Social Networking and Education: Emerging Research within CSCL

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Abstract: In this paper I introduce a youth-initiated practice: online social networking that is transforming our society in important ways and has vast implications for learning research and education. I introduce the social and technical features that characterize social networking systems and outline results from emerging research that suggests the social and intellectual practices in which participants naturally engage and how these relate to the competencies increasingly valued in formal education. Next, I discuss one research projects which I am currently pursuing that build on early work and suggest how educational programs might employ such practices to advantage. Finally, I discuss what I see as the educative value of this technology in certain contexts and suggest a course for future research and development. My overall goals are to inform other researchers interested in pursuing similar projects and to stimulate interdisciplinary conversation about where such agendas fit within and advance the aims of CSCL.

Social Networking Systems: The Next Wave of CSCL?

Recent conference symposia, papers and journal articles within the CSCL community have demonstrated keen interest in learning from students’ everyday out-of-school socio-technical practices about how to better develop future technology-powered contexts for learning (Barron, 2006; Fields & Kafai, 2007; Forte & Bruckman, 2008; Gardner & Kolodner, 2007; Halverson, 2007; Miyake et al., 2007; Peppler & Kafai, 2007; Steinkuehler, 2007; Yardi & Perkel, 2007). One example of this include Steinkuehler’s research on online game-playing “in the wild,” a goal of which is to inform the design of intentioned learning environments in school and after-school contexts. Similarly, Forte and Bruckman (2008) examined authorship and editorial processes in Wikipedia to generate new methods for assessing user-generated content in classrooms. Peppler and Kafai (2007) investigated youth’s creative media production after-school with Scratch design software to suggest new directions for media literacy education, and Barron (2006) tested a learning ecology framework to ultimately address inequities in school-based learning opportunities.

In this vein, I introduce another youth-initiated technology-enabled practice: online social networking that is transforming our society in important ways and has vast implications for educational research and pedagogy. In this paper, I introduce the social and technical features that characterize such systems. Next, I outline results from emerging research that suggest the social and intellectual practices in which participants naturally engage and how these relate to the competencies increasingly valued in formal education. I discuss one research projects which I am currently pursuing that build on this research and suggest how educational programs might employ such capacities to advantage. In closing, I discuss what I see as the educative value of this technology and suggest a course for future research and development efforts. My overall goals in this paper are to inform other researchers interested in pursuing similar projects and to stimulate interdisciplinary conversation about where such agendas fit within and advance the aims of CSCL research.

Social Networking Sites(SNS): A definition

According to boyd & Ellison (2007) an online social network site is a “web-based service that allows individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (p. 1). Other terms used to characterize such services are social digital technologies (Palfrey & Gasser, 2008), participatory media (Bull et al., 2008) and social media (Barnes, 2006). Whereas this term “social network” site seems to reflect the fact that these sites represent existing social bonds, another term commonly used, “social networking” implies that people use these websites in order to forge new networks. For instance, LinkedIn is a social networking site tailored to business people seeking to make contact with those within and outside of their usual network of colleagues and customers. Other sites, such as Facebook and MySpace, have features that support maintaining existing social bonds, such as the ability to join online groups of people who are already in one’s offline
network (e.g., a high school alumni group, a sports team, etc.), as well as creating new bonds (e.g., the browsing feature, groups feature, etc.). In this paper, I use the term social networking site (SNS) to describe an online Web-based service with the features described above and through which users maintain existing social ties and develop new ties with people outside their network (Jones, Millermair, Goya-Martinez, & Schuler, 2008).

What distinguishes online social networking sites from other forms of virtual communities is that they allow users to articulate and display their social connections (Donath & Boyd, 2004), similar to allowing others to view your Rolodex, or contact list, and interact with it online. In this way our connections are made visible and potentially become the connections of our “friends, and who we are – our online identities- are visibly linked to who we know. Boyd & Ellison (2007) suggest that interactions through social networking sites can result in more and different types of connections that would not otherwise be made. In addition to individual profiles, SNSs may include profiles of bands, companies, events, non-profit organizations or political parties. Social networking sites can serve a range of purposes, including helping users maintain existing friendships (Ellison, Steinfield, & Lampe, 2007) or forge new relationships based on shared professional goals, political views, a common language or shared racial, sexual, religious, or cultural identities (boyd & Ellison, 2007).

