webpage, and given the time and the nature of the comments, he may have made the comments under the influence. His commentaries were not limited to the class Facebook webpage, but on his own personal "wall". Of the class Facebook page, most of his comments had some relevant relationship with the readings while a minority had no relationship at all. Only one student emailed Professor Williamson about Bradley's behavior and although concerned about his well-being, Professor Williamson took no action in the matter. Instead, Bradley received a 'C' for the course, given his lackluster test scores in the course. However, he is appealing his grade on the fact that Williamson discriminated against him in class, given his comments on a non-university sanctioned webpage.

Implications

Both appeal cases strike a median between faculty usage of Facebook as a pedagogical tool and university utilization of Facebook in reaching out to students. Universities and colleges have clearly embraced the popularity of Facebook and have utilized it in interacting with students in instances of recruitment (Fagerstrom & Ghinea, 2013; Joly, 2007). In fact, Fagerstrom and Ghinea (2013) examined one institution's Facebook usage in their student recruitment strategies. The institution invited potential students to join their subject-related Facebook groups, and with a trained student facilitating to each group, potential applicants could pose various questions about admission and enrollment information, as well as share their experience with other potential applicants in the group. The campaign resulted in a large increase in the conversion rate of applicants enrolling into the institution. Joly (2007) found that as Mars Hill College and the University of Florida used Facebook in a similar manner.

However, these two student appeal cases highlight the actions of an institutional agent of the university, in this case a faculty member, and the integration of a non-university supported SNS as a pedagogical tool in the classroom. Although the Bradley situation came dangerously

close to a student conduct issue, Professor Williamson opted to take no action in the manner, even after receiving one student complaint about Bradley's behavior. Although some scholars have lamented how higher education institutions can use Facebook to improve the academic experience of undergraduates (Junco & Mastrodicasa, 2007; Selwyn, 2009), what are some of the limitations integrating this SNS in the classroom environment? For those faculty who do connect with students on Facebook, there is the question of the comfort of both the faculty member and the student (Connell, 2009; Hewitt & Forte, 2006; Mazer et al., 2007; Mazer, Murphy, & Simonds, 2009), but if used correctly, the integration of technology and faculty life can have positive effects (Li & Pitts, 2009).

Researchers have found positive attributes in the learning process when faculty and student interaction occurs both outside and inside the face-to-face class format (Astin, 1993; Colwell & Lifka, 1983; Cox & Orehovec, 2007; Tinto, 1993). Astin (1993) found that the amount of time students spent talking with professors outside the class environment is positively correlated with not only their satisfaction in the quality of instruction but also their GPA, degree completion, enrollment in graduate programs, and even their future employment. Cox and Orehovec (2007) encouraged out-of-class interactions between students and faculty members order to get rid of the professional distance often felt in the classroom setting. They also indicated that student-faculty interactions outside the classroom help students feel valued as a member of the institution. Tinto (1993) confirmed that when students and faculty frequently interact with each other outside the formal setting, students are not only less likely to drop out but also more likely to develop both intellectually and socially. Because of this, he suggested the establishment of faculty mentor programs where new students can talk to faculty in an informal way.

In what ways does this complicate academic appeals where classroom activity occurs in a virtual environment that is not sanctioned or supported by the university or college? Of the cases of Michelle Floyd and Tanner Bradley, which of the two has a stronger case for a successful grade appeal? In addition, the plight of the appealing students is not the only dynamic to consider in academia. The academic freedom of the faculty member remains a long-standing right in academia, protected by the rule of law (Kaplin & Lee, 2007) and adds another layer of complexity. If an institution employs a policy of barring the use of Facebook for academic use, how would that affect the academic freedom of faculty?

While Facebook can conceivably connect college students in group discussions, interact remotely, communicate with these classmates, and receive notification of upcoming assignments, most students do not find these very beneficial (Parry & Young, 2010) due to the nature of the SNS. Although a large number of college students are using Facebook, it remains a social, not academic, median, enabling them to communicate with friends, relatives and other students. SNSs like Facebook show no indication of lower popularity. Given the dynamics, faculty may be tempted to meet students on their turf to facilitate engagement, but at what costs and liability?

