

The Potential of Web 2.0 Tools to Promote Reading Engagement in a General Education Course

By Seung Won Park, The University of Georgia

Abstract

General education classes involve extensive course readings. College instructors have a limited time to cover every detail of the materials students are supposed to learn in class; thus, they expect students to learn through course readings. However, many college students demonstrate a low level of engagement in course reading tasks. Existing research has reported that most college students do not complete their assigned readings or they only engage in shallow levels of reading such as skimming and literal comprehension. Despite this negative phenomenon in college, a lack of research has been conducted to promote reading engagement in college classrooms. The purpose of this paper is to provide college instructors with practical guidance on using Web 2.0 tools to enhance student engagement in this task. According to self-determination theory (SDT), Web 2.0 tools share several engagement-enhancing factors. The paper discusses the potential of Web 2.0 technology to engage students by aligning with SDT. Based on the potential of Web 2.0, the paper suggests practical ways of using different Web 2.0 tools (i.e., GoogleDocs, Blog, Twitter, and Facebook) to promote reading engagement in a college classroom.

Keywords: Web 2.0; Reading engagement; Textbook reading; General education course

Introduction

Most colleges in the United States offer general education courses (Aloi, Gardner, & Lusher, 2003)it is not sufficient for colleges and universities to train students for mere technical competence. What is required for graduates' professional and personal success is additional attention to the development of knowledge, skills, and attitudes that will support them throughout their lives. General education outcomes, as well as technical skills and knowledge developed through concentrated study in a major discipline, must be developed in every college or university graduate. To better serve students and to address the heightened call for accountability in higher education, institutions must engage in a comprehensive campus-wide discussion on the specific components of critical thinking, problem solving, writing, and the methods to assess these skills (Maki, 2001. General education programs are designed to expose students to a variety of learning experiences and assist them in acquiring the fundamental intellectual capabilities for them to become responsible and thoughtful members of society (Benander, Denton, Page, & Skinner, 2000). General education programs are for the most part composed of introductory-level courses in the different disciplines that aim to include a breadth rather than a depth of knowledge

(Gump, 2007). These courses usually include a large number of students. As a result, most general education course instructors deliver course content through lectures (Gump, 2007). Furthermore, they rely heavily on textbooks as a primary resource of information for facilitating the efficient communication of course content to a large group of students (Phillips & Phillips, 2007; Ryan, 2006).

Instructors of general education courses often assign weekly textbook readings so that students can gain familiarity with a topic and thus be better prepared for class (Hilton, Wilcox, Morrison, & Wiley, 2010; Tomasek, 2009).
"International Journal of Teaching and Learning in Higher Education"; page: "127–132"; volume: "21"; issue: "1"; shortTitle: "Critical reading"; author: [{"family": "Tomasek", given: "T"}]; issued: {"year": 2009}; page-first: "127–132"} . Although the instructors provide lectures to explain major ideas and concepts, due to limited time and resources, they cannot include all the details students are supposed to learn (Bramhall, 2009). Thus, instructors of general education courses expect students to read the assigned textbook chapters before class. Indeed, some studies have reported that students who completed assigned readings tend to achieve higher grades on exams (Sappington, Kinsey, & Munsayac, 2002; Smith & Jacobs, 2003).

However, it has been extensively recognized that only a small number of college students complete the assigned readings. For example, Clump, Bauer, and Bradley (2004) reported that less than one third of the students enrolled in an introductory psychology class completed the assigned course readings prior to class. In a more recent study examining textbook usage of college students enrolled in finance courses, only 18% of the students read their textbooks before class, even though they acknowledged the importance of textbook reading to their grades (Berry, Cook, Hill, & Stevens, 2011). Other studies also reported that college students expended only a minimum effort and amount of time in reading their textbooks (Arquette, 2010; Fitzpatrick & McConnell, 2009; Smith & Jacobs, 2003).

Moreover, even those college students who read their textbooks engaged in a shallow level of reading. For example, Phillips and Phillips (2007) studied the textbook reading behaviors of introductory accounting students and found that many students completed the assigned readings by skimming them. Although most college-level textbooks are conceptually

sophisticated and dense with abstract concepts and ideas, students seldom engage in the deeper levels of information processing such as elaboration or organization (Cao & Nietfeld, 2007). Rather, they demonstrate a poor use of reading strategies, relying on rote memorization or rehearsal (Barnett, 2000; Taraban, Rynearson, & Kerr, 2000).

