Using 21st Century Tools to Enhance Mentoring and Induction of New and Novice Teachers

I. Introduction

This inquiry is about computer-based networks and learning communities, specifically those set up for the induction and mentoring of preservice and novice teachers in diverse public school settings. Teacher networks, known variously as professional learning communities, communities of instructional practice, and so on, are not a new concept in the realm of teacher professional development. When formed for the express purpose of improving teaching and learning within a school culture, the value of these communities is well established in the literature (Berry, Norton, & Byrd, 2007; Supovitz & Christman, 2005).

For simplicity's sake, I will use the term “learning community” to refer to the collective activities within a school building that support teacher professional development through collaboration, innovation, and reflective practice. A quality learning community will include as a subset of its practices all those events, both formal and informal, that support novice teachers. Technology, in the form of email and listservs, has long fostered the growth of teacher networks and learning communities, and this kind of intervention when used with new teachers is often termed eMentoring. Bierema and Merriam defined eMentoring as follows: “a computer mediated, mutually beneficial relationship between a mentor and a protege which provides learning, advising, encouraging, promoting and modeling, that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face mentoring” (2002, p. 214).

My focus, then, is on eMentoring in learning communities. While questions about effective implementation remain to be answered, the literature suggests that technology can greatly enhance the performance and growth of school-based learning communities (Berry, Norton, & Byrd, 2007; Bierema & Merriam, 2002; Nussbaum-Beach, 2007). In cases of formal and informal mentoring, an electronic intervention can address a number of shortcomings in traditional face-to-face models. As Fulton (2007) noted, “Too many novice teachers are given minimal induction support, with mentors who may be untrained, overwhelmed with their own classroom duties, or ill-suited to the job because their content or grade-level expertise doesn't
match that of the new teachers to whom they are assigned” (p. 12). Virtual communities ensure flexible meeting times and more precise matches between mentors and proteges (Fulton, 2007; Berry, Norton, & Byrd, 2007).

Typically online communities have depended upon email, electronic bulletin boards, videoconferencing, satellite-based lessons, and online chat rooms, but that is all changing. Recent technological innovations are radically transforming personal learning environments (PLEs), school-based learning communities, and eMentoring programs (Enhancing Professional Development, 2007, p. 3-4). This new generation of information and communication technologies, sometimes referred to as “21st century tools,” “the read/write web,” “web-based tools” or “Web 2.0,” is currently being explored as an area that affords much promise for collaboration and community-building among teachers and students alike. In the 2nd edition of Classroom Blogging: A Teacher’s Guide to Blogs, Wikis, and other Tools that are Shaping a New Information Landscape, educational technologist David Warlick (2007b) defined the new playing field: “Blogging, podcasting, RSS, social networks, video conferencing, social bookmarks, and others constitute a new information landscape where the web has moved beyond the digital library where we find and consume content to an ongoing, constructive, inquiry and observation-driven online conversation, where people connect through their ideas” (p. 12).

II. Web 2.0 and PD 2.0

“Web 2.0” represents a monumental increase in our capacity to communicate, collaborate, and create. The inherent utility, accessibility, and affordability of these tools has led to widespread adoption among young people. (Just consider MySpace, Facebook, YouTube, and text messaging.) This has prompted many in the fields of education technology and school reform to call for the systematic adoption of Web 2.0 within schools. One possible inroad – perhaps the only logical inroad – is through teacher education and professional development programs. According to Chris Dede of the Harvard Graduate School of Education web-based professional development is a reflection of broader societal trends: “If teachers are going to prepare students for twenty-first century work, they have to understand twenty-first century work. . . . Thinking, working, and learning are now richly distributed in just about every sector of society except education” (Enhancing Professional Development, 2007, p. 4-5).

In a 2007 online discussion about educational technology sponsored by the National School Boards Association, Will Richardson, a leading innovator of web-based tools in classroom contexts, suggested that teachers must first understand how these emergent technologies affect their own learning practice. He said, “I really believe that until we understand the potentials and
pitfalls of these shifts and these tools for ourselves, how they can connect us and transform our own learning, that it's difficult to understand the pedagogies that make their use successful in the classroom."

In a three-part podcast presented at the 2007 K12 Online Conference, James Folkestad of Colorado State University refers to the Web 2.0 phenomenon as an “avalanche of change.” Folkestad argued persuasively for the use of these tools in teacher preparation programs, claiming that “students and teachers who fail to learn how to survive this avalanche will jeopardize their advancement.” He cites a U.S. military study that compared “high-connectivity” organizations with traditional bureaucracies. The “edge” organizations outperformed bureaucratic, centralized organizations on efficiency, cost, and decision wait-time, but with a greater degree of coordination work and double the risk. To Folkestad, this suggests that today's teachers and learners must possess the “survival skills” of collaboration and collective action. Specifically, we need “improved network architecture” and “increased professional competency” to organize, navigate, and manage risk in this new, global arena. In his teacher preparation course at CSU, Folkestad describes how his students create blogs, digital stories, and webquests, which they in turn upload to a secure, online forum called “Wisdom of Students,” which he built upon the Ning social networking platform. (See Section V for more information about Ning.) Within this virtual classroom, students produce, share, and comment on each other's work without fear. They even upload personal photos and artwork in a manner akin to a true social network.

It's easy to dwell in the instant “wow factor” while neglecting to answer questions about how the new Web will transform teaching and learning or even why the transformation is needed. Some, like education technologist and theorist George Siemens, are calling for more practical discussions that emphasize wise and effective implementation. In his Connectivism Blog, named after the digitally based learning theory he developed, Siemens wrote:

. . . we are seeking a window dressing solution when it is the house that needs to be renovated. If we present blogs and wikis as ways to improve education, our aspirations are noble. If we present them as ways to fundamentally alter the system to align it with the knowledge needs of the next generation, then we are fighting for real change. . . . Forget blogs. . . think open dialogue. Forget wikis. . . think collaboration. Forget podcasts. . . think democracy of voice. Forget RSS/aggregation. . . think personal networks. Forget any of the tools. . . and think instead of the fundamental restructuring of how knowledge is created, disseminated, shared, and validated. But to create real change, we need to move our conversation beyond simply the tools and our jargon (2007).

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In this inquiry I wish to be held accountable to the standard that Siemens upholds. Additionally, the goals he enumerates – open dialogue, collaboration, equity in representation, networking – dovetail nicely with the 2001 revised standards from the National Staff Development Council. These standards guide professional development providers in the creation of learning experiences that will develop teachers' capacity in the following areas:

- participating in learning communities
- leadership
- effective use of resources
- data-driven decision making
- evaluating impact
- research-based decision making
- effective lesson design
- reflective learning
- collaboration
- equity
- quality teaching

Many of the applications described in this inquiry address the first three “context standards” on the NSDC list. Web 2.0 tools promote multiple kinds of networking – social but also professional and academic – and possess great potential for helping organize adults into vital and dynamic learning communities aligned with the goals of the school and district. Additionally, the best networks (physical and virtual) draw their strength from the distributed leadership of individuals and teams who take on different roles. Network moderators facilitate discussions, invite new members to join, and encourage participation among reluctant members.

