Actual friends matter: An internet skills perspective on teens' informal academic collaboration on Facebook

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ABSTRACT

Social media platforms such as Facebook enable adolescents to collaborate on academic activities, but this kind of participation may require a set of higher-order Internet skills. This study explores the factors that predict informal academic collaboration on Facebook, such as seeking help, discussing schoolwork, and finding class-related resources. Based on survey data collected from high school students ($N = 690$), we found that academic performance, perceived support from 'actual' Facebook friends, higher order Internet skills (especially information seeking skills), and instrumental support from Facebook friends predicted academic collaboration on Facebook. In light of these findings, theoretical and practical implications are discussed.

1. Introduction

Social interactions around learning can take place online through a wide variety of formal tools as well as informal channels such as social network sites (SNSs). According to a recent Pew report, 81% of teens say that Facebook is the social media they use most often (Madden et al., 2013). To what extent can Facebook use be harnessed by teens to support informal learning practices?

When they wish to collaborate on academic tasks, students have various options. In a face-to-face learning context, students may form study groups both within and outside of classrooms to solve study-related problems (Kuh, Kinzie, Schuh, & Whitt, 2010). In some instances, they may use online resources to search for information, share information, and, when needed, collaborate with each other to solve problems. Although the informational resources available online can support learning, the skills that are activated when students ask for, receive, and exchange help with one another may be even more valuable. In fact, Vygotsky (1978) asserted that learning occurs best in social settings involving interpersonal interactions.

Although there has been some research that examines the use of Facebook as a tool for classroom organization and student collaboration among college students (e.g., Lampe, Wohn, Vitak, Ellison, & Wash, 2011), studies about academic uses of Facebook by high school students are scant. This study fills this gap with an analysis of high school student use of Facebook for academic collaboration and associated issues, and thus contributes to the literature on the role of social media for class-related collaboration among teens.

Using social media for informal academic collaboration may be challenging for some students because they may lack the requisite Internet skills needed for collaboration and leaning. While early literature addressing issues of Internet literacy and the digital divide initially concentrated on *access* – how availability of technology can exclude certain communities or individuals (Jenkins, Clinton, Purushotma, Robinson, & Weigel, 2006) – more recent studies have emphasized the importance of *skills* (e.g., Sonck, Livingstone, Kuiper, & de Haan, 2011; Van Deursen & Van Dijk, 2009). Skill-related gaps could lead to not only differences in access but also inequality in the extent to which users benefit from their technology use (DiMaggio & Hargittai, 2001). Thus an important element of social media use for learning, and possibly academic collaboration, may be these higher order skills, such as requesting help in an efficient manner.

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In addition to skills, academic collaboration may be impacted by academic performance, demographic factors such as age or gender, and the frequency of social media use. Future educational opportunities may be limited when academic preparation is poor, and academic progress requires, among other things, consistency and the ability to collaborate with peers. In many cases, achieving good grades may indicate that students are studious and are investing time collaborating with other classmates. We are interested in knowing whether academic performance as measured by course grades is an indicator of academic collaboration on Facebook. Research shows that Facebook use is more common among individuals with higher grades (Pasek, More, & Hargittai, 2009), but what other factors influence this relationship?

Additionally, collaboration of any sort hinges upon being able to gain support from others. Facebook friends may provide various forms of support such as emotional and instrumental support. Among other things, classmates connected to each other via SNS may provide support by sharing resources and time. These forms of support are referred to as instrumental support (Malecki & Demaray, 2003), and may especially prove vital in online academic collaboration.

Considering the potential of social media use to support academic collaboration among teens and the lack of empirical data on this topic, this study focuses on the role of higher order Internet skills among adolescents on academic collaboration via social media. The motivation for this work is to better understand the extent to which specific Internet skills serve as a necessary foundation for class-related academic collaboration practices. In addition, we want to take a closer look at how different factors related to one's connections on Facebook could affect the propensity of academic collaboration via Facebook. The following section reviews the literature on Facebook for academic collaboration in more depth, including the role of gender and socio-economic status (SES), and a discussion of other factors such as Internet access, skills, and Facebook friends in enabling academic collaboration.

