Connections for Learning: Schools and the Educational Use of Social Networking

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One of the best ways to describe today's children and young adults is "socially connected." Whether texting with cell phones about meeting afterschool; posting to online communities to get homework help; or chatting in multiplayer games about mythological characters, technology use by this "Net Generation" is all about work, play, and learning with others. For many of our students, connectivity is as basic as oxygen. This is the first generation to understand that human beings are the best source of information, knowledge, and advice that one can find online.

Today's students have grown up using online environments like **Club Penguin** where they play as avatars with their elementary school-age peers. They graduate to popular social networks like **Facebook** where they rely on their friends to entertain them with shared content and games. The "Net" generation looks to **YouTube**, **Flickr**, **del.icio.us** and **Wikipedia** for information to pursue both personal and academic interests.

Social networking and social media motivate students to learn independently, primarily outside of the school day. They construct their own learning tasks, activities, knowledge and understandings. Learning through social networking is constructionism in its purest form, with students constructing and taking ownership of their learning.

These students knows the value of learning by doing. Educators have been slow in using social networking in the educational process, but now they are turning to a variety of solutions to provide collaborative tools for educational use. Social networking, a mainstay of young people's online activity, is beginning to be seriously analyzed and recognized for its educational value. Progressive teachers are actively looking for solutions that engage students and prepare them for life and the workplace where social technologies are increasingly important.

This paper will define and examine the attributes of social networking, describe some of its current manifestations, and address popular adult concerns about its use. An action plan for schools, based on research studies and experiential reports, is proposed. The plan suggests appropriate uses for social networking tools in fostering 21st century skills by creating learning communities where knowledge is created by students and teachers together and where students take responsibility for their individual learning.

Web 2.0 tools and social networking: description and history

Early in this decade, a new set of online resources lead to a phenomenon commonly called Web 2.0 – the interactive, or read/write, Internet. Simply put, form-based programs, fast Internet connections, and free online content hosting eliminated the need for programming skills or personally owned or leased web servers if one wished to put words, pictures, sounds or video online. With Web 2.0, any individual can add or edit content directly on an existing web page. Web 2.0 tools make it easy to create pages that can automatically display content and features from other web sites such as videos from TeacherTube, or SchoolTube for example. The tools also allow embedding of small applications that add games, search functionality, dictionaries and any number of software-like applications. The result is that an individual can build a web site that previously only professionals could.

In a broad sense, "social networking" encompasses many popular web-based tools for sharing information and connecting with other Internet users. Here are some of the most popular Web 2.0 tools:

- **Blogs** (web logs) started as personal journals. A blog in its most generic sense is a website that is updated on a regular basis, displays the content in reverse chronological order (newest entries first), and allows, even invites, reader response. Through RSS feeds or by e-mail, blog updates are easily tracked. **Technorati,** a web site devoted to blogs, estimates there were more than 77 million blogs in 2008. Of all Web 2.0 tools, blogs are among the most used by K12 teachers who bring the read/writeable Web into the classroom.
- **Wikis** are online tools that provide a group writing and editing space. Unlike blogs with separate "feature" and "comment" spaces, edits on wikis appear within the main body of the text. The most popular wiki is **Wikipedia**, a user-edited encyclopedia that rivals traditional encyclopedias for accuracy and is wildly popular with all ages of users. Wiki created reference, travel and curricular materials (**Curriki**) are growing in popularity. Tools like the free **pbwiki** and **Wikispaces** offer educators ad-free wikis that have limited access and control settings. More robust versions are available for a monthly fee.
- **Social bookmarking** sites such as **del.icio.us** allow users to share their Internet bookmarks and create descriptive "tags" to help organize these resources. : **Flickr** lets users share their photographs and create descriptive "tags" to help organize and find them; **YouTube** and **TeacherTube** allow video sharing and tagging. News readers like **GoogleReader** allow users to easily track and share the often changing web content of blogs and mainstream news sites that have RSS feeds.
- **Cloud-based productivity tools** allow multiple authors to create and edit word processing documents, spreadsheets and multimedia presentations without any desktop application other than a web browser. These creations can be stored and share online or locally. **GoogleDocs** and **Zoho** are among the more popular tools of this type.
- In **3-D virtual environments** like **Second Life** and **Teen Second Life** users create avatars, pictorial representations of themselves, and explore these worlds. They converse with other avatars, participate in their economies, create habitats, and attend events, some educational. **Club Penguin** and **Webkinz** are virtual environments aimed at elementary-age children.
- **MMORPGs** (Massively Multi-Player OnlineRole Playing Games) such as **World of Warcraft** and **Everquest** require that players work collaboratively to accomplish missions and win competitions.