The new Web also presents an opportunity for effective use of professional development resources. For a minimal cost, they generate irrevocable trails of evidence that can be used to monitor and reward teachers for their documented interaction and collaboration in transparent online communities. Additionally, many web-based applications include storage capacity, so the community not only engages in open construction of knowledge but can also amass its collective wisdom in a searchable archive for future members to browse. This is in contrast to traditional professional development plans that often allocate limited resources to reward a few teachers for
“seat-time arrangements" in expensive graduate-level courses or regional, state, or national conferences where there is little or no follow-up to measure impact. The NSDC acknowledges the value of off-site professional development activities but holds that "when most teachers' and principals' professional learning occurs away from the school, it serves as a centrifugal force that leads to fragmentation and incoherent improvement efforts." With just about every classroom in the nation wired to the Internet, it is conceivable to design staff development in which a grade-level team or an entire faculty, for that matter, engages collaboratively on-site, during school hours, using web tools accessible from any computer with an Internet connection.

III. Explanation of subheads

A. In plain English

A brief description of the tool and how it works. Note: Words and phrases that appear in **boldface** are defined in a glossary at the end of this inquiry.

B. eMentoring Toolkit

A list of resources available at the companion web site for this inquiry: http://ementoring.wikispaces.com/eMentoring+Toolkit+Home

C. The ripe environment

A discussion of the prerequisite conditions needed for successful integration: What conditions must exist for novice teachers and their mentors to feel comfortable? Chris Lehmann, principal at Philadelphia's Science Leadership Academy, called this “planning for innovation." It's a way to anticipate the inevitable question from teachers, principals, and other stakeholders: “Yes, but how do we get there?” (2007b). Similarly, teacher and instructional technologist Ben Wilkoff (2007) outlined traits for what he calls “the ripe environment”:

- Recognize that teachers have a genuine need to be heard by others and, in one way or another, receive feedback for contributions. (This is what Lehmann dubbed “reflective culture.”)
- Provide living examples of collaboration (not case studies or projects from a few years ago) that teachers can become a part of.
- Provide time to connect more than two dots together. (Lehmann emphasized “time for play.”)
• Support collaboration as an extension of teachers' natural instincts (opening possibilities for learning).

• Encourage teachers to grow their own personal learning environments

• Value teachers' products and ideas.

• Promote the marks of successful collaboration. (This includes the habits and traits of engaged leadership and followership, discussed in detail in Section XI of this inquiry.)

• Accept that questions are both for independent and interdependent learning.

• Believe that personal and professional change can never be institutionalized. (Individuals create change, not schools or districts.)

• Know that meetings, conferences, and workshops are not the places where the most powerful learning and change takes place.

D. Eyes wide open

pitfalls, red flags, and stumbling blocks associated with the tool

E. The nitty gritty details

This section resembles a software review, where one specific application is examined in detail. Various technical issues are discussed: quality, documentation and tech support, licensing terms (if applicable), costs (if any), scalability, system requirements, design and user interface, reliability, usability, and user features

Unlike traditional software reviews which should include a discussion of licensing and associated costs, the software and services reviewed in this investigation are web-based and, therefore, essentially free. Most costs incurred with these tools will be in terms of training costs or costs associated with releasing teachers from classroom duties so they may collaborate, explore, and “play” with the tools. Many who advocate the adoption of web-based technologies and open technologies caution against underestimating implementation costs (Enhancing Professional Development, 2007; Hargadon, 2008; Klein, 2007; Soloman & Schrum, 2007). Hidden costs associated with training, support, and maintenance do arise, and these should be carefully considered and prorated over a three- to five-year period. Still, “When long term costs are considered, open technologies are often far less expensive than their proprietary counterparts” (Klein).
IV. At a Glance: Innovating within Learning Communities through Web 2.0

In his 2007 blog post titled “Planning for Innovation,” Lehmann wrote,

> Innovation is different than change. Innovation is change with a positive moment. Innovation is change with forethought. Innovation is change with purpose. Innovation is change with a goal. These are important distinctions. Always asking, 'Why would we do this differently,' forces us to examine our motivations, our goals, our reasons for change.

This is in line with Siemens' (2007) assertion that, in matters concerning technology integration, the reasons for change supersede the tools themselves in terms of importance. With that in mind, I've constructed a chart. The chart places vision, pedagogy, and innovation at the forefront, allowing Web 2.0 newcomers to focus on the needs and challenges specific to their context before choosing a tool.

<table>
<thead>
<tr>
<th>Why innovate?</th>
<th>Recommended Web Tool</th>
<th>Section page, number</th>
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<tbody>
<tr>
<td>• increase social-emotional support</td>
<td>social network</td>
<td>Section V, page 8</td>
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<tr>
<td>• build community/relationships among teachers and across groups</td>
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<td>• distribute ownership/leadership</td>
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<td>• continue and extend professional development discussions</td>
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<td>• share and archive resources in a knowledgebase</td>
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<td>• increase accountability and transparency</td>
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<tr>
<td>• enable synchronous learning and chat</td>
<td>Tapped In</td>
<td>Section VI, page 15</td>
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<tr>
<td>• increase social-emotional support</td>
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<td>• increase accountability and transparency</td>
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<tr>
<td>• support collaboration and knowledge creation</td>
<td>wiki</td>
<td>Section VII, page 25</td>
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<tr>
<td>• distribute ownership/leadership</td>
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<td>• continue and extend professional development discussions</td>
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<td>• share and archive resources in a knowledgebase</td>
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<td>• increase accountability and transparency</td>
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<tr>
<td>• create a centralized learning portal</td>
<td>CMS (“content management system” or “course management system”)</td>
<td>Section VIII, page 33</td>
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<tr>
<td>• enable synchronous and asynchronous learning</td>
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<td>• distribute ownership/leadership</td>
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<td>• share and archive resources in a knowledgebase</td>
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<td>• increase accountability and transparency</td>
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<tr>
<td>• develop and extend personal learning environments (PLEs)</td>
<td>blogs and RSS (“real simple syndication”)</td>
<td>Section IX, page 42</td>
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<td>• encourage personal reflection</td>
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<td>• continue and extend professional development discussions</td>
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<td>• increase social-emotional support</td>
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<td>• increase accountability and transparency</td>
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V. Tool: Social networks

A. In plain English

A “social network” is a web site that provides users with a variety of tools to help them construct personal **home pages** and locate and connect with other users with related interests and backgrounds. Common features of social networks include user names, user profiles, **user-generated content**, and contact lists (often referred to as “friends”). Precursors of social networking include Usenet and bulletin board systems, closed environments that lacked interactivity and visual appeal. The mid-90s ushered in a new wave of **web-based** social networking sites that allows users to customize a personal web page and share photos, videos, and other content with “friends.” Today, MySpace.com and Facebook.com are perhaps the most famous examples of social networks, with millions of users, but social networks can be scaled to accommodate the specific needs and interests of families, organizations, businesses, and even towns (Glaser, 2007). For example, Classmates.com is a searchable database of networks created by individuals who want to stay in touch with friends and acquaintances from school and the military. LinkedIn.com is a web site for professional networking and career building.