REFERENCES

- Acquisti, A., & Gross, R. (2005). Imagined communities: Awareness, information sharing, and privacy on the *Facebook*. In P. Golle & G. Danezis (Eds.), *Proceedings of the 6th Workshop on Privacy Enhancing Technologies*, (pp. 36-58). Cambridge: Robinson College.
- Astin, A. W. (1993). What matters in college? Four critical years revisited. San Francisco: Jossey-Bass.
- Bart, M. (2009, December 30). Do college students spend too much time on Facebook, YouTube and other social networking sites? *Trends in Higher Education*. Retrieved from http://www.facultyfocus.com/articles/trendsin-higher-education/do-college-students-spend-too-much-time-on-facebook-youtube-andother-social-networking-sites/
- Bersin & Associates (2012, October 12). Learning Management Systems 2013: The Definitive Buyer's Guide to the Global Market for Learning Management Solutions. Oakland, CA: Bersin & Associates. Retrieved at http://www.bersin.com/uploadedFiles/092712 MB LMSWhatWorksBrief final.pdf.
- Bugeja, M. J. (2006, January 23). Facing the Facebook. *Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/Facing-the-Facebook/46904
- Colwell, B. W., & Lifka, T. E. (1983). Faculty involvement in residential life. *The Journal of College and University Student Housing*, 13(1), 9–14.
- Connell, R. S. (2009). Academic libraries, Facebook and MySpace, and student outreach: A survey of student opinion. *Libraries and the Academy*, 9(1), 25-36.
- Cox, B. E., & Orehovec, E. (2007, Summer). Faculty-Student interaction outside the classroom: A typology from a residential college. *Review of Higher Education*, *30*(4), 343-362.
- Dahlstrom, E. (2012). The ECAR study of undergraduate students and information technology. (Research Report). Louisville, CO: EDUCAUSE Center for Applied Research. Retrieved from http://www.educause.edu/ecar
- Dorum, K., Bartle, C., & Pennington, M. (2010). The effect of online social networking on facilitating sense of belonging among university students living off campus. World Conference on Educational Multimedia, Hypermedia and Telecommunications. Toronto, Canada.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefit of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-mediated Communication*, 12(4), article 1.
- Fagerstrom, A., & Ghinea, G. (2013). Co-creation of value in higher education: Using social network marketing in the recruitment of students. *Journal of Higher Education Policy and Management*, 35(1), 45-53. doi: 10.1080/1360080X.2013.748524
- Gemmill, E., & Peterson, M. (2006). Technology use among college students: Implications for student affairs professionals. *NASPA Journal*, *43*(2), 280-300.
- Gosling, S. D., Gaddis, S., & Vazire, S. (2007, March 26-28). *Personality impressions based on Facebook profiles*. Presented at the International Conference on Weblogs and Social Media Conference, Boulder, CO.

