

**Effects of Student Engagement with Social Media on Student Learning:**

**A Review of Literature**

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### **Abstract**

Social media, Internet-based tools that promote collaboration and information sharing (Junco, Helbergert, & Loken, 2011), can be used in academic settings to promote student engagement and facilitate better student learning (Kabilan, Ahmad, & Abidin, 2010). Because student engagement represents the time and effort that students invest in collaborative and educational activities (Kuh, 2001), it is often linked with the achievement of positive student learning outcomes, such as critical thinking and individual student development (Carini, Kuh, & Klein, 2006; Kuh, 1993). This review discusses the connections between student engagement and student learning, followed by the prevalence of social media use and how it can impact peer interactions, collaboration, and knowledge creation. Finally, recommendations for educators on how to incorporate social media in course content are presented.

## **Effects of Student Engagement with Social Media on Student Learning**

The rapid development of information and communication technologies has sparked the creative incorporation of social media into current pedagogical applications and processes. Social media includes a variety of web-based tools and services that are designed to promote community development through collaboration and information sharing (Arnold & Paulus, 2010; Junco, Helbergert, & Loken, 2011). These tools provide opportunities for individual expression as well as interactions with other users (Arnold & Paulus, 2010). Social media can include blogs, wikis, media (audio, photo, video, text), sharing tools, networking platforms (including Facebook), and virtual worlds. Current research has indicated that using social media as an educational tool can lead to increased student engagement (Annetta, Minogue, Holmes, & Cheng, 2009; Chen, Lambert, & Guidry, 2010; Junco, 2012a; Junco et al., 2011; Patera, Draper, & Naef, 2008). By encouraging engagement with social media, students develop connections with peers, establish a virtual community of learners and ultimately increase their overall learning (Fewkes & McCabe, 2012; Heafner & Friedman, 2008; Jackson, 2011; Kuh, 1993; Liu, Liu, Chen, Lin & Chen, 2011; Nelson Laird & Kuh, 2005; Yu, Tian, Vogel, & Kwok, 2010). This literature review will explore the dimensions of student engagement through social media as a means of fostering increased student learning and implications for educators on how to incorporate social media with academic course content.

Student engagement represents both the time and energy students invest in interactions with others through educationally purposeful activities (Kuh, 2001). Nelson Laird and Kuh (2005) reported that students who use information technology for academics also have a higher likelihood of contributing and participating in active, academic collaboration with other students. This collaboration indicates that as engagement with technology increases, engagement with academics also increases, promoting a deeper connection between the students, educators, and course content (Mehdinezhad, 2011). By participating in a community of learners, students become more engaged with the course content which increases the achievement of popular learning outcomes, such as critical thinking and individual student development (Carini, Kuh, & Klein, 2006; Kuh, 1993, 2009; Kuh, Cruce, Shoup, Kinsie, & Gonyea, 2008; Pike, Kuh, & McCormick, 2011). Therefore, student engagement through social media can increase connections to create a virtual community that leads to better content learning.

### **Significance of Review**

Social media use has increased in recent years across all age levels. The Pew Internet and American Life Project found that although 73% of teens between the ages of 12 and 17 use social media, the rates of social media use are even higher (83%) for young adults between the ages of 18 and 29 (Lenhart, Purcell, Smith, & Zickuhr, 2010; Madden &

Zickuhr, 2011). Due to age restrictions and limited access to social media, pre-adolescent students do not appear to have the same level of social media use as older students (Lenhart et al., 2010). In addition to the number of teens and young adults using social media, two-thirds of adult Internet users are also using social media (Madden & Zickhur, 2011). Social media has also been implemented in academic settings to motivate students to participate, share, and learn with other collaborators (Kabilan, Ahmad, & Abidin, 2010). Nelson Laird and Kuh (2005) found that students use information technology regularly in both their academic and personal lives. However, students use social media more than other course related technologies because they are already familiar with the features and settings (Appel, 2012; Hurt et al., 2012; Liu, 2010).

### **Social and Collaborative Learning**

Nowadays, most researchers agree that knowledge not only exists in individual minds but also in the discourse and interactions between individuals. Such interactions support active participation, which is an essential element in student learning (Hrastinski, 2009). Learners need to develop skills to share knowledge and to learn with others, both in face-to-face situations and through technology including social media. Kabilan et al. (2010) found that students build learning communities by working collaboratively to construct knowledge. Social media serves as a tool to facilitate the development of these learning communities by encouraging collaboration and communication. Moreover, these interactions reinforce the achievement of desirable learning outcomes (Yu et al., 2010).