For this study, I explored the social networking platform called “Ning,” which means “peace” in Chinese. Ning is a free service for creating, extending, and customizing a social network from scratch. Ning is **not** a social network; it is a platform for **creating and hosting** a user-specific social network. It is what some call an “out-of-the-box” service in that it requires no advanced programming or expert knowledge of computer code. Any person may create and develop a Ning network for free; Ning currently hosts more than 70,000 networks for groups as diverse as firefighters to African American entrepreneurs to readers and writers of crime fiction.

Because of its ease and affordability (free), Ning is also popular among educators, with networks such as “Texas School Librarians” and “Gifted Education.” And, of course, specific networks reside within school communities. Many of these are private, with membership by invitation only to the student body, the faculty, or, in some cases, both. Here in East Tennessee, a Ning community named “School Matters” was recently launched for members of the general public to discuss local, state, and national education issues. Most active members are parents of children enrolled in the county school system, and some school board representatives, community activists, and a few teachers also participate. School Matters is a public network moderated by community volunteers.

B. eMentoring Toolkit
The following online resources may be accessed at http://ementoring.wikispaces.com/Social+networking:

- links to Ning teacher communities devoted to specific content areas
- link to a Ning network for education stakeholders in the East Tennessee region
- link to an example of a student-centered Ning network in the United Kingdom
- an instructive video about social networking, created by Common Craft
- a video about “Classroom 2.0,” a Ning network for teachers in technology created by Steve Hargadon. Hargadon describes this community and elaborates on the value of virtual communities for teachers in general.

C. The ripe environment

Schools with overtaxed mentoring teams and large staff turnover from semester to semester are primed for a social networking intervention. Staffs that are populated with many new faces at the start of each school year will immediately relate to the value of an online network membership directory, which, in many ways, is analogous to a faculty section in a yearbook. (And who has time to wait until May when the yearbook is published?) This is what prompted a media specialist/librarian in Georgia, USA, to start a Ning network for her faculty at a large, newly built suburban high school north of Atlanta. Reflecting on their first full year of operation, many teachers at the school expressed a need for more time to get to know one another (personal communication, Sept. 23, 2007).

Another educator based in Tasmania, Australia, created a private Ning at his school to facilitate discussion within his curriculum group. Here is how he described his decision to set up a faculty network with Ning:

*There are many things our group needs to tackle - and to make it wieldy the administration wanted us to subdivide. I, on the other hand, didn't want to wind up on five subcommittees, nor miss out on the transaction in four groups if we met simultaneously. It seemed to me to be great use of this framework [Ning] to allow the possibility of a large number of people being in discussion, and yet, only one person is able to talk at a time, and everybody who has something to contribute can. The nightmare of scheduling and prioritising meetings can be reduced. We started the process as a face-to-face group, and we'll regather, but the intermediate chats can be carried out asynchronously, fitted better to our individual schedules, and be wider ranging than a large disparate group. (A minor sub-point, but relevant: for me, partially deaf, I'm not as exhausted trying to filter out signal conversation from noise. In a large group with lots of chat, I'm cut out.)* (personal communication, Oct. 16, 2007).

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Teachers are ready for social networking in general, and Ning specifically, once their conception of social networking is broadened beyond the virtual town square or shopping mall metaphor commonly associated with the popular MySpace and Facebook sites. Teachers need to see examples of networking for professional and academic purposes like the Texas School Librarians community. More importantly, they need an opportunity to participate in an online community by publishing original content and receiving immediate, positive feedback for their contributions. In Ning, for example, the responsibility of comment moderation can be assigned to multiple individuals (not just the network creator), which ensures someone is always reading and responding to forum discussions, at least in the early stages of development until distributed ownership is achieved within the community.

D. Eyes wide open

The single greatest factor that limits the use of social networks in educational contexts is Internet filtering. To qualify for and retain federal funding for technology, public school systems must certify they have an Internet safety policy in place as well as a mechanism for blocking “obscene” content. (See Section X for a thorough explanation of policy.) A number of forum discussions on the issue of filters are archived at “Classroom 2.0,” a Ning network developed for teachers interested in integrating web tools into instruction. These discussions reveal that Ning and other educationally valid networking sites are blocked inconsistently and unpredictably across the nation due to a dizzying array of filtering software used by local, state, and regional school systems. In some cases, there is a wholesale block against all social networks, no matter the content or intent of the site in question. In other cases, some networks are blocked while others are not. In still other cases, a Ning network will be open one day and blocked the next.

In Knox County, Ning is blocked, but specific Ning sites can be partially unblocked, as was the case recently for School Matters, a public Ning for education stakeholders in East Tennessee. When first launched in August, the site was not accessible on the Knox County Schools' network. It is now viewable to students, teachers, administrators, and other school personnel, but they cannot join or participate in discussions unless they do so off-site on a non-school computer.

E. Ning: the nitty gritty details

- technical quality

Ning is accessible and requires no installation or complicated start-up procedure. The registration process for users is simple: create an ID and
password and supply an email address. There is also an option to upload a thumbnail photo; some users opt to upload a graphic or *avatar*. Once registered, users may browse and join any public Ning network they wish from the Ning home page.

Through a simple point-and-click process, a user can create a new network in under 30 minutes. Customizing a network takes as little or as much time as the creator wishes to spend.

- **documentation/tech support**

  Technical support is entirely online and consists of FAQs and troubleshooting forums, where users submit questions and other users respond. In addition, network creators enjoy instant membership in a community of creators and developers with forums dedicated to their specific needs. All forums can be searched and browsed by topic and keyword.

  Another source of support is “Ning in Education,” a community formed specifically for troubleshooting and resource sharing among teachers who use Ning in their professional development or classroom practice.

  Questions and concerns may also be submitted directly to Ning through email.

- **license terms**

  Generally, users and network creators retain all rights to content and code they create on the Ning platform; Ning does not claim any ownership rights. Upon registration, users must agree to “terms of service,” which include rules for acceptable use and conduct.

- **cost**

  Ning is free, but pages in Ning networks are subject to “micro” advertising, powered by Google, in the far, right-hand column. It costs $20 per month to disable advertising on a network, unless the user can prove the educational validity of the network, in which case ad removal is performed for free. (This is a new service, unveiled Nov. 1, 2007. Because Ning is not yet compliant with the Children’s Online Privacy and Protection Act, the ad-free trial program will
only be for networks geared toward students between the ages of 13 and 18. And it is not yet clear whether networks designed for adult learners are eligible for the service.

In addition, network creators who want to remove all references to the Ning brand, may pay $5 per month for an original URL that does not include the word “Ning.”

● scalability

Ning is scalable in terms of numbers of users, file uploads, and the amount of content users can post. The number of registered users in a network is not limited. In private networks, users may create up to 500 mb of content, equivalent to five yards of bookshelf space or the content on one CD-ROM.

● system requirements

All that is needed is an Internet connection.

● other requirements

No additional hardware or software is needed.

● design/user interface

The Ning standard format is a three-column layout, with the third column partly devoted to advertising. (See figures 2 and 3.)
Figure 2. A sample home page and member profile from the Ning community School Matters.

The wide, middle column contains a list of the member's latest activity on the site as well as thumbnails of the member's contacts, or “friends.” Clicking on a contact's picture will take the user directly to that person's page. The left-hand column includes a member profile and other special features which vary according to how the network administrator set up the site.

Figure 3. A sample home page and member profile from the Ning community Classroom 2.0.