- Gross, R., Acquisti, A., & Heinz, H. (2005). Information revelation and privacy in online social networks. *Proceedings of the 2005 ACM Workshop on Privacy in the Electronic Society*, 71-80.
- Heiberger, G., & Harper, R. (2008). Have you Facebooked Astin lately? Using technology to increase student involvement. *New Directions for Student Services*, 124, 19-35.
- Hewitt, A. & Forte, A. (2006, Nov.) *Crossing boundaries: Identity management and student/faculty relationships on the Facebook.* Poster presented at the annual meeting of Computer Supported Cooperative Work. Banff, Alberta, Canada.
- Joly, K. (2007). Facebook, MySpace, and Co.: IHEs ponder whether or not to embrace social networking websites. *University Business*, 10(4), 71-72.
- Junco, R. (2011). The need for student social media policies. *EDUCAUSE Review*, 46(1), 60-61.
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computer and Education*, 58, 162-171. doi:10.1016/j.compedu.2011.08.004
- Junco, R., & Mastrodicasa, J. (2007). Connecting to the net.generation: What higher education professionals need to know about today's students. Washington, DC: NASPA.
- Kabilan, M. K., Ahmad, N., & Abidin, M. (2010). Facebook: An online environment for learning of English in institutions of higher education? *Internet and Higher Education*, 13, 179-187. doi: 10.1016/j.iheduc.2010.07.003
- Kaplin, W. A., & Lee, B. A. (2007). The law of higher education, student version (4th ed.). San Francisco: Jossey-Bass.
- Ketcham, G., Landa, K., Brown, K., DeFranco, T., Heise, M., McCabe, R. & Youngs-Maher, P. (2011, February 11). Learning Management Systems Review. *Doodle LMS Report*. Retrieved from http://www.academia.edu/459487/Learning_Management_Systems_Review.
- Kolek, E., & Saunders, D. (2008). Online disclosure: An empirical examination of undergraduate Facebook profiles. *Journal of Student Affairs Research and Practice*, 45(1), 1-25.
- Lenhart, A. (2007). Cyberbulling and online teens. *Pew Internet and American Life Project Report*.
- Li, L. & Pitts, J. P. (2009). Does it really matter? Using virtual office hours to enhance student-faculty interaction. *Journal of Information Systems Education*, 20(1), 175-185.
- Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social interaction and informal learning at university: 'It is more for socializing and talking to friends about work than for actually doing work'. Learning, Media and Technology, 34(2), 141-155. doi: 10.1080/17439880902923606
- Mazer, J. P., Murphy, R.E., & Simonds, C. J. (2007). I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1), 1-17.
- Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2009). The effects of teacher self-disclosure via *Facebook* on teacher credibility. *Learning, Media and Technology, 34*(2), 175-183.
- Parker, P. (2012). Using Facebook as a course management system: One instructor's journey. *Distance Learning*, 9(4), 47-53.

- Parry, M., & Young, J. R. (2010, July 28). New social software tries to make studying fee like Facebook. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/New-Social-Software-Tries-to/125542/
- Patil, A., & Kbosa, A. (2005). Designing with privacy in mind. *Proceedings of the CHI-2005 Workshop on Awareness Systems: Known Results, Theory, Concepts and Future Challenges*.
- Riddell, R. (2013, February 8). 12 learning management system providers and what they bring to classrooms. *Education Dive*. Retrieved from http://www.educationdive.com/news/12-learning-management-system-providers-and-what-they-bring-to-classrooms/97613/
- Roblyer, M. D., & Wiencke, W. (2004). Exploring the interaction equation: Validating a rubric to assess and encourage interaction in distance courses. *The Journal of Asynchronous Learning Networks*, 8(4), 25–37.
- Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, V. J. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *Internet and Higher Education*, 13(3), 134-140.
- Salaway, G., & Caruso, J. (2008). *The ECAR study of undergraduate students and information technology*. (Research Report). Boulder, CO: EDUCAUSE Center for Applied Research. Retrieved from http://www.educause.edu/ecar
- Selwyn, N. (2009). Faceworking: Exploring students' education-related use of Facebook. *Learning, Media and Technology.* 34(2), 157-174.
- Simonson, M. (2007). Course management systems. *Quarterly Review of Distance Education*, 8(1), vii.
- Smith, J. (2010). December data on Facebook's US growth by age and gender: Beyond 100 million. *Inside Facebook*. Retrieved from http://www.insidefacebook.com/2010/0 l/04/december-data-on-facebook%E2%80%99s-us-growth-by-age-and-genderbeyond-100-million/
- Smith, S. D., & Caruso, J. B. (2010). *The ECAR study of undergraduate students and information technology.* (Research Report). Boulder, CO: EDUCAUSE Center for Applied Research. Retrieved from http://www.educause.edu/ecar
- Teclehaimanot, B. & Hickman, T. (2011). Student-teacher interaction on Facebook: What students find appropriate. *Techtrends: Linking Research and Practice to Improve Learning*, 55(3), 19-30.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago: University of Chicago Press.
- Tufekci, Z. (2008). Can you see me now? Audience and disclosure regulation in online social network sites. *Bulletin of Science, Technology and Society, 28*(1), 20-36.