As a result, social media supports collaborative learning, which in turn helps to strengthen the creative learning process (Shoshani & Rose Braun, 2007). Collaborative learning is characterized by student interactions and connections with course content. Social media provides an opportunity for students to expand their learning environment since only a portion of student learning occurs within the confines of a classroom (Chen & Bryer, 2012; Friesen & Lowe, 2012; Wodzicki, Schwämmlein, & Moskaliuk, 2012). Fewkes and McCabe (2012) further argued that it is the responsibility of educators to find ways to incorporate current social media into their classrooms. Educators can use social media to develop creativity in their students by encouraging them to explore the content material in new ways (Frye, Trathen, & Koppenhaver, 2010; Lamb & Johnson, 2010). For example, social media provides students with options for creating authentic, creative products through tools such as blogs, YouTube, and podcasts (Frye et al., 2010; Lamb & Johnson, 2010). Students can also use social media to research content material in order to develop new knowledge (Frye et al., 2010; Lamb & Johnson, 2010). By allowing the needs of creative learners to be met through a cooperative learning environment, students are better able to balance their individualism with the need for contact with others, allowing new ideas to flourish (Garrett, 2011; Shoshani & Rose Braun, 2007).

Technology, when used independently, does not necessarily contribute to learning. Aguilar-Roca, Williams, and O'Dowd (2012) found that students who take notes by hand achieve higher test scores when compared to students who use laptops to take notes. Additionally, prior computer knowledge plays a factor in a student's perceived learning through online methods of instruction (Appel, 2012; Top, 2012). However, the Internet can provide a rich environment for hosting the educational and learning activities for students. Chen et al. (2010) found that students who primarily take online courses also spend more time using online tools and social media as supplementary learning tools when compared to students who primarily take face-to-face courses. By supplementing student course work with outside materials as well as creating and sharing knowledge among peers, social media creates an environment where increased critical thinking and collaboration are possible (Carini et al., 2006; Kuh, 1993; Mazman & Usluel, 2010; Shoshani & Rose Braun, 2007). Thus, the active engagement and establishment of virtual relationships through social media offers opportunities for increased learning by encouraging students to build on established connections with other sources beyond the classroom (Fewkes & McCabe, 2012; Yu et al., 2010).

#### **Using Social Media to Connect to a Virtual Community of Learners**

Students who participate in social media as part of a class feel more connected to their peers than those students who do not participate in social media (Annetta et al., 2009; Jackson, 2011; Tomai, Rosa, Mebane, D'Acunti, Benedetti, & Francescato, 2010). Social media allows students to not only group themselves with peers who are similar, but also to enhance and link existing peer groups (Jackson, 2011; Mazman & Usluel, 2010; Wodzicki et al., 2012). In addition to enhancing established peer groups, social media can bridge the diversity that exists in classrooms by establishing a neutral zone in which students can interact with one another (Junco et al., 2011; Krause & Coates, 2008; Kuh, 1993, 2009; Mehdinezhad, 2011; Pike et al., 2011). Tomai et al. (2010) found that students who used social media felt more emotionally connected to their peers because they felt as though they had people to talk to if they had a problem or if they needed help. Further, these peer connections encouraged participation by students who initially felt intimidated by in-class discussions (Arnold & Paulus, 2010; Junco et al., 2011; Rambe, 2008).

The connections that students make with classmates through social media can impact the learning environment that is created. Participation in social media creates a more collaborative and communicative learning environment for students by providing opportunities for discussions and interactions with their peers (Heafner & Friedman, 2008; Jackson, 2011; Liu et al., 2011). By collaborating with peers on a given topic, social media offers opportunities to develop a stronger sense of community among students (Arnold & Paulus, 2010; Dawson, 2008; Heiberger & Harper, 2008; Hurt et al., 2012; Jones et al., 2009; Top, 2012). Although Dawson (2008) found that the degree to which a student feels a sense of

community might be influenced by the presence and experiences of pre-existing social networks, students who interact with higher numbers of learners also exhibit a higher sense of community. The use of social media also contributes to a sense of community among students by allowing personalization of profiles, including the addition of pictures and other identifying information (Arnold & Paulus, 2010; Stevens, 2009). This personalization, coupled with the critical examination of course topics, supports an authentic relationship between students by encouraging openness and sharing of information, which also increases students' perceived learning (Hurt et al., 2012; Top, 2012).