Since rising to mainstream adoption in 2003, online social networking sites have attracted millions of users. Two of the most commonly known are MySpace and Facebook, with the former comprised of 125 million unique users worldwide (“Comscore,” n.d.) and with Facebook comprised of 200 million unique users worldwide (Comscore, 2009). (In comparison, the current total U.S. population is 300 million) (Stone, 2008). Launched in 2003, MySpace recently generated more page views than Google and has users across all age ranges, but young people (12-17) and (18-34) make up its largest share (73%) of users (Compete, 2008). In fact, the majority of online teens (55%) in the U.S. have created a personal profile within an online social networking system (Lenhart & Madden, 2007) and visit their SNS daily or several times a day, devoting an average of 9 hours a week to the network (National School Boards Association, 2007). The percentage of college students, ages 18-24 who are using these technologies may be even higher than the U.S. teen data. A study of undergraduates enrolled in four- or two-year colleges and universities in the U.S., released in October 2008, found 85% of respondents use social network sites, and most used these on a daily basis to communicate with others (Salaway, Borreson, Nelson, 2008).

Popular media accounts of these technologies have frequently painted a negative image. They are commonly depicted as a passing fad, a waste of time, or harmful stomping grounds for fakesters, cyberbullies, and sexual predators. Despite these accounts, fields outside education are discovering that these technologies also have benefits as they are increasingly integrated into economic, cultural, and political processes, helping to transform not only daily practices but the very principles that govern them. For instance, despite the economic downturn, businesses are sustaining or increasing their investments in online social networking systems to tap their employees “social connections, institutional memories and special skills – knowledge that large, geographically dispersed companies often have a difficult time obtaining” (Stone, 2008, p. C2). The “hot spots “of innovation that emerge when traditionally disparate entities have the means to coalesce personally and professionally are generating revised notions of how generative collaborations occur and in turn, revised management philosophies and business practices (Gratton, 2007). In journalism, news media are increasingly tapping viewer participation in the form of online comments and testimonials, independently produced videos, and citizen journalist blog entries to enhance the accuracy, power and spread of centrally produced stories (e.g., CNN’s documentary Black in America). And of course, apparent in the 2008 presidential election campaign was a new style of “Netroots” politics where potential voters don’t just consume campaign propaganda but help shape and distribute it via online meet-ups, blogs and user-generated videos embedded within social network sites (Sheehy, 2008, p. 79)

Although much of the published research on the use of social network sites is still emerging, the phenomena emerging around them is driving cutting edge research in communications, information science, sociology, economics, political science, cultural studies, and computer science and is both conceptual and empirical in nature (boyd & Ellison, 2007). Few studies explore the link between SNS use and education (e.g., see boyd & Ellison’s comments on the lack of research in this area). Given the overwhelmingly apparent interest in SNSs among high school age youth and the emphasis on developing 21st century competencies — which assume collaborative problem solving, multimodal communication, technological fluency, and digital citizenship skills — for academic success in the digital age, SNS use among high school students seems an important topic for CSCL researchers to examine. Next, I outline results from one such study and discuss a future agenda in the context of one recently funded project.
Social Networking Sites & Learning: An Overview of Emerging Research

To date, a research-based discussion of SNSs and education has been virtually nonexistent. A search of five educational databases and table of contents analysis in several major educational/technology/learning sciences research journals (2004–2008) found little empirical work that addressed what, if anything, students might be learning within the hours they spend engaged in these sites. Moreover, popular essays and reports use findings from large survey studies in order to make conceptual arguments (National School Board Association, 2007).

To understand how social network sites functioned for what purposes and with what results in the lives of urban youth (17–19 years old), we undertook an 18-month investigation of the SNS-using practices among students from low-income families, an adolescent sub-group of increasing interest but relatively underexplored in the learning sciences literature (Barron, 2006). We began by surveying them in the winter of 2007 (n=832) and again, in the winter of 2008 (n=600) on their Internet and technology access, conditions, and use, including their use of social network sites (Greenhow, Walker & Kim, under review; Greenhow, Kim & Robelia, 2008). We followed up on trends seen in the survey data using focus groups and semi-structured, in-depth interviews with a selected sub-set of students who were all predominantly MySpace users. To explore in depth what the students were telling us and identify whether, in fact, they were engaging in social and intellectual practices of interest to education, we conducted talk-alouds (Clark, 1997) and content analysis of students’ SNS pages with this same sub-group of users, adapting a coding scheme developed by Jones et al. (2008). Findings from these exploratory studies revealed several benefits to students’ integrating social network sites into their lives (Greenhow & Robelia, in press-a; Greenhow & Robelia, in press-b) and suggest directions for the design of future research and educational environments (Greenhow, Robelia & Hughes, 2009).