MySpace (2003) and **Facebook** (2004) are sites most commonly identified when the term "social networking" is used. First adopted by young adults, they are used by an increasingly diverse demographic as a means of finding, communicating and following "friends" who shared common interests. These sites integrate many popular Web 2.0 tools for sharing, creating, collaborating, and connecting with others. A dedicated social networking site is ideal for education since it can be a "one-stop shop" that allows access to a wide variety of tools. Such sites eliminate the need for students and staff to access tools from multiple sites, each with its own management needs and learning curve.

Social networks have also introduced new technologies that make it easy to learn from what others on the network. These social networking tools include:

- **Walls** function like a discussion board but are meant for brief messages that can be easily seen, quickly read and immediately replied to.
- **Friends and "friending"** are terms that refer to the personally selected communities of people known to the user, built by invitation. Connections to friends can be social, interest-group, work or school related.
- **Notification of the activity of friends** through news-feed like technology that relays what people are doing – uploading photos, playing games, making new friends – as content for everyone
- **Messages or Notes** are alternatives to email. Because users create their own universe of friends in social networking, private communication can be more selective than e-mail. Spam is less common in social networking communications.

All these social networking tools allow users to learn from the choices and behavior of others in their networks – what books are being read; who posted photos or a new blog; movies being watched; what songs are being heard. Questions can be quickly posted and answers received. Users follow the activities of their contacts in "real time" – as they happen. A history of what's transpired among friends is also relayed and users can click to sample the content that was posted or to view the video that a friend watched.

Social networks are also a means limiting one's communication environment – a means of coping with information overload. Because one can include and exclude contacts within a social network, using the communication tools built into these sites is preferable to using e-mail by many users.

Use of popular social networks has grown exponentially over the past five years. Facebook has more than 150 million active users, of which more than half are outside of college. The fastest growing demographic of Facebook user is those 25 years old and older. A 2006 poll, Student Monitor's Lifestyle & Media Study, found that only iPods were more popular. Professionals are adopting the social model using sites like **LinkedIn** for career networking. **Sermo**, a social network exclusively for doctors (MDs and Dos), enables consultations to improve care to patients. Organizations and special interest groups are creating smaller social networking communities with platforms like **Ning.** Popular online courseware platforms like **Moodle** have social threaded discussions, chats and other components. And newer social networking services like **Saywire** have been developed specifically for k-20 educational environments.

If Web 1.0 could be considered the read only web; and Web 2.0 is the read-write web; then the Social Web is using the network to build collaborative knowledge and experience.

Popular views and concerns

Despite the growth of social technology for use in the professions, many adults are still skeptical about their importance and value. "Social" networking feels like the online equivalent of hanging out in the mall or coffee shop – *not* being in school. It's easier for them to understand the value of networking at conferences, in the break room or on the golf course. As more adults use social networks for work and family, doubts will subside. In the meantime, educators need to recognize that those who have not experienced new technologies often view them with suspicion.