Although both a low completion of assigned readings and a shallow level of reading among college learners indicate their poor engagement in reading, only a few studies have addressed this phenomenon. Given the importance of textbook reading in general education courses, this paper proposes promising ways to promote student engagement in course reading using Web 2.0 tools. Practical advice provided in this paper is not empirically based but grounded on a strong theoretical foundation. Web 2.0 tools share the features that self-determination theory suggests are engagement-enhancing factors (i.e., autonomy, competence, and relatedness). In the following, the paper briefly introduces self-determination theory (SDT) and discusses the potential of Web 2.0 Tools in relation to SDT. The paper then presents several practical suggestions on how college instructors can use different Web 2.0 tools in a classroom to enhance student engagement in course reading.

Self-Determination Theory

Self-determination theory (SDT) provides a comprehensive understanding of human motivation (Deci & Ryan, 1985). According to SDT, human motivation is not a singular construct but rather is composed of several different facets, which are related to varying levels of engagement and performance. One type of motivation is called *intrinsic motivation*. When people involve themselves in an activity for the sake of their inner pleasure and satisfaction, it is said that they are intrinsically motivated (Ryan & Deci, 2000). It is human nature for people to engage in activities in which they are interested. Generally speaking, intrinsically motivated behaviors result in active engagement and high performance (Deci & Ryan, 2000).

However, most learning activities are not intrinsically interesting and motivating. People still complete tasks for reasons other than their inherent interest or enjoyment in doing so. This type of motivation is called *extrinsic motivation* (Deci & Ryan, 1985). SDT further proposes four different types of extrinsic motivation based on the degree to which the motivation for one's behavior originates from the self or the behavior is

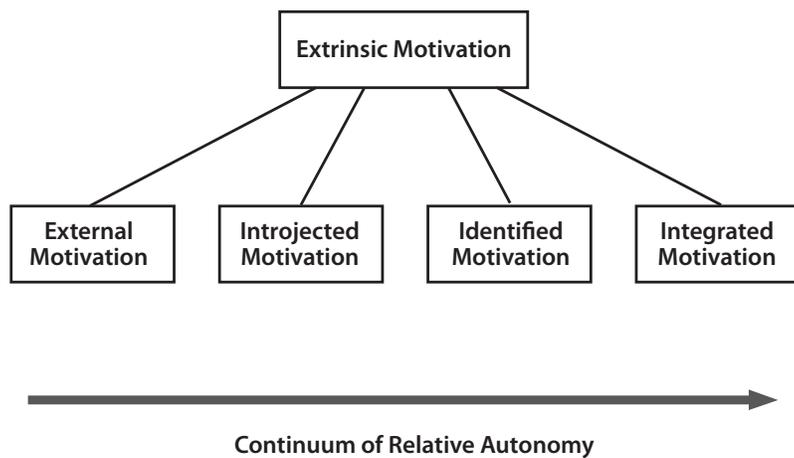


Figure 1. Types of extrinsic motivation (Adapted from Ryan & Deci, 2000)

experienced as autonomous (see Figure 1). *External motivation* is the least autonomous type of motivation, which refers to behaviors performed in order to achieve a reward or avoid a punishment. Such behaviors are discontinued if the external incentives are absent. For example, a student who may have read his or her textbook to receive a good grade on an upcoming exam would probably not have read it if there had been no exam in the class. Another type of extrinsic motivation is *introjected motivation*, and it refers to behaviors performed to avoid a feeling of guilt or to attain a sense of self-worth. For example, a student may complete a reading assignment so that he or she will not experience a feeling of guilt for failing to have fulfilled a responsibility. Along with external motivation, introjected motivation promotes little autonomy because behaviors enacted from this type of motivation are initiated and controlled by internal pressure (Niemic & Ryan, 2009).

On the other hand, the more autonomous type of motivation, *identified motivation*, is indicated when activities are considered valuable or personally important. For example, a student might read a textbook in a human development course because he or she believes that mastery of the course content is important for competence in more advanced psychology courses. The most autonomous type of extrinsic motivation is called *integrated motivation*, whereby the identified value of an activity is integrated into the self. For example, a student who wants to be an elementary school teacher may study a human development textbook because he or she can acquire knowledge about how children can be adequately raised and educated, knowledge that he or she considers essential for being a good teacher. SDT scholars assert that only a few peo-

ple reach this level of motivation (Deci & Ryan, 2000). In comparison to external and introjected motivations, both identified motivation and integrated motivation are perceived as arising fully from the self; thus they are self-determined.