Studying the user interface is a good way to begin to understand how a Ning network might support mentoring and induction of new teachers. Figure 4 features the main page of the Ning community known as “Classroom 2.0,”

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which is for teachers who use technology. It is one example of how a Ning community might be set up; although, there are many possibilities for customizing a network to fit the needs of its members. On the left is a welcome message with tips for getting started. Below that is a digest of all the latest activity on the site including discussions, comments, and the newest blog entries. In the middle is a membership directory. The forum is underneath with the most recent discussions appearing first in the queue. To the right are links to more resources within the network. By scrolling down, a user can locate special interest groups within the network that he or she might join. Classroom 2.0 has subgroups for art teachers, elementary teachers, technology trainers, and many others.

![Main page of the Classroom 2.0 Ning community.](image)

- **reliability**

Ning is currently experiencing problems with slow page downloads and occasional server outages.

- **usability**

In a recent review at the TechCrunch.com web site, Ning scored a 4 out of 5 in web site usability. At education.ning.com, an entire network of Ning users provides testimonials on its use in education. In a recent discussion about
social networking in school at Scott McKeod's blog, the mood among educators was split regarding Ning's usability. Some educators regarded its similarity to Facebook and MySpace as a plus, making it easier for users who are familiar with those applications to adapt to the Ning environment. Another commenter took exception to the fact that Ning is first and foremost a social networking site and was not created with educators' needs in mind.

**user features**

Here is a short list of user features that are most relevant to the creation and development of an Ning community of novice and mentor teachers: secure login with privacy settings and passwords, content moderation by network administrator(s), membership directory with thumbnail portraits, file uploads and content sharing, groups, customizable profile pages, keyword search, messaging/comment board, RSS, and email notification.

The user features listed above represent only a few of the tools available within a Ning network. The network creator chooses which tools to add when configuring the network, and tools can be added or removed at any time.

VI. Tool: Tapped In

A. In plain English

“Tapped In” is a web-based learning environment that is one part social network and one part collaborative conferencing tool with capabilities for real-time, text-based conversation (chat) as well as discussion boards for asynchronous learning. SRI International created Tapped In in 1997 so providers could offer online professional development to teachers at minimal cost. The site is built around a “campus” metaphor, and providers are termed “tenants.” They are housed within “buildings” on the campus. (See Figure 5.) Users can click on buildings and teleport to the provider’s “reception desk.” Likewise, users can click on door icons within buildings to switch “rooms” and “floors” (Cooper & Weksler, 2006).

While the campus map is helpful for understanding the metaphor, it is important to note that it is only one of a number of different ways to navigate the Tapped In interface. In fact, first-time visitors and most members log in and arrive directly at the reception desk within Tapped In Central (the building pictured in the middle of the map, Figure 5). At Tapped In Central members can engage in self-directed professional development activities independent of a partnering

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institution. In other words, anyone over the age of 18 who is interested in education issues can join; affiliation with one of the Tapped In partners is not required.

Tapped In boasts more than 20,000 international members and more than 10 tenant partners. Current partners include the Milwaukee Public Schools, the National Writing Project, and Pepperdine University Graduate School of Education and Psychology. In addition, a secure K-12 campus exists for use by Tapped In members and their students. In a recent edition of the Tapped In monthly newsletter, which members may subscribe to for free by email, member Sheryl McCoy was quoted:

> While many of us ride out on the frontier of technology in education, most teachers need a comfortable, stable place to have an office and take their classes in privacy. Teachers also need rigorous professional development opportunities online where they can expand their knowledge of technology to further their teaching. Tapped In provides that opportunity, because it bridges the Digital Divide.

![Tapped In Campus Map](image)

**Figure 5.** "Map" that depicts the campus metaphor used to organize the Tapped In online community.

### B. eMentoring Toolkit

The following online resources may be accessed at http://ementoring.wikispaces.com/Tapped+In :

- links to Tapped In resources including help index, calendar, archived transcripts, and user testimonials

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● a slideshow presentation that provides an overview of Tapped In's origin and vision, interface, user features, and potential uses in education

C. The ripe environment

Like Ning, Tapped In gives teachers a safe and secure virtual home in which to try out new ideas and skills. Teachers are ready for this type of electronic intervention if they long for a way to connect and communicate beyond the physical and sometimes isolating classroom. In addition to enhancing communication and discussion among peers, Tapped In provides powerful collaboration capabilities for teachers who want to plan and conduct projects with their peers and their students. Teachers can share and store links, upload resources, join and create special interest groups, and attend or facilitate online courses. But the powerful and ubiquitous chat tool (located in every room), is probably Tapped In's most attractive feature, which Ning lacks. The monthly Tapped In calendar is loaded with regularly scheduled chats on an assortment of topics. Even more amazing is the fact that edited transcripts of most of these events are archived. Almost five years of transcripts are stored as PDF files at www.tappedin.org/transcripts. At that URL there is a search tool, which allows visitors to locate and read specific discussions.

New users require time to take in and appreciate the Tapped In campus and room metaphor, so physical communities (schools) that want to take advantage of the Tapped In online community must provide time on the front end for “learning by doing.” Fulton (2007) and other Tapped In experts recommend attending one of the online “Tips and Tricks" training sessions, which occur at regularly scheduled times throughout the month and which take about one hour to complete. Then the “rule of three” applies. Fulton suggested, “If a user gets online three times and has a successful experience in those first visits, he or she is hooked" (p. 14). Cooper and Weksler (2006) recommended novice members print out the interface guide, place it next to their computers, and just explore. (See Figure 6.)
Additionally, a school that wants to create an **online community** within the Tapped In environment, must also be able to designate individual teacher leaders who can provide continual technical support and troubleshooting for the life of the community. This is especially important for purposes of facilitating group chats and comments on discussion boards. On Oct. 3, I sat in on a recent Tapped In discussion that focused on how to use web tools to foster learning communities. I asked Pam Berger, a longtime discussion facilitator, specifically about the degree of moderation needed at Tapped In. She replied, “Moderating is so important – a group can live or die on the moderating.” Moderating responsibilities can be assigned to multiple individuals so someone is ever-present to greet new users and to assure that the group norms and conventions are observed and passed on. (For a thorough discussion of moderating, facilitating, leadership, and followership in virtual learning communities, see the last section of this document.)

**D. Eyes wide open**

As is the case with most interactive **web-based** applications, a primary concern to be addressed prior to implementation is whether or not firewalls and Internet filters are going to hinder interactivity or block the site completely. The chat tool within Tapped In may cause the site to be blocked. The Help Index at the Tapped In web site includes an extensive FAQ, with
numerous tips for troubleshooting blocked chat. In fact, the extensive help resources available at Tapped In’s main page suggest an overall degree of complexity that may be a “turn off” to groups looking for a virtual home. Or, it may simply be evidence that the Tapped In developers, who have been supporting virtual learning communities for 10 years, have been doing it longer than most other groups and are better equipped to anticipate their users’ needs.