Of greater concern to many adults are the very real issues of safety and ethical use surrounding the read/write web. The danger in Web 1.0 was perceived to be the possibly harmful materials children and young adults might encounter on the Internet - pornography, hate sites, or other materials antithetical to one's cultural values. The original Federal Childhood Internet Protection Act of 2001 (CIPA) reflected these concerns. To comply with the law, schools installed Internet filters that use software to "block" categories of web content deemed inappropriate or dangerous.

But Web 2.0 fears stem from what young people themselves post and do online and the consequences of sharing information - actions less easily controlled by filters. These include:

- **Protecting children from predators.** Pedophiles using the information gleaned from sites like FaceBook and MySpace is arguably the area of greatest concern to parents and educators, thanks to hyper-sensationalized television programs like "To Catch a Predator." According to the National Center for Missing and Exploited Children, "Approximately one in seven youths (10 to 17 years) experience a sexual solicitation or approach while online." Other authorities doubt such figures. In its article "Predators & cyberbullies: Reality check," BlogSafety.com writes that in 2005 there were only 100 known cases of child exploitation related to

social-networking sites nationwide and that there was "not a single case related to MySpace where someone has been abducted."

- **Protecting children from each other (cyberbullying).** Nationally recognized Internet safety expert Nancy Willard, executive director of the Center for Safe and Responsible Internet Use, defines cyberbullying as "sending or posting harmful or cruel text or images using the Internet or other digital communication devices." She documents instances when such activities have resulted in severe psychological damage to the victim, including in rare instances, suicide.
- **Protecting children from themselves (making inappropriate and personal information public)**. The greatest likelihood of children and young adults doing harm to themselves on the social web is by posting pictures and messages that portray them in a negative light and that can be viewed by teachers, coaches, relatives, college admission officers, and potential employers. Too few students (and adults) understand that material once placed on the Internet and made public has the potential of always being accessible. A study by the Archives of Pediatrics & Adolescent Medicine published in 2009 showed that more than half of teenagers mention drugs, alcohol, sex or violence on their MySpace pages.

MySpace and **Facebook** have responded to concerns by providing more controls for users to manage their privacy. The **Ning** platform allows users make their networks private. For schools, having privacy controls in mainstream social networks that rest in the hands of students is seriously problematic.

A general conclusion about the new dangers of Web 2.0 is be that children are at risk because of what they themselves put online for others to view or hear. The well-named, but misguided, Federal 2006 Deleting Online Predators Act (DOPA) would have required all schools and libraries receiving E-Rate funding to filter out all interactive websites since they might lead to students' contact with online predators.

The combined concerns of both frivolity and danger have led many schools to simply not allow - through policy or blocking - *any* use of Web 2.0 tools or social networks.

Given the nature of today's learners and of the 21st century skills they will be expected to master, ignoring the educational potential of social networking tools, neglecting teacher training in the use of these tools, and not providing sufficient networking resources is a serious mistake.

Attributes of Net Generation students related to social networking

Ignoring the educational potential of social networking technology is a serious mistake because it matches how students like to learn, and it prepares them for life outside of school. In their e-book *Educating the Net Generation,* Diana and James Oblinger draw on numerous studies to describe today's students as connected and social:

> The Net Gen exhibits a tendency to work in teams or with peers and will move seamlessly between physical and virtual interactions. It is not uncommon to find students working together and still sending IMs—even though they are a few feet away. Their communities and social networks are physical, virtual, and hybrid. Personal does not always mean "in person" to the Net Gen. Online conversations may be as meaningful as one that is face-to-face. Interactions with faculty need not be "in person" to be valuable and personal.

The Oblingers state …"individuals raised with the computer deal with information differently compared to previous cohorts" and "develop hypertext minds." Among other differences are their:

- **Ability to read visual images**—they are intuitive visual communicators
- **Visual-spatial skills**—perhaps because of their expertise with games they can integrate the virtual and physical
- **Inductive discovery**—they learn better through discovery than by being told
- **Attentional deployment**—they are able to shift their attention rapidly from one task to another, and may

choose not to pay attention to things that don't interest them

- **Fast response time**—they are able to respond quickly and expect rapid responses in return"

They warn educators: "It isn't technology per se that makes learning engaging for the Net Gen; it is the learning activity. If today's students are experiential learners, lectures may not be an optimal learning environment. If they are community oriented, providing opportunities for peer-to-peer experiences or team projects may be preferable to individual activity. There are significant individual differences among learners, so no one-size-fits-all approach will be effective."