As may be expected, a greater autonomous motivation for learning yields deeper engagement and enhanced learning outcomes. Many studies, in fact, reported that students with autonomous motivation (e.g., identified motivation) exhibited a high level of interest and enjoyment toward a course subject, active class participation, and higher perceived competence, whereas those with external or introjected motivation demonstrated anxiety, negative coping strategies, and a low level of effort (Black & Deci, 2000; Connell & Wellborn, 1991; Ryan & Connell, 1989). Thus, SDT suggests that the autonomous type of motivation be promoted for high-quality learning and performance.

Self-determination theory (SDT) introduces three basic psychological human needs that have powerful influences on the development of autonomous motivation: the needs for autonomy, competence, and relatedness. SDT asserts that greater autonomous motivation is facilitated if the learning environment is structured in a way that satisfies these innate human needs. First, the need for autonomy refers to the desire to self-organize and self-control one's experiences and behaviors. It is closely related to the feeling of freedom from controllers of one's behavior. The need for autonomy is thus supported when students are given a choice or an opportunity to determine their own actions (Ryan & Deci, 2000). Next, the need for competence means a need to feel efficacious. Students can experience feelings of competence when they are given optimal challenges and provided positive feedback (Ryan & Deci, 2000). Lastly, the need for relatedness refers to the desire to experience a sense of belongingness and connectedness to others. People tend to prefer activities that are valued by their significant others or those to whom they want to relate. A feeling of being respected and cared for typically supports the need for relatedness. Again, when these three basic psychological needs are fulfilled, students are likely to experience autonomous, self-determined motivation.

To summarize, self-determination theory (SDT) proposes that students can exhibit various types of motivation and that certain types of motivation result in better learning outcomes. Although intrinsic motivation is an ideal type of motivation, it is very rare that students have this kind of motivation, especially toward activities arranged in a school setting. Nevertheless, students can demonstrate active engagement and

adaptive learning behaviors if they have more autonomous types of extrinsic motivation. The need for autonomy, competence, and relatedness are suggested as the key factors that can foster autonomous motivation. If a learning environment supports the satisfaction of autonomy, competence, and relatedness, students are more likely to value academic activities and more willing to engage in less interesting tasks. In the next section, the paper discusses the potential of Web 2.0 tools to satisfy the need for autonomy, competence, and relatedness in students.

Web 2.0 Technologies

Web 2.0 represents web-based technologies with which users can contribute to content on the Internet. When the World Wide Web was first introduced, content was created by a limited number of content providers, and users could merely browse and read the provided subject matter. However, with the advent of Web 2.0 technologies, users can also become producers of content as well as consumers of information (Cormode & Krishnamurthy, 2008). For example, amateur musicians may upload a video of their performance and share it with people on the Internet via video sharing websites such as YouTube. In addition to users' contribution to content, other distinct features of Web 2.0 include social communication and interaction among users. Web 2.0 technologies that highlight this feature are called social networking websites (SNSs) such as Facebook and Twitter. Users of Facebook, for example, can send messages to and leave them for their companions and peers, as well as have an online text-chat with friends and family.

Today's college learners, so-called digital natives (Prensky, 2001) or the Net generation (Tapscott, 1998), are typically familiar with Web 2.0 technologies. Smith, Salaway, and Caruso (2009) surveyed over 30,000 college students in the United States and found that 90% of college students use SNSs, and of these, 63% use them daily. Moreover, 40% of college students engage in content creation via other Web 2.0 tools including video-sharing websites (e.g., YouTube), wikis (e.g., Wikipedia), blogs, and podcasts. Given that this survey was conducted in 2009, the number of college students who use Web 2.0 technologies has by now increased. These data suggest that Web 2.0 tools are an important part of college students' lives.