E. The nitty gritty

● technical quality

Tapped In requires no installation or complicated start-up procedure. The registration process is simple: fill out a brief online questionnaire, supply an email address, and specify and confirm a password. Once logged in, a user can add a more detailed profile as well as upload a photo. This profile is viewable by all members. Additionally, each member receives optional “office” privileges. Cooper & Weksler (2006) recommended the office feature for those who do not have a “virtual presence” on the Internet: “Hold office hours, meet with parents, peers, etc. "Decorate" your office to reflect and express your professional self.” Within offices, users can meet and chat with other users away from high-traffic reception areas and group rooms. Users can share links and upload files. Offices can also be “locked” for privacy. (See Figure 7.)

Figure 7. Sample “office” space within the Tapped In community.
• **documentation/tech support**

As mentioned previously, the main page at Tapped In includes a Help tab with extensive troubleshooting tips, FAQs, a printable interface guide, and email links to contact developers directly. What is most impressive, however, is the live chat “help desk,” which is open continually thanks to volunteers **around the world** (Germany, Australia, and Asia). U.S. volunteers man the help desk from 11 a.m. to 11 p.m. EST.

In addition, Tapped In volunteers conduct regular “Tips and Tricks” sessions, which depart from the reception desk at Tapped In Central at scheduled times. No reservation is required, but visitors and new members are advised to arrive early, print the interface guide, and read the FAQ before going on the tour. I had a very positive experience during one such session on Oct. 6. I and another new member, located in Minnesota, went on a “virtual field trip” with a Tapped In facilitator named B.J. Berquist, who herself was located in Pennsylvania. We learned how to edit our profiles, locate the secure K-12 campus (where separate tours are also available), access the discussion calendar, join groups, and set up an office. Berquist also shared some basic conventions for effective chat sessions and pointed out the universal “code of conduct” which applies to all members, adults and youth alike.

• **license terms**

Other than a policy of acceptable use and conduct, there are no complex licensing terms because Tapped In is based on **open source software** developed by SRI International and released in 2004 after requests by third parties who wanted to use the platform for their own communities. Optionally, SRI offers packages for initial setup and ongoing support, with fees going back to the Tapped In infrastructure so all members benefit.

• **cost**

Tapped In is free for individual users. Tenant partners pay subscription fees for specialized support and scaling-up services.

Costs incurred from training will vary depending on the level of staff support a school wants to provide. In my opinion, Tapped In’s free online “Tips and
Tricks” training, is more than adequate for accommodating the needs of a few users at a time. These virtual tours are scheduled regularly on the monthly calendar of events, and it is possible to consult with help desk volunteers to schedule additional sessions to accommodate an influx of new users.

Tenant partners may allocate dollars for additional training that goes beyond Tapped In’s free resources. This was the case with Teachers Learning in Networked Communities (TLINC), a project of the National Commission on Teaching and America’s Future. According to Fulton (2007), TLINC facilitators representing teacher preparation programs in Memphis, Seattle, and Denver supplemented Tapped In’s “go-to” support with their own paper-based how-to guides and trainings from one to four hours, conducted either online or in person (p. 14).

● **scalability**

Tapped In is scalable in terms of numbers of users, file uploads, and user-generated content. Members may join as many groups as they want, and they may create two original groups of their own. Groups are not limited in terms of number of members; although, each group room is limited to 4 mb of storage space. Groups can pay for additional file storage. In addition, individual members must observe a file storage quota of 3 mb, about the equivalent of three 3 ½-inch diskettes. (At this time it is not possible to upload video or high-resolution photos.)

● **system requirements**

All that is needed is an Internet connection. However, first-time users should anticipate some browser issues. First, to fully enjoy and benefit from Tapped In, certain features must be enabled on the browser software. The Tapped In FAQ links to a helpful “browser configuration checker” so the user can assess the state of his or her browser. Second, the Tapped In developers highly recommend using the main browser installed on the computer (Internet Explorer for PCs, Safari for Macs).

● **other requirements**

No additional hardware or software is needed.
- **design/user interface**

The Tapped In interface, while functional, is low-frills and lacks visual appeal. The text and icons are small, especially on Mac screens, but users can learn how to enlarge text size. All the meeting rooms and individual offices possess some universal elements for navigation and communication. As seen in figures 7 and 8, there are universal information tabs along the top, which may be accessed from any room at the site. Along the left side is a menu of tools available for use in the room; these include a discussion board, a whiteboard for brainstorming sessions, and a place for members to upload and share files. The chat room, when enabled, sits at the bottom of the interface:

![Tapped In Central reception area.](image)

- **Reliability**

The Firefox browser is *not* recommended for Tapped In due to some bugs. Also, the newest operating system on Mac (OS X) is *not* fully supported at this time. Additionally, those working behind computer firewalls must contact their system administrators to enter Tapped In.

- **usability**

Those attempting to integrate Tapped In into their personal practice or school...
culture should anticipate a slight learning curve, even for teachers with intermediate tech skills. Tapped In developers have tried to make the learning curve as smooth as possible by offering virtual tours. In a recent online discussion about Tapped In, Weksler repeated the conventional wisdom known as the “rule of threes”: “If people take one of the 'Tips and Tricks' tours, attend three discussions, most of the basics become pretty straightforward.”

From the “About Tapped In” web page, visitors can click on links to more than 35 publications that have cited the effectiveness of Tapped In since its inception. Even more persuasive is a collection of user testimonials archived at the FAQ.

NCTAF’s TLINC project provides insight into Tapped In’s potential as an eMentoring platform. Since it was added in January 2006, the TLINC building on the Tapped In campus has come to house 91 group rooms across various floors occupied by teacher preparation programs at the University of Memphis, the University of Washington, and the University of Colorado at Denver. More than 800 registered TLINC members demonstrate varying levels of activity and engagement. “Some groups, such as Jefferson County’s Emergent Teacher Leaders group [based in Denver] are large and expansive. This group has 45 registered participants, 19 of whom have created 195 messages in 33 discussion threads covering topics including grant writing, curriculum writing, action research, National Board Certification, and book-group discussions” (Fulton, 2007, p. 12).

Here are some snippets from my Oct. 6 chat session that demonstrate Tapped In's “friendliness” and usability:

JenniferKL: Hello. I'm here for the tips session. I'm late.
BjB: just in time, Jennifer!
DavidW smiles [Here is an example of “cyber body language.” The tour guide will teach you how to do it at the end of the tour.]
BjB . o O ( time flies! )
DavidW checks his watch
BjB: Let's go to the After School Online room, Jennifer
JenniferKL: Yes. I was trying to log in with Macbook had a lot of problems
JenniferKL: OK
JenniferKL: How do I do that?

BjB: above this chat window on the right is featured passageways

Lubke, 23
BjB: click on the door next to After School Online
JenniferKL: ok
BjB left the room.
JenniferKL left the room.

Room: After School Online
JenniferKL joined the room.
BjB: good job, Jennifer
BjB: Hi, Elisabeth!
ElisabetD: hello, huff. i found it!
BjB smiles...yeppers...good job!
ElisabetD: ha, thanks.
DavidW joined the room.
BjB: is this your first tour of Tapped In, Elisabeth and Jennifer?
JenniferKL: yes
ElisabetD: yes it is
BjB: cool...let's start with introductions then. . . .

Room: Tapped In Groups Lobby
JenniferKL joined the room.
BjB joined the room.
BjB: we are now in the TI Groups lobby. . . .