Children living in media-rich home environments are too often bored and disengaged when placed in media-poor schools. And this too often leads to disinterest, low performance and increased dropout rates.

"Living and Learning with New Media," a report of a three-year ethnographic study by The MacArthur Foundation, offers similar observations:

> Digital media and online communication have become pervasive in the lives of youth in the United States. Social network sites, online games, video-sharing sites, and gadgets such as iPods and mobile phones are now fixtures of youth culture. They have so permeated young lives that it is hard to believe that less than a decade ago these technologies had barely registered in the lives of U.S. children and teens. Today's youth may be coming of age and struggling for autonomy and identity as did their predecessors, but they are doing so amid reconfigured contexts for communication, friendship, play, and self-expression.

The report concludes:

> Contrary to adult perceptions, while hanging out online, youth are picking up basic social and technological skills they need to fully participate in contemporary society. Erecting barriers to participation deprives teens of access to these forms of learning. Participation in the digital age means more than being able to access "serious" online information and culture. Youth could benefit from educators being more open to forms of experimentation and social exploration that are generally not characteristic of educational institutions.

The attributes of social networking tools "fit" the learning styles and needs of today's students. No doubt about it.

Social networking tools and 21st Century learning objectives.

There is a growing awareness that the simple recall of content and the "basic skills" of reading, writing and mathematics are insufficient to thrive in today's globally competitive economy. Problem solving, creativity and "dispositions" such as self-evaluation, empathy and responsibility are reflected in most descriptions of 21st century skills. Universally emphasized are the twin skills of "communication and collaboration," the mastery of which require sophisticated uses of technology.

The International Society for Technology in Education's 2007 National Educational Technology Standards for Students (NETS) list "communication and collaboration" as one of the six key areas in which student mastery is expected. The standards state:

> Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:
>
> a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
> b. communicate information and ideas effectively to multiple audiences using a variety of media

and formats.

c. develop cultural understanding and global awareness by engaging with learners of other cultures.
d. contribute to project teams to produce original works or solve problems.

The American Association of School Librarians' "Standards for the 21st Century Learner" list the ability to "share knowledge and participate ethically and productively as members of our democratic society" as one of its four key areas. Students need the skills to:

- Participate and collaborate as members of a social and intellectual network of learners.
- Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use, and assess.

And the prestigious Partnership for 21st Century Skills's "Framework for 21st Century Learning," boldly states that "learning and innovation skills increasingly are being recognized as the skills that separate students who are prepared for increasingly complex life and work environments in the 21st century, and those who are not. A focus on creativity, critical thinking, communication and collaboration is essential in preparing students for the future."

While these standards tend to emphasize learning and work skills, there is a growing concern that students who do not master communication and collaboration enabling technologies will not be able to full participate in modern cultural and political life. As described by Henry Jenkins of MIT:

> We are using participation as a term that cuts across educational practices, creative processes, community life, and democratic citizenship. Our goals should be to encourage youth to develop the skills, knowledge, ethical frameworks, and self-confidence needed to be full participants in contemporary culture.

Jenkins warns:

> A growing body of scholarship suggests potential benefits of these forms of participatory culture, including opportunities for peer-to-peer learning, a changed attitude toward intellectual property, the diversification of cultural expression, the development of skills valued in the modern workplace, and a more empowered conception of citizenship. Access to this participatory culture functions as a new form of the hidden curriculum, shaping which youth will succeed and which will be left behind as they enter school and the workplace.