2. Collaborative learning

Collaboration is generally defined as a social activity that leads to a maximization of productivity (Bozeman, Dietz, & Gaughan, 2001). Our focus here is collaborative learning, which can be seen as a component of collaboration. Amongst various definitions, Dillenbourg (1999) defined collaborative learning as "a situation in which two or more people learn or attempt to learn something together" (p. 1). Seen from a wider perspective, it is argued that "social interaction is a prerequisite for collaboration and collaborative learning" (Kreijns, Kirschner, & Jochems, 2003, p. 340). Evidence shows that the cognitive processes for deep learning and information retention processes occur in dialogs (Van der Linden & Renshaw, 2001). Lack of social interaction is the main element that may inhibit the realization of full benefits of online collaborative learning.

Collaborative learning can benefit students. It has the potential to enhance critical thinking (Gokhale, 1995), and aid in the development of higher level thinking skills (Webb, 1982). According to Hafner and Ellis (2004), "students engaged in collaborative efforts typically retain the information being learned longer by becoming more actively engaged in the learning activity" (p. 1). Collaborative activities also "foster higher-order thinking skills such as analytical reasoning, synthesis, and evaluation" (Hafner & Ellis, 2004, p. 1).

Alavi and Dufner (2005) argued that collaborative learning occurs through active interpersonal interactions. Technology can play a central role in enabling collaborations simply due to the enhanced facilitative roles of advanced communication platforms. Students viewed an online collaborative forum as "convenient in time and place" and "more equitable for quieter students (Ellis, 2004, p. 3). Students may directly or indirectly influence each other by studying together. On Facebook, social interaction is supported via the ability to post content on another user's "wall" or comment on her posts, potentially leading to shared learning and the formation of learning communities centered around a common course in school. Additionally these behaviors are enacted in an environment replete with identity cues such as shared Friends and profile information (Ellison, Steinfield, & Lampe, 2007) that enables users to identify those with useful information and initiate contact with them.

2.1. Facebook for academic collaboration

There is significant interest among those in the research community and practitioners regarding the relationship between social media use and academic outcomes (Junco, 2012; Kamenetz, 2011; Lampe et al., 2011; Park, Cha, Lim, & Jung, 2013; Pasek et al., 2009). Much of this research focuses on the largest SNS, Facebook. Facebook offers opportunities for extracurricular activities, peer group interactions, formation of groups around shared interests, and faculty–staff interactions (Heiberger & Harper, 2008). Although not especially designed for learning, Facebook does share some functionality with formal courseware or learning management systems (LMS) such as Angel or Blackboard. For example, the availability of Facebook features such as private messaging or "Groups" provide a more private, closed space where students in a particular course can interact with one another.

Facebook also provides a platform for informal and unstructured forms of learning, and the collaborative potential of such sites can be tapped for academic purposes (Selwyn, 2009). Mason (2006) argued that Facebook's educational utility lies in its reflective qualities and its ability to facilitate peer feedback and collaborative learning. Furthermore, the design of SNSs facilitates peer feedback, encouraging collaboration and active participation (Maloney, 2007). Because so many students have Facebook accounts, it is often easy for students to find one another on the site, as opposed to using other channels such as email or text messaging. Additionally, the identity information available in the profile may provide information that lowers the barriers for requesting and providing help (Ellison et al., 2007).

A key feature of SNSs such as Facebook is the ability to articulate a network of connections on the site (Ellison & Boyd, 2013). In Facebook, these are known as "Friends." Once a contact is "Friended," barriers to initiating and engaging in directed or undirected communication are lowered. Facebook allows users to share and access identity information about others, allowing students to find those who might in some way be useful (Ellison et al., 2007). The availability of these contacts, which often reflect offline relationships (Ellison et al., 2007), may enable classroom-related communication to take place.

The use of Facebook for formal class-related academic collaboration has shown limited success. A study by Madge, Meek, Wellens, and Hooley (2009) of first year undergraduates at a British university found that only 10% of the students used it to discuss academic related work with other students on a daily basis and preferred to use Facebook for social reasons rather than formal educational purposes. Similar resistance to formal use of SNS was also found in Selwyn's (2009) study.