With the growing popularity of SNSs and other Web 2.0 tools among college students, efforts have been made to integrate these technol-

ogies into college classrooms. Several researchers have also reported on the pedagogical merits of Web 2.0 (e.g., McLoughlin & Lee, 2008; New Media Consortium & EDUCAUSE, 2007). First of all, Web 2.0 tools provide a convenient way to manage and store information and, at the same time, share it with others. Martindale and Wiley (2004) used blogs in a college classroom to enable students to build a searchable archive of their literature critiques. The instructor could read students' work without the additional step of downloading it. Students were also encouraged to visit their classmates' blogs and read their postings. Added to easy access to information for all users, Web 2.0 makes collaboration and group communication possible beyond the classroom. For example, Wang and Hsu (2008) had pre-service teachers make comments on their peers' blog postings as a way to expand in-class discussions. Similarly, Cole (2009) used wiki technology with which college students collectively wrote reflective essays outside the classroom. Moreover, because student work can be shared with people beyond the classroom, students can also benefit from interacting with a much wider audience (McLoughlin & Lee, 2008). Given these advantages of Web 2.0 tools, a growing number of college instructors are considering using them in their classrooms.

These advantages in ways to teach and learn by using Web 2.0 tools seem to have an impact on students' actual learning and performance as well. Junco, Heiberger, and Loken (2011) used Twitter in a college seminar course to facilitate students' academic and co-curricular discussions and found that students who used Twitter increased their academic engagement and subsequently achieved a higher semester GPA. Students themselves also acknowledged the value of Twitter on their learning (Rinaldo, Tapp, & Laverie, 2011). Moreover, Cobanoglu and Berzina (2011) reported that college students in a hospitality course showed an enhanced engagement with their reflection paper assignments when they posted them on their blog, as compared to those instances in which they typed them in papers.

Such positive influence on students' learning experiences is observed partly because students' needs for autonomy, competence, and relatedness, which self-determination theory (SDT) suggests as the essential factors for engagement, are supported with the use of Web 2.0 technologies in classrooms. First, Web 2.0 provides a personal learning space filled with a student's work that is publicly available to other people. Creating content on the Internet with

an awareness of audience enables students to experience autonomy and take ownership and responsibility for publishing quality work on the web (Lee, 2011). Moreover, Web 2.0 tools allow for immediate feedback on student work, which support students' competence. Taking advantage of web-based technology, instructor and peers can readily access student work published on Web 2.0 websites and immediately leave feedback. Lastly, Web 2.0 fulfills the need for relatedness as it allows students not only to interact with their instructor and peers but also to make connections with readers beyond the classroom audience (Baker, Rozendal, & Whitenack, 2000).

In short, Web 2.0 technologies share characteristics that accommodate support for autonomy, competence, and relatedness, which promotes student engagement. Several empirical studies have also indicated that Web 2.0 facilitated high-quality learning for college students. Therefore, the integration of Web 2.0 technologies into reading tasks are likely to enhance students' active engagement with reading materials. That said, how could college instructors put various Web 2.0 tools into practice in a general education class? The following section illustrates possible uses of Web 2.0 to promote course assignments reading in a general education course. The examples provided employ the four most common Web 2.0 tools: GoogleDocs, Blogs, Twitter, and Facebook.

Examples of Web 2.0 Tool Use to Enhance Reading Engagement

Example 1: Google Docs

Google Docs (<https://docs.google.com>) is a wiki tool available among various Google products. A wiki is a website that multiple users can collectively edit and modify, which makes it an excellent tool for collaborative work (Parker & Chao, 2007). Given this feature, a wiki has been used for the particular purpose of promoting collaborative knowledge building among students. For example, middle school students working on a geographic project compiled collaborative notes on their wiki page about what they researched each week (Engstrom & Jewett, 2005). Google Docs provides wiki functions in various forms such as documents, spreadsheets, and presentation files. Students can share one or more of these Google Docs and collaboratively work on them at a convenient place and time. Students can access their docs from any location with an Internet connection. Google Docs also

enables users to view what has been and is being edited, and who is editing in real time.

When used with reading assignments in a general education course, Google Docs can provide a shared place for a group of students to discuss what they have read in a textbook. For example, a group of students may construct a collaborative note about a chapter in the textbook on their shared Google Doc, which they can then use as a resource for course exams. As general education courses usually include a large number of students, early in the semester an instructor may need to divide a class into groups of four to six students. Each group creates and shares a Google Doc after the instructor has introduced the tool and demonstrated how it works. For each reading assignment, students in the group may take responsibility for different sections of the chapter and summarize the key concepts in his or her assigned section. Students can then read each other's summaries and make changes, if necessary, or post questions for clarification. If the instructor is concerned about whether students have read only the assigned section rather than the entire chapter, the instructor may require each student to make a comment on the summaries of other sections. While doing so, students may need to re-read the appropriate part of the textbook. The instructor can also provide a small number of discussion questions and require each group to collectively write responses in their Google Doc. Depending on the content of each chapter, the instructor can ask a group of students to draw a concept map. For example, in a physiology class, students may be asked to draw a series of cause and relationship illustrations of how alcohol causes drowsiness. Moreover, the instructor can encourage students to bring their coauthored summaries to class and make additional notes, thereby increasing their individual knowledge. This would prompt students to be more engaged in the lecture and promote their understanding.