Social networking, not only teaches and improves skills, but can be used to improve the instruction processes necessary to developing higher order thinking skills in the content areas. Reynard observes that:

> Students who understand that their knowledge is socially constructed can benefit immensely from the integration of social networking into their learning process. It cannot be understated that the sooner students understand that their knowledge is not an isolated construct, the sooner they will develop skills of negotiation, debate (an almost forgotten academic skill), critical inquiry, and cognitive positioning – all of which are essential in becoming successful lifelong learners as well as developing expertise in their discipline.

and concludes that "the inclusive educator stimulates student customization of their own learning environment while retaining accountability." True "differentiated instruction," individualized learning plans, resources and activities can be accomplished using social networks that are in large part designed by the learner himself.

Social networking tools are not just helpful in teaching 21st century skills. They are critical.

Changing attitudes toward online social networking

An increased number of teachers and other adults themselves are engaging with Web 2.0 tools and are beginning to use them productively. When using what are often called "Personal Learning Networks" (PLNs), teachers see the value of using blogs, wikis, Nings and social networks to establish ongoing professional development opportunities. Johnson and Valenza list reasons why it is important for educators to create PLNs, some tools for doing so, and observe:

> The thing about social networking is that, well, it's social. Getting to know individuals and groups is a great way to stay committed and involved. Have conversations with the people you find interesting and knowledgeable. Most are flattered to be asked for help or advice. One of the real pleasures of Web 2.0 communications is that the line between personal and professional gets blurred.

Once teachers experience the empowering aspect of any technology, they become far more likely to use it as a teaching tool. While teacher use of Web 2.0 tools has not yet reached a critical mass in most schools, a growing number of educators are asking, "Shouldn't students be creating their own PLNs and how can we help our students benefit from them?"

Studies of Online and Social Networking in Practice

Online learning in higher education has been well-studied and some common requirements appear about what makes it successful are accepted. These include that the technology used must appeal to multiple learning styles, be complemented by face-to-face instruction, and that both synchronous and asynchronous activities meet particular learning needs. (Menchaca, 2006) In other words, a single online tool does not meet all educational needs. Online learning seems especially well-suited for introverted students and for establishing a sense of educational "community" among learners. (Overbaugh, Lin 2006) Online environments are especially powerful when used to individualize the learning experience and harness the social nature of this generation of students (Reynard, 2008). Many K-12 schools in the United States are offering online courses or online supplements to face-to-face instruction. Several states now make the successful completion of an online course a requirement for high school graduations.

Large-scale social networking experiments in K-12 are less common and less studied. One, however, serves as model. Over 100,000 students ages 6-12 in England, Northern Ireland and Scotland have participated in an education-sponsored social network called SuperClubsPLUS. The carefully monitored program allows students to email other students and teachers, create and edit personal home pages, research and read other children's home pages and school project pages, contribute to forums and get help with school subjects. Independent research concluded that the program "helps children to develop the cognitive and social skills that underpin integrated development. Integration concerns the 'whole child', their knowledge base, community and skills combined with the thinking processes necessary to avail themselves of learning opportunities" in a safe environment (Pine, 2006).

Most schools, however, have relied on the popular, commercial products that are available. These tools can be used to good effect, although they are rarely used systemically. Pioneering educators are finding exciting ways to make good use of Web 2.0 resources. Some examples include:

- Schools and libraries are replacing their newsletters with blogs that can be rapidly updated and allow readers to respond. Teachers are helping students create classroom blogs to showcase student writing.
- Teachers are using wikis to facilitate peer-reviewed and collaborative writing projects – including student created textbooks. Wikis are being used to create WebQuests that can be easily modified.
- Social book marking sites are proving to be an efficient means of creating bibliographies and reading lists.
- Creative teachers are asking students to create Facebook-like profiles for literary or historical characters. (Who

would be on Juliet Capulet's friends or music favorites list?)