### **Social Media and Integrating Course Content**

Although collaborating with classmates through social media builds a system of relationships between students, it also provides instant pathways for disseminating and enhancing course-related knowledge outside the confines of the traditional classroom (Fewkes & McCabe, 2012; Hurt et al., 2012; Junco et al., 2011; Top, 2012). In using social media for academic purposes, namely group discussions, multiple students can discuss a class in general and interact with the same content at the same time (Patera et al., 2008; Rambe, 2008). The ability to communicate with each other in one location allows students to build on conversations, whether related to course content or not. This increases the likelihood of having greater learning because students are adding to the dialogue beyond that of the prescribed topic, including discussions that were originally posted by a moderator or professor (Hurt et al., 2012). Furthermore, sharing and co-creating information through social media merely requires a student to understand its appropriateness for a given topic (Lin, Hou, Wang, & Chang, 2013). By providing students with a common experience within a virtual community, they are able to dig deeper for content and make connections across multiple sources (Annetta et al., 2009; Frye et al., 2010). This ability produces a network of opportunities to increase student learning beyond the traditional classroom setting.

### **Social Media and Student Learning Achievements**

The use of social media in academic coursework can increase the learning achieved by an individual student. Students who participate in coursework that utilize social media demonstrate an increase in overall GPA when compared with students who do not participate in social media (Junco, 2012b; Junco et al., 2011). Social media usage within the academic setting not only increases students' GPA, but also facilitates peer feedback on assignments and thoughtful student reflections on course content because of the ability for students to openly communicate with each other and develop strong relationships among peers (Arnold & Paulus, 2010; Ebner, Leinhardt, Rohs, & Meyer, 2010; Kuh, 1993). Furthermore, using social media fosters long-term retention of information and develops a deeper understanding of content that is discussed in a class (Chen & Bryer, 2012; Heafner & Friedman, 2008). This research indicates that students who use social

media are better able to connect course content with out-of-class peer interactions, ultimately supporting their learning within the classroom.

### **Challenges for Social Media Use**

Though social media can increase student learning through student interactions, challenges arise when social media are incorporated into an academic course. The assumption that students are familiar with and agreeable to using certain types of social media can cause educators to inadvertently fail to provide the resources or encouragement necessary to support student usage and learning (Cole, 2009; Väljataga & Fiedler, 2009). Arnold and Paulus (2010) found that even when social media is used for an educational purpose, students incorporate the technology into their lives in a way that may differ from the intentions of the course instructor. For example, off-topic or non-academic discussions occur on social media because of its primary design as a social networking tool (Lin et al., 2013). Further, as a student's age increases, the frequency of off-topic discussions also increases (Lin et al., 2013). This indicates that while social media may encourage broader discussions of course content, older students may spend more time than younger students engaging in unrelated discussions. Social media can also negatively impact student GPA as well as the amount of time students spend preparing for class (Annetta et al., 2009; Junco, 2012b). One explanation for this impact is that social media provides too much stimulation and therefore can distract students from completing their coursework (Hurt et al., 2012; Patera et al., 2008). Another reason for this may be that students who spend more time on social media may have difficulty balancing their online activities and their academic preparation.

Social media can also be a challenging instructional strategy to incorporate because it attempts to balance the authority of the educator with the active participation of the students. Collaboration through social media supports more of a constructivist approach to learning, where students and educators can work together to co-create understanding of a particular topic, rather than an approach that emphasizes individual contributions (Stevens, 2009). As a result, students and educators become equal participants in the knowledge sharing process. Though this seems beneficial for creating and disseminating knowledge, social media can also become a privacy concern (i.e. cyber-plagiarism) as well as an outlet for abuse and cyber-bullying (Chen & Bryer, 2012; Frye et al., 2010; Jackson, 2011; Smailes & Gannon-Leary, 2011). This suggests that establishing standards for social media use should include behavior and attitude guidelines similar to those enforced in the classroom.

### **Providing Instructional Support for Social Media Use**

When using social media, educators must be able to play an active role in the collaborative process. Educators must not only promote creativity and assess student activities but also inform and clarify misunderstandings that occur

involving the content area and subsequent knowledge creation in order to maintain the integrity of the learning environment (Frye et al., 2010; Garrett, 2011; Liu, 2010). In order to support these roles, educators must be provided with professional development that demonstrates how to incorporate social media into their classrooms in order for it to be used to effectively promote student learning (An & Reigeluth, 2012; Stevens, 2009). Even though educators are supportive of using social media and may receive professional development, educators report that they do not know how to effectively incorporate it into their classroom (An & Reigeluth, 2012; Fewkes & McCabe, 2012; Heafner & Friedman, 2008). These educators are unfamiliar with the time constraints involved in creating lessons that utilize social media while at the same time creating lessons that do not use social media (Hur & Oh, 2012). However, educators are more likely to incorporate social media activities into their classroom that they have created because they are able to creatively control the content that is included; for example, content that may be assessed on state mandated tests (Annetta et al., 2009; Hur & Oh, 2012).