JenniferKL: Which groups are busiest, most active? Do you know?
BjB: mostly the groups on the calendar, Jennifer
BjB: which brings me to another topic...
BjB: normally, only Tapped In members can join a group and only
group members can enter a group room...
BjB: but sometimes a group will open their room to all visitors...
BjB: this allows anyone to enter the group room and view the
resources
BjB: on the right of the web window is Featured Passageways
BjB: ALL the groups listed are open to all visitors
BjB: this allows you visit those rooms, check out their resources...
BjB: and, if you choose, join the group like we just did in fanfiction:
welcome note/this is the group room/green i/join this group
JenniferKL: By "resources" do you mean mainly links? What other
kinds of resources can be shared in a group room?
BjB: American Indian Studies just scheduled 4 sessions the last two
weeks in October and the first two weeks in November to introduce
Native American Heritage month
BjB: yes, links, files, notes...and the discussion board also can be a
resource
JenniferKL: And just to be sure I'm understanding you. . .

BjB listens
JenniferKL: any TI member can start a group and make it private or
public?
BjB: yes, any TI member can create two group rooms. The rooms can
be private, public/moderated, or public/open. . .
user features

This is a short list of Tapped In features that are most relevant to the creation and development of an online community of novice and mentor teachers: secure login with privacy settings and passwords, file uploads and content sharing, chats with transcripts automatically emailed to participants, threaded discussions, customizable profile pages called “offices,” keyword and people search, private messaging, and email notification. Some new features to heighten interactivity are also in development, including voice capability for synchronous learning.

The features listed above represent only a few of the tools available. For a cost, partners can work with Tapped In developers to design “buildings” with a specified number of floors, offices, group rooms, and public spaces.

VII. Tool: Wikis

A. In plain English

A “wiki” is an interactive, editable web site. The best wikis grow and thrive within a collaborative community of users who share an interest in the topic. All members may write, edit, and publish content with little or no experience in design or development of web pages. Perhaps the most famous example of a wiki is the international online encyclopedia, Wikipedia. But there are many examples of small-scale wikis, too. Of course, the scalability, utility, and constructivist nature of wikis have led to their widespread adoption across many content areas in education. For example, the International Collaborative Literature Project is a wiki shared between two classrooms, one in Israel and the other in Canada.

In addition to student-centered wikis used for projects and research, teachers and others in the education field are creating wikis to enhance community engagement, promote collaboration within and across content areas, and archive course and presentation materials. In their study of wikis at California State University, Northridge, Foley and Change (2006) explored the professional development potential of wikis, noting a number of implications that could extend to mentoring and induction teams. Because of their ease and openness, wikis can truly become a “tangible representation” of knowledge, and “this is particularly supportive of the teacher-learner community in its effort to develop socially constructed knowledge about teaching practice” (p. 4).
Many wiki applications are suitable for educational contexts. In this inquiry I will explore “Wikispaces,” which is extremely popular among K-12 teachers because of its responsive support team as well as the fact it was created specifically for small interest groups and educational settings. Wikispaces is also currently giving away “premium” ad-free spaces to the first 100,000 K-12 educators who apply. The companion web site for this inquiry (http://ementoring.wikispaces.com/) was created using Wikispaces and qualified for the premium giveaway, so it is ad-free.

B. eMentoring Toolkit

The following online resources may be accessed at

http://ementoring.wikispaces.com/Wikis

- links to exemplary wiki pages created for professional development purposes
- links to other educational wikis
- an introductory video about wikis, created by Common Craft

C. The ripe environment

Within a mentoring/induction context, a wiki is an appropriate intervention for teachers who want to collaborate on a project or some other form of knowledge building, such as archiving documents or sharing links or other resources. Same as the other Web 2.0 tools discussed in this inquiry, wikis enhance collaborative efforts within learning communities by wiping away traditional boundaries of space and time. Teachers may contribute to, comment on, and discuss the wiki content asynchronously from any online computer. In some ways, Ning and Tapped In offer a predefined structure within which a learning community makes a home. In contrast, wikis offer similar tools for communication and relationship building, but the learning community builds up the wiki according to the situation and context (Foley & Chang, 2006, p. 3).

According to the “Classroom 2.0 Wiki,” which is an educator's how-to guide for using collaborative technologies, wikis foster institutional change in the following ways:

- build learning communities
- extend professional development workshops
- provide a storage space for curriculum resources, lesson plans, course materials, tech
A learning community that wants to use the wiki tool will probably require light training and support regarding technical aspects. What may be more important, however, is establishing ground rules and expectations for contributing and editing content (Foley & Chang, 2006, pp. 11-12). The wiki environment guarantees an intense experience in collaboration! It is indeed a collaborative tool that builds and reinforces collaborative principles and communication skills in ways that users -- even veteran teachers -- may not anticipate. As Foley and Chang (2006) discovered in their study of wikis with preservice and inservice teachers, “Putting together information on a particular topic requires research, synthesis and presentation of the idea for others, which can also be a powerful learning activity for members of a community” (p. 1).

Not everyone in Foley and Chang’s study relished the prospect of altering the work of their peers. One teacher wrote, “A major problem for me with the editing aspect is that I don’t have the mindset or ethos that I am inherently entitled or obligated to change someone else’s ideas or writing without some kind of specific reason or permission” (p. 9). In his book Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms, Will Richardson (2006) nicely summarized the tension within the creative process as follows: “Philosophically, wikis can play havoc with the traditional ideas of copyright and intellectual property. Obviously, they follow closely the open source software ideal that the quality of the collectively produced product is more important than owning the idea or the code” (p. 63). Interestingly, the discomfort felt by participants in the California study may be evidence of an intergenerational values shift; Foley and Chang also studied wiki use in a high school social studies class and concluded that youth were far less inhibited by the collaborative process!

In their final recommendations for wikis as professional development tools, Foley and Chang emphasized that members of the community must be willing to take ownership of the ideas and recognize incorrect statements and misinterpretations. “They need to go beyond communication and develop consensus about key topics. . . . Online chat and discussion boards can be valuable tools, but they do not require the development of consensus. The challenge of using wikis in this way may be a valuable tool in pushing teachers in a positive direction” (p. 12). To stem off feelings of inadequacy in this cooperative context, Foley and Chang suggested starting wikis among small groups with designated facilitators who can offer guidance on what to contribute and when and how to edit (p. 12).
D. Eyes wide open

**User-generated content** lends an unpredictable quality to wikis that may cause school IT coordinators and administrators to feel a little jumpy. Consequently, the number one concern to watch out for regarding wikis in educational contexts is whether or not the chosen application is available on the school network. Wikis are often blocked by content filtering systems. Wikispaces developers have worked to create a “private label” option to give K-12 teachers full control of the content on the site and to overcome filters. With a “private label” wiki, teachers can create and delete members in bulk, set up the messaging system between users, upgrade or delete spaces, or remove a discussion **thread** deemed inappropriate.

A common criticism leveled at wikis is their lack of credibility. How can a reader be sure that the information contained within a wiki is accurate and reliable, as anyone may contribute and alter the wiki pages? Richardson (2006) invited skeptics to explore wikis on their own and judge for themselves, and he acknowledges that wikis require a certain “faith that we didn't need in the days before the interactive Web, a faith that collectively we can produce information that is as high quality as what a trusted few produced in the past. It's a tough call” (p. 63). Foley and Chang (2006) acknowledged that **user-generated content** may not be accurate on initial attempts without first undergoing continual editing and scrutiny of the community (p. 4). If the members are not committed to reading, responding to, and providing feedback on each other's work, the wiki is dead in the water. And herein lies another potential pitfall: members must possess the affective skills and knowledge to shape the outcome of the collaborative document, and this is not always comfortable (p. 9).