- Virtual worlds are allowing students to walk through Orwell's world of *1984* or create their own multi-dimensional historical or science environments.
- Projects like the Flat Classroom "a global, collaborative project using Web 2.0 tools to foster communication, collaboration and creation" connect students and teachers from throughout the world.

Yet exciting projects like these are still rare in most schools. There are several hurdles and teaching requirements that are depriving too many children and young adults from these engaging and 21st century skill producing activities. A lack of awareness of newer technologies; fear of online problems; misaligned teaching methods; and pressures on teachers to teach to test-score driven measurements of academic success, all work to keep too many children and young adults from participating in these engaging and 21st century skill-producing activities.

Possible directions and recommendations for schools

Whether deliberately or by default, schools decide if and how they use social networking tools. Schools primarily have three choices:

Ban social networking tools. Adopting a "this too shall pass" attitude is a short-term option. Citing safety concerns, schools can simply block access to any tool that allows students to communicate, post, or collaborate online. Such an approach is shortsighted given both learning styles and skill needs of today's students. Such an approach does not provide an environment in which safe and responsible use of social networking tools can be taught by caring adults.

Use popular, free resources. Commercial sources of Web 2.0 tools, most available at no or low cost to schools, are a viable option for many districts. Beside the cost, the popular tools are often full-featured, flexible and accessible from any networked computer.

Yet there are also drawbacks. Management of student accounts is difficult. Monitoring appropriate use is not an option with many of these applications. Without a stable revenue source, the long-term viability of the companies providing such tools is questionable, and if the application site shuts down, there is the possibility that work saved on that site disappears as well. While most sites allow some degree of privacy control, it is the individual user who must adjust the settings that determine who can and cannot see the account's contents. Training staff and students becomes problematic when several titles of a type of tool are used in a school or district. In some cases, bandwidth demand by these tools exceeds what a school has available or can afford.

Provide "walled-garden" solutions. Internet safety experts like Willard propose an alternative to either denying access to Web 2.0 tools or to allowing the unfettered use of commercial products on the Internet:

> I have long said that to effectively manage student Internet use in schools it is necessary to establish safer places for younger students – walled gardens – and more effectively monitor what older students are doing ALONG WITH strong professional and curriculum development for teachers and effective instruction of students.

Some schools are now trying the "walled-garden" approach to social-networking solutions. Products designed specifically for educational use allow students to practice the communication and collaboration skills they both enjoy and need to master but in a secure and monitored environment. Teachers and/or network administrators create student accounts, enable permissions and monitor activity for successful skill assessment and for appropriate use. One commercial provider of a walled garden social network is **Saywire**. Examples of its innovations include a Homework Help Wall where students can ask questions and get help from peers and from teachers. Saywire enables users to create communities for classes, clubs, teams, organizations,

interests and even professional development. Creators of these communities can choose from a variety of tools and features to have on their pages.

While there is a cost associated with commercial social networking solutions, a number of factors help reduce the expense to the school or district. Ease of management and security reduces technical support time. Deploying the solution from within the school's own network reduces bandwidth needs. And training on a single product district-wide lowers to cost of staff development.

Conclusion:

A "perfect storm" of conditions is forming that dictates every educational institution begins using social networking tools in considered and systemic ways:

- The technology-rich world, social characteristics, and new learning styles of today's students.
- The increased skills demanded of workers to thrive in a global economy, and the expectations of schools to help all students achieve at higher levels of academic performance.
- The more important role that technology-enabled communications in civic, cultural and political discourse.

The MacArthur "Living and Learning with New Media" report asks its readers to think about the role of education in a networked world:

> What would it mean to really exploit the potential of the learning opportunities available through online resources and networks? Rather than assuming that education is primarily about preparing for jobs and careers, what would it mean to think of it as a process guiding youths' participation in public life more generally? Finally, what would it mean to enlist help in this endeavor from engaged and diverse publics that are broader than what we traditionally think of as educational and civic institutions?

These powerful questions are ones that all thoughtful educators need to be attempting to answer. Today.

Resources:

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