Example 2: Blogs

The term "blog" is short for "web log," which functions much as an online diary or journal (Martindale & Wiley, 2004). People have their own spaces on the web, or a blog, and post their writings on these web spaces. The first page of the blog is typically the most recent text that the author has posted and past entries are archived chronologically. Although a blog can be a personal journaling place, it can also be shared with others who can leave comments as well (e.g., Wang & Hsu, 2008). Readers can subscribe to a

particular blog and receive a feed about recent entries on the subscribed blog. The blog thus enables any individual to publish his or her work on the web, as well as share it with others and build a sense of community. Apparently, these blog features appear to facilitate student engagement; several researchers have indicated that college students increased their learning motivation and performance after engaging in blogging activities (e.g., writing and posting reflective essays about course reading materials on blogs) (Ellison & Wu, 2008; Hsu & Wang, 2010). The two most common free blog-service providers are Blogger (<http://www.blogger.com>) and WordPress (<http://wordpress.com>).

Students in a general education course can use a blog to present their reflections about course readings. As each student can have his or her own customized blog, students are likely to perceive ownership for the blog. To further support students' autonomy, the instructor may provide several discussion topics from which students can choose for their writings on the blog. Moreover, students may be asked to make comments on their peers' blog postings so that they can connect to their peers as well as receive feedback from them. For more efficient interactions, the entire class can be separated into several groups whose members become blogging peers. If individual students in the group choose to respond to different discussion questions, they can learn from each other's blog postings. With perceived ownership and responsibility accompanied by peer interaction, such blogging activities can promote student engagement in reading.

Example 3: Twitter

Twitter (<http://twitter.com>) is another popular Web 2.0 tool that features a public, ongoing dialogue. On Twitter, users can post a message, or a tweet, with a limited number of characters (140). The posted messages are shared among followers (friends on Twitter) who can reply to the message using the "@ replies" function. One of the unique features of Twitter is that users can tag keywords with hashtags within tweets. When the tagged word is clicked, all the tweets that tagged the same word are searched. In a simpler way, Twitter functions much like a text message sent publicly to a group of friends within this particular website. When Twitter is incorporated into a classroom, the interactive communication featured in and enabled by Twitter seems to facilitate student interest and trigger active participation and engagement (Junco et al., 2011; Rinaldo et al., 2011).

This simple Web 2.0 tool can be also used to promote students' course reading in a general education course. First of all, the instructor may open a class Twitter account and require students to become followers. With each assigned reading, students are asked to reply to discussion questions posted on the class Twitter account. Students can be also required to make a certain number of replies to other students. Students may be advised to tag the course number within their tweets and replies so that others can easily search them. If the number of students is too large to post replies to a single discussion question, students could be divided into groups assigned to leave messages on specific discussion questions. Unlike the blog example in which students must visit the different websites of their peers' blogs, students can view other students' tweets on the same web page so it is more amenable to ongoing discussions. Students may also be prompted to post questions or comments about the assigned reading or course materials by replying to the class Twitter account. The instructor can encourage students to participate in Twitter activities by responding to students' tweets. The immediate feedback can empower students to perceive active interactions and feel respected, which promotes their engagement. Finally, it is critical for students' active participation that they value this Twitter activity as a viable communication channel and a free discussion place for the class.

Example 4: Facebook

Facebook (<http://www.facebook.com>) is the most popular Web 2.0 website commonly used by college students (Junco, 2012). For the most part, people use Facebook to share life events or opinions. Facebook members can also chat with friends, share personal photos or videos, join social interest groups, and play online games. Facebook thus enables people to effectively connect to and interact with friends. As a result of the various activities provided by Facebook, many college students are attracted to it.