E. Wikispaces: the nitty gritty details

- **technical quality**

Wikispaces is highly accessible and requires no installation. As with Ning and Tapped In, the registration process is simple: create a user name and password and supply and confirm an email address. Once registered and logged in, users may click on the My Account button at the top of any Wikispaces page and update their profile and add a thumbnail photo or avatar.

Through a simple point-and-click process, a user can create, name, and organize a new Wikispaces in just about five minutes. Organizers can then promote their spaces by inviting new members to join. (Wikispaces refers to

Lubke, 28
users who create spaces as “organizers.”) Organizers can create an unlimited number of spaces; thus, a teacher might create one wiki for a collaborative project among students and create another wiki to share curriculum resources with colleagues. Each time a new Wikispace is created, the organizer must choose a level of visibility: will it be “public,” “protected,” or “private”? A class wiki might be defined as completely private, meaning it is password protected and accessible only by students and teacher. A staff wiki might be classified as public or protected depending on the desired level of collaboration.

Beyond naming a space and setting visibility, there are not many other factors to consider. By design, Wikispaces does not offer a tremendous amount of control over aesthetics. There are a few options for customizing the look of the space; I played around with these options for about 30 minutes before I had exhausted them. Bottom line: the Wikispaces application is about functionality and utility; it’s for collaboration and sharing, not for creating dynamic, visually appealing sites.

- documentation/tech support

Wikispaces technical support is accessible in a number of ways, all online: a help page with a thorough index of hyperlinked topics, an FAQ, and a discussion forum where users can interact and problem solve together. Questions and concerns may also be submitted directly to Wikispaces staff through email. Anecdotal evidence that attests to the responsiveness of Wikispaces can be found throughout the forums at “Classroom 2.0,” an online network for technology teachers that encourages its members to review software and share bugs and success stories related to the software.

One unique support feature at Wikispaces is a “staff handout” created expressly for use on school campuses. Organizers can download, customize and revise, duplicate, and distribute the document, which contains all the information from the help page in booklet form. It was designed to help teachers who are not comfortable using technology and who demand a hard copy format!

- license terms

Organizers retain all rights to content they create.
• cost

Public and protected Wikispaces are free but subject to “micro" advertising, powered by Google, in the far, right-hand column. It costs $5 per month (or $50 per year) to disable the advertising. Private spaces never have advertisements and cost $5 a month or $50 a year. The first 30 days of a paid space are always free.

Another unique feature at Wikispaces is their current promotional campaign, “100,000 Wikis in the Classroom.” They are giving away free K-12 Plus wikis that include all the features and benefits that normally cost $50 per year. So far, more than 40,000 wikis have been awarded to educators who must certify their spaces are for educational purposes.

• scalability

Wikispaces is scalable in terms of numbers of spaces per organizer and number of members per space. Spaces may also contain an unlimited number of pages. File storage in free and open spaces is limited to 2 gb (equivalent to 20 yards of books on a shelf), with no single file exceeding 10 mb (equivalent to a box of 3 ½ inch floppy disks). Paid spaces are allowed up to 5 gb of storage.

• system requirements

All that is needed is an Internet connection.

• other requirements

No additional hardware or software is needed.

• design/user interface

Organizers with a basic, open wiki plan, can choose from four template formats. (More templates come with paid wiki accounts). All but one of the templates is based on a three-column layout, with the third column devoted to advertising. (See Figure 9.)
Figure 9. Sample home page from a Wikispaces wiki that is "protected."

The wide, middle column contains members' user-generated content. Clicking on the “Edit This Page” button at the top of the page opens the visual editor, or “WYSIWYG,” which denotes “what you see is what you get.” (Note: The “edit” button in Figure 9 is not visible because that wiki is “protected” and editable only by members who know a password. See Figure 10 for a glimpse of the Wikispaces editing environment.) In a WYSIWYG users add text, edit text, attach files, and upload video and photos in an environment that resembles a word processing interface.
Two features within the interface that support collaborative community building are the “Discussion” and “Notify Me” tabs, found at the top of every wiki page. These tools would be especially valuable within a mentoring and induction context. If members want to ask questions or reflect on content within a certain page of the wiki, they simply click the “Discussion” tab and make a comment. The “Notify Me” tab is a critical piece of the puzzle because by using it, members can stay apprised of new discussions as well as any and all page edits as they are made. Notification can be delivered via email or through RSS. Members can monitor activity on all or part of a wiki by selecting either a universal space subscription or individual page subscription.

- **reliability**

So far, I have not experienced any bugs in the Wikispaces program. The Wikispaces developers keep an archive of problems submitted by users. I browsed this list and noticed that the Wikispaces visual editor is only supported on versions of Internet Explorer 6 and 7 and Firefox 1.5 and 2.0. Other browsers work to varying degrees.

- **usability**

Lubke, 32
As noted, wiki applications in general and Wikispaces in particular are notable for their user-friendliness. Wikispaces is widely heralded among educators as one of the most accessible wiki applications currently available. At the About pages at Wikispaces.com, the developers say, “Wikispaces is our attempt to build a wiki that's easy to use and easy to adopt for all kinds of audiences. We've kept the tool simple so that you can focus on building content, talking with other members, and growing your community.”

Usability comes at a cost; the streamlined simplicity of the interface will leave tech savvy users wanting more. Consequently, some educators opt for the wiki application called “Wetpaint,” which gives its users more graphic license and many more templates to choose from.

● **user features**

Here is a short list of user features at Wikispaces that specifically relate to the use of wikis as a mentoring and induction tool: online video demos for new users; secure login with privacy settings (“public,” “protected” or completely “private”); discussion boards; file uploading; link sharing; page histories; and notification via email or RSS.

**VIII. Tool: CMS**

**A. In plain English**

**CMS**, which stands for “content management system” or “course management system,” is a centralized software application used to create a learning portal for an organization. All the tools and resources for an online community are aggregated into one web site, which serves as the community's doorway to the Internet. Occasionally this kind of software is referred to as LMS, or “learning management system.” CMS is a popular entry point for web-based technology implementation in schools districts (Soloman & Schrum, 2007, p. 128), probably because these applications offer something for everyone within a uniform interface. Consequently, many commercial options are available, with perhaps Blackboard being the best known among the K-12 set. But Soloman and Schrum noted that districts are starting to adopt open source software too, such as Moodle (p. 128).

No where in the realm of **Web 2.0** does the distinction between “proprietary” and “open source” come up as often as in discussions about CMS, so a short discussion on the subject...
seems necessary here. “Open” technologies, not to be confused with freeware, are applications and software programs where the means (the code) used to create them are provided free of cost to the user. An individual or organization may download the program and use, modify, and redistribute it with little or no restriction. In addition, adopters of open source gain entrance into an international, collaborative community of developers and users from all over the globe who work together to solve problems and enhance program performance (Klein 2007). Why, then, is the use of open source technology not more prevalent in public schools? Klein attributed the problem to “fear, uncertainty, and doubt” that run rampant in the offices of K-12 technology leaders, whose decisions are often driven by “the marketing efforts of those whose profits are based on a proprietary, licensed business model.” The most common misconception about open technologies is that they are unsupported, when in fact the collaborative spirit from which they are born feeds the establishment of “online knowledgebases, independent technical support forums, and direct contact with the actual development team” (2007).