While some educators have found ways to include social media into their lessons, other educators are not utilizing social media for instructional purposes (Fewkes & McCabe, 2012). The use of social media must be purposeful and as a result should be applied in situations that are the most appropriate for learning and student understanding to occur (Liu, 2010, Väljataga & Fiedler, 2009). For example, social media is best used as an introductory tool for review and collaboration, not merely as a method of advertising class reminders (Annetta et al., 2009; Fewkes & McCabe, 2012). Therefore, educators who are considering incorporating social media into their academic courses should ensure that the specific type of social media used matches the learning outcomes for the students.

### **Conclusions**

Using social media for educational purposes can be beneficial for student learning in multiple ways. First, social media enhances peer interactions, which can bridge diversity in the classroom and establish open lines of communication between students and educators (Annetta et al., 2009; Heafner & Friedman, 2008; Hrastinski, 2009; Jackson, 2011; Liu et al., 2011; Tomai et al., 2010). Social media also facilitates discussion and knowledge transfer between students, creating a deeper sense of understanding of the course material (Carini et al., 2006; Chen & Bryer, 2012; Fewkes & McCabe, 2012; Garrett, 2011; Heafner & Friedman, 2008; Kuh, 1993; Mazman & Usluel, 2010; Shoshani & Rose Braun, 2007; Yu et al., 2010). Thus, students who use social media are able to move beyond the memorization of material and create products that represent their own voices (Frye et al., 2010; Lamb & Johnson, 2010). Finally, social media can aid in the achievement of both general and content specific student learning outcomes (Carini et al., 2006; Junco, 2012b; Junco et al., 2011). Therefore, overall student learning can increase when educators incorporate social media into academic course content.

### **Implications**



Educators who want to use social media in their academic courses to promote student learning should be prepared to support students and be active participants in the collaborative learning community. Assuming that students already know how to use social media may disadvantage those students who may need closer supervision and guidance (Cole, 2009; Jackson, 2011; Väljataga & Fiedler, 2009). Furthermore, educators need to recognize the potential for distractions and overstimulation that is associated with certain types of social media (Chen & Bryer, 2012; Hurt et al., 2012; Patera et al., 2008). Other complications that should be planned for include student access to technology, privacy issues, cyber-plagiarism, and cyber-bullying (An & Reigeluth, 2011; Chen & Bryer, 2012; Frye et al., 2010; Jackson, 2011; Smailes & Gannon-Leary, 2011).

Educational institutions must also consider the financial and policy commitments involved with adopting social media. First, administrators may need to consider realigning assessment and evaluation strategies to effectively gauge student learning in classrooms that use social media (Annetta et al., 2009; Heafner & Friedman, 2008; Hur & Oh, 2012). Strategies that do not adequately reflect student learning should be discarded or revised. Administrators should also consider the policy implications associated with academic integrity as well as out-of-class interactions between students and educators (Chen & Bryer, 2012; Frye et al., 2010; Jackson, 2011; Smailes & Gannon-Leary, 2011). Finally, the financial responsibilities of incorporating social media must be addressed. Not only do institutions need to ensure that the appropriate equipment and Internet access are available, they also need to ensure that educators have been adequately trained or have opportunities for training before implementing social media as a curriculum strategy (An & Reigeluth, 2012; Fewkes & McCabe, 2012; Heafner & Friedman, 2008; Hur & Oh, 2012; Patera et al., 2008; Stevens, 2009).

While there is evidence that social media enhances student learning (Carini et al., 2006; Heafner & Friedman, 2008; Junco, 2012b; Junco et al., 2011), future research needs to build on this finding, specifically addressing assessments of social media use in particular classrooms (i.e. science, math, and language arts). Currently, there is little research to show whether social media use varies based on course content type. Researchers should also investigate best practices for educators in how to effectively incorporate social media into the classroom. This research could provide insights on how students assume the role as co-creators of knowledge as well as how social media increases creativity. Finally, researchers should also consider the role that gender plays in social media use. Since females are more likely to use social media (Madden & Zickuhr, 2011), gender may affect the degree to which students are engaged in course collaborations, thus affecting their overall student learning. Since students vary in their level of engagement, it is imperative that further assessments of social media supported student learning consider multiple explanations for increased student learning.

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