Facebook can be used in a way similar to the manner in which Twitter is integrated into course reading assignments. First, the instructor creates a class group and invites students to join. Each week, the instructor can post several discussion questions on the class page. Students are then assigned by groups to respond to particular questions, or individual students can be required to respond to a specific number of questions. Students should be asked to leave comments on other students' messages and ask questions re-

lated to the course materials. In responding to discussion questions, students can be not only encouraged to “write” their responses but also to use audio- or video-chat to conduct a discussion and upload a file to Facebook. Providing various ways to discuss the course reading can further promote students’ needs for autonomy, competence, and relatedness. Instructor feedback can further foster students’ active participation in this Facebook discussion. As in the Twitter example, students’ active interaction on Facebook is a key to enhancing student engagement.

Conclusion

Despite the significance of course readings in a general education course, only a few college students successfully complete them. In response to this problem, this paper proposed the use of Web 2.0 tools as a potential way to promote students’ reading engagement. Based on self-determination theory, Web 2.0 tools allow students to perceive autonomy and feelings of competence, as well as to experience a sense of connection with their peers and instructor. These positive learning experiences are expected to enhance student engagement. In particular, four exemplar practices with Web 2.0 technologies (i.e., Google Docs, Blogs, Twitter, and Facebook) in a general education course are provided. These practices are relatively simple to implement and do not require significant instruction time. When using any of these Web 2.0 tools, it is essential that the instructor provide explicit guidance on how to use the tools and what students are expected to do with them. It may be helpful if the instructor demonstrates exemplary answers and provides feedback on student work as well. The four sample uses of Web 2.0 tools may not guarantee every student’s deep engagement in course readings, especially given the large number of students involved in a general education course. Nevertheless, they can induce students who otherwise rarely open textbooks to at least become involved in course readings to a greater extent. The instructors may be able to further enhance student engagement by extending online discussions during in-class instruction.

Correspondence concerning this article should be addressed to Seung Won Park: 602 Aderhold Hall, Department of Educational Psychology & Instructional Technology, The University of Georgia, Athens, Georgia 30602-7144/ EMAIL won10@uga.edu

References

- Aloi, S. L., Gardner, W. S., & Lusher, A. L. (2003). A framework for assessing general education outcomes within the majors. *The Journal of General Education, 52*(4), 237–252.
- Arquette, C. M. (2010). Education majors’ textbook reading habits: How much are they reading? *National Social Science Journal, 35*, 14–22.
- Baker, E., Rozendal, M., & Whitenack, J. (2000). Audience awareness in a technology-rich elementary classroom. *Journal of Literacy Research, 32*(3), 395–419. doi:10.1080/10862960009548086
- Barnett, J. E. (2000). Self-regulated reading and test preparation among college students. *Journal of College Reading and Learning, 31*(1), 42–61.
- Benander, R., Denton, J., Page, D. S., & Skinner, C. (2000). Primary trait analysis: Anchoring assessment in the classroom. *The Journal of General Education, 49*(4), 279–302.
- Berry, T., Cook, L., Hill, N., & Stevens, K. (2011). An exploratory analysis of textbook usage and study habits: Misperceptions and barriers to success. *College Teaching, 59*(1), 31–39. doi:10.1080/87567555.2010.509376
- Black, A. E., & Deci, E. L. (2000). The effects of instructors’ autonomy support and students’ autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education, 84*(6), 740–756.
- Bramhall, D. D. (2009). A short take on: Value in textbooks. *Community College Enterprise, 15*(1), 39–44.
- Cao, L., & Nietfeld, J. L. (2007). College students’ metacognitive awareness of difficulties in learning the class content does not automatically lead to adjustment of study strategies. *Australian Journal of Educational & Developmental Psychology, 7*, 31–46.
- Clump, M. A., Bauer, H., & Bradley, C. (2004). The extent to which psychology students read textbooks: A multiple class analysis of reading across the psychology curriculum. *Journal of Instructional Psychology, 31*, 227–232.
- Cobanoglu, C., & Berezina, K. (2011). The impact of the use of blogs on students’ assignment engagement. *Journal of Hospitality, Leisure, Sports and Tourism Education, 10*(1), 99–105.
- Cole, M. (2009). Using Wiki technology to support student engagement: Lessons from the trenches. *Computers & Education, 52*(1), 141–146.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *The Minnesota symposia on child psychology* (Vol. 23, pp. 43–77). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Cormode, G., & Krishnamurthy, B. (2008). Key differences between Web 1.0 and Web 2.0. *First Monday, 13*(6), 1–30.
- Deci, E.L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.

- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Ellison, N. B., & Wu, Y. (2008). Blogging in the classroom: A preliminary exploration of student attitudes and impact on comprehension. *Journal of Educational Multimedia and Hypermedia*, 17(1), 99–122.
- Engstrom, M. E., & Jewett, D. (2005). Collaborative learning the wiki way. *TechTrends*, 49(6), 12–15.
- Fitzpatrick, L., & McConnell, C. (2009). Student reading strategies and textbook use: An inquiry into economics and accounting courses. *Research in Higher Education Journal*, 3. Retrieved from <http://www.aabri.com/manuscripts/09150.pdf>
- Gump, S. E. (2007). Classroom research in a general education course: Exploring implications through an investigation of the sophomore slump. *The Journal of General Education*, 56(2), 105–125.
- Hilton, J. L., Wilcox, B., Morrison, T. G., & Wiley, D. A. (2010). Effects of various methods of assigning and evaluating required reading in one general education course. *Journal of College Reading and Learning*, 41, 7–22.
- Hsu, H.-Y., & Wang, S. (2010). The impact of using blogs on college students’ reading comprehension and learning motivation. *Literacy Research and Instruction*, 50(1), 68–88. doi:10.1080/19388070903509177
- Junco, R. (2012). Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance. *Computers in Human Behavior*, 28(1), 187–198.
- Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27(2), 119–132.
- Lee, E. (2011). Facilitating student-generated content using Web 2.0 technologies. *Educational Technology*, 51(4), 36–40.
- Martindale, T., & Wiley, D. A. (2004). Using weblogs in scholarship and teaching. *TechTrends*, 49(2), 55–61.
- McLoughlin, C., & Lee, M. J. W. (2008). The three p’s of pedagogy for the networked society: Personalization, participation, and productivity. *International Journal of Teaching and Learning in Higher Education*, 20(1), 10–27.
- New Media Consortium, & EDUCAUSE. (2007). *The horizon report*. Stanford, CA: The New Media Consortium.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133–144. doi:10.1177/1477878509104318
- Parker, K. R., & Chao, J. T. (2007). Wiki as a teaching tool. *Interdisciplinary Journal of Knowledge and Learning Objects*, 3(1), 57–72.
- Phillips, B. J., & Phillips, F. (2007). Sink or skim: Textbook reading behaviors of introductory accounting students. *Issues in Accounting Education*, 22(1), 21–44.
- Prensky, M. (2001). Digital natives, digital immigrants Part 1. *On the Horizon*, 9(5), 1–6.
- Rinaldo, S. B., Tapp, S., & Laverie, D. A. (2011). Learning by tweeting: Using Twitter as a pedagogical tool. *Journal of Marketing Education*, 33(2), 193–203.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57(5), 749–761. doi:10.1037/0022-3514.57.5.749
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. doi:10.1037/0003-066X.55.1.68
- Ryan, T. E. (2006). Motivating novice students to read their textbooks. *Journal of Instructional psychology*, 33(2), 135–140.
- Sappington, J., Kinsey, K., & Munsayac, K. (2002). Two studies of reading compliance among college students. *Teaching of Psychology*, 29(4), 272–274.
- Smith, B. D., & Jacobs, D. C. (2003). TextRev: A window into how general and organic chemistry students use textbook resources. *Journal of Chemical Education*, 80(1), 99–102.
- Smith, S. D., Salaway, G., & Caruso, J. B. (2009). The ECAR study of undergraduate students and information technology. *Educause Center for Applied Research*, 6, 1–13.
- Tapscott, D. (1998). *Growing up digital: The rise of the net generation*. New York, NY: McGraw Hill.
- Taraban, R., Rynearson, K., & Kerr, M. (2000). College students’ academic performance and self-reports of comprehension strategy use. *Reading Psychology*, 21(4), 283–308.
- Tomasek, T. (2009). Critical reading: Using reading prompts to promote active engagement with text. *International Journal of Teaching and Learning in Higher Education*, 21(1), 127–132.
- Wang, S. K., & Hsu, H. Y. (2008). Reflections on using blogs to expand in-class. *TechTrends*, 52(3), 81–85.

Copyright of TechTrends: Linking Research & Practice to Improve Learning is the property of Springer Science & Business Media B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.