We found that students’ participation in social network sites involved operating within various technical and social affordances and limitations and that such participation could have potential learning benefits. For instance, communicating through these spaces, students: maintained various types of relationships (e.g., strong and loose interpersonal connections) to meet a range of needs, such as obtaining emotional and cognitive support; they experimented with their SNS as a platform for self-presentation (Greenhow & Robelia, in press-a). Using their SNS outside of school, students formulated and explored various dimensions of their identity and projected these to multiple audiences, a communicative affordance previously only available to a privileged few.

Students also used their online social network to fulfill essential social learning functions, including obtaining peer support for creative endeavors and help with school-related tasks. Within their SNS, students engaged in a complex array of communicative practices. They believed their regular use of social networking sites was developing their creativity, communication skills, technology skills, and openness to divergent viewpoints (Greenhow & Robelia, in press-b). However, more research is needed to understand whether and how such socio-technical practices fit within students’ overall learning ecology (Barron, 2006) and complement – or be designed to enhance – the competencies educator’s value (e.g., new literacy practices, technological fluencies, collaborative problem-solving approaches). Such research initiatives might also suggest how current institutionalized approaches to teaching and learning might shift to accommodate such change (Greenhow, Robelia & Hughes, 2009).

Designing Social Networking Platforms for Learning

We aim to develop this research, specifically targeting students from low-income families and hone our research questions about their participation and learning within SNSs in situ. In addition, we aim to investigate similar questions with different populations of high school and college undergraduate social media users. Our ultimate goal is to understand how these technologies, and students’ use of them, may be adapted for different social and learning purposes across the secondary to postsecondary experience.

In our current Youth and Social Media project, funded by the John S. and James L. Knight Foundation, we are developing an informal learning environment for high school and college undergraduates, ages 16–25, that involves SNS technologies. This social media environment, called Hot Dish (http://apps.facebook.com/hotdish/) is located within the largest worldwide online social network: Facebook.com, and features social networking around a particular content area (i.e., environmental science news, research, and activist-oriented “challenge” activities) rather than school or geographic location. Over a 9-month period, we are studying young people’s participation in HotDish (and one other site we are still developing), focusing specifically on: (1) how students engage with the content (both editorial and user-generated) to develop their knowledge of environmental science concepts, issues, and green consumerism; (2) how community develops, if at all, in such spaces; (3) characterization of users’ literacy practices; and (4) real-world impact of “challenge” activities. We seek to understand whether there may be unique advantages to locating similar sites that may be designed, within existing social network sites and if so, what those advantages may be. Although our study is grounded in the CSCL, learning technologies, New Literacies, and new
media/communication studies literature, we know of no other studies currently examining such issues among
students, and in this, our study will break new ground.

Avenues for CSCL Research

CSCL is concerned with how people can learn together with the help of computers and the Internet (Stahl, 
Koschmann & Suthers, 2006). According to Stahl and Hesse (2006), much of CSCL research focuses on:

…the individual learner or on local interactions in dyads and small groups. The role of technology is
conceptualized as mediation by affordances or artifacts, which exist within socio-cultural contexts, influenced
by…large-scale factors.

CSCL emphasizes collaboration, knowledge-building, and learning together through individual and group processes
of negotiation and meaning-making, mediated by technologies, in formal and informal educational contexts (Stahl
et al., 2006). Social networking technologies, or their coming iteration, social operating systems, and their interface
with other technologies (e.g., virtual worlds), may create opportunities for supporting CSCL in ways we have not
seen. What research questions and avenues might CSCL take up with respect to these emergent socio-technical
spaces and the issues they raise? What might we gain in doing so? Due to space constraints, I will merely list initial
thoughts here, but will elaborate on these and others in the final presentation and ask my colleagues to join with me
in sharing their knowledge, experiences and ideas.

One strand of research might involve analyzing -- and defining methods for analyzing -- the individual and
group meaning-making activities and artifacts that occur naturally within environments involving SNS features,
attending especially to how the features and practices seemingly unique to such environments contribute to bringing
these about. Increasingly, environments involving SNS features have built-in data-gathering and visualization
capabilities (e.g., Google and Facebook analytics and related network-mapping tools). Research initiatives might
also seek to define and describe how these capabilities might align with and advance CSCL purposes.

A second strand of research might involve design-based research projects where CSCL principles and
insights from the existing SNS literature across disciplines are synthesized to generate guidelines for the design of
promising learning environments with strong visual elements (not just text) and personal / inter-personal profiling
and contributions. Results from such experimentation might then suggest new avenues for learning environment
research and design, avenues that take advantage of recent technological advancements, or suggest new paths for
pedagogical theory or school policy (e.g., intellectual property, digital citizenship, Internet safety policies).

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