In education, attitudes about open source software may be shifting due in part to the overwhelming popularity of Moodle. Since the first program release in 2002, more than 40,000 registered Moodle sites have been created and launched around the world. Some of these sites, mostly at the higher education level, support more than 20,000 teachers and students (“Moodle Statistics,” 2008). In 2006 U.S. instructional technologist Steve Hargadon interviewed Moodle creator Martin Dougiamas, who is based in Australia. Dougiamas suggested that for larger organizations the cost differential between Moodle and a proprietary CMS software package is probably not a factor in the decision to adopt Moodle. Institutions are choosing open source because they value the development community that comes with it, which allows for customization and the opportunity to “piggyback” with other organizations around the world. Hargadon noted, “Moodle, in a very unique way, is introducing people to open source software” (2006b).

Moodle, an acronym for “Modular Object Oriented Dynamic Learning Environment,” organizes resources (assignments, quizzes, schedules, calendars, discussion forums) to support learning among groups of people in schools, universities, companies, or special interest groups. A variety of optional add-ons are also available, for instance a blog module, a wiki module, and chat (“Some overall design features,” 2004). In an implementation study conducted as part of the Consortium for School Networking (CoSN) K-12 Open Technologies project, Hargadon wrote, “This versatility allows Moodle to be used in a variety of ways depending on the needs and capabilities of the school or district: from simple classroom management to pure e-learning – or a 'blended' combination of the two, with e-learning content and utilities extending on-site.
classroom learning.” He summarized Moodle's array of functions as follows:

- a classroom **learning portal** for students and parents
- a utility drop box, scheduler, and collaboration center for blended classrooms
- an in-house **social network** for students and teachers
- a way to provide e-learning courses in distance learning contexts
- a way to provide e-learning for professional development and staff collaboration (2008).

This last point is highlighted by the manner in which faculty at Philadelphia's new Science Leadership Academy planned and coordinated their curriculum prior to the school's official opening in 2006. In a forum discussion at the Classroom 2.0 social network for teachers, Principal Chris Lehmann shared, “We first rolled out Moodle to the faculty as our online planning space, so we learned the tool as we used it. We weren't in the same place, and we had a lot to do, so there was a real impetus to learning it ourselves” (Lynch, 2007). Lehmann also asks his faculty to compose journal entries on topics related to school improvement, which he can access from the Moodle archives when doing long-range planning for the school (2007, August 14). On a district-wide scale, the San Antonio Independent School District (SAISD) Moodle site, titled OLE (Online Learning Environment), hosts an array of PD initiatives, such as technology leadership seminars for principals, a social studies support group, and book groups for instructional technologists. SAISD technology coordinators Miguel Guhlin and Greg Rodriguez endorsed Moodle over proprietary CMS in a 2006 article posted at TechLearning.com:

> Imagine a content management system that enables district level staff – and campus, too – to share documents securely through passworded levels of access, as well as update them without knowing how to create Web pages. Imagine online help desks, frequently asked question (FAQ) repositories, and more – all management systems available to you and your district at no charge.

The CoSN study included five “snapshots” of Moodle implementation in the U.S., two of which were school organizations using Moodle expressly for professional development purposes. At the Clarksville-Montgomery County School System in Tennessee, Moodle is used to organize all system-wide PD, including required courses in technology and the new teacher orientation module. The Arizona Department of Education consolidated all its materials for educational technology through a **learning portal** created with Moodle named ASSET (Arizona School Services through Educational Technology). More than 20 ASSET courses dealing with classroom methods and technology are offered online in self-paced or facilitated modes (Hargadon, 2008).
B. eMentoring Toolkit

The following online resources may be accessed at http://ementoring.wikispaces.com/CMS:

- link to an online CMS matrix for comparison purposes
- “What is Moodle?” a video presentation outlining the basics of Moodle, its core values, and uses

C. The ripe environment

If a school has the desire to introduce social networking and user-generated content into the learning community in a manner that all stakeholders can feel comfortable with, a locally hosted CMS may be the answer. Dougiamas said, “Schools and even universities want a more protected environment. You need accounts, passwords, and so on. It's a safe and contained space. We can experiment without worrying about the effects of the wider Internet” (Hargadon, 2006b). This is sometimes referred to as the walled garden approach and is hotly debated among instructional technologists, with some questioning the instructional validity of not allowing learners to engage with and be held accountable to a worldwide audience. And even though sites created with Ning and Wikispaces can be password protected and private, they are still remote and therefore subject to firewall and filtering issues, a problem Moodle users will never encounter.

CMS in general, and Moodle in particular, have the potential to transform learning. Dougiamas, who created Moodle using pedagogical principles derived from social constructivism, said that Moodle introduces participants to the “culture of online learning through engagement with their peers” in safe and secure environments. “That's the model of learning that is the future of the web – that you become a part of a community of practice” (Hargadon, 2006b). For successful integration of CMS to happen, the learning community must be dedicated to these theoretical underpinnings. In their 2007 book, Web 2.0: New Tools, New Schools, Soloman and Schrum suggested CMS on these grounds: “If one subscribes to a philosophy of constructivist learning and a belief that creating online communities helps students to learn, one needs the tools to support the activities” (66).

Another prerequisite condition must be in place for the successful integration of Moodle, or any open technology for that matter. The school system, and the technology implementers within it, must be willing to join the open source community, which differs considerably from what Klein (2007) called the “proprietary, licensed business model.” Technology coordinators

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must have freedom to exercise outside-the-box thinking when searching for the best technology solutions to fit their context, like Guhlin and Rodriguez, who wrote, “Setting up Moodle in San Antonio ISD has saved us the cost of investing in higher-priced course management systems such as Blackboard and WebCT. Why both when such a powerful, yet free, solution exists?” (2006). But the advantages of open source extend beyond price point comparisons, as Hargadon noted in his 2006 interview with Dougiamas, “It's not about the cost of the program, it's the value that comes with it.” These values include collaboration, access, and flexibility. Open technology is central to the entire Web 2.0 phenomenon fueled by “e-citizens” accustomed to a “digital lifestyle” in which it is easy and free to share everything – media, content, and computer code (Klein, 2007). (For more discussion about open technologies, see pages 6 and 33.)

D. Eyes wide open

A common concern raised by those who advocate CMS and Moodle has to do with time. In some instances, it might be necessary to invest up-front time to modify the school or district servers before installing the software (Guhlin & Rodriguez, 2006). Moreover, once the software is up and running, it takes time (and possibly money in the form of extended contracts or stipends) to nurture the online community. Helen Gooch, technology coordinator for Clarksville-Montgomery County School System in Tennessee, said, “School districts are going to need to realize the time factor not only in developing a course but also facilitating. . . . Anytime, anywhere is wonderful but it is very easy to 'forget' the true number of man hours involved because it is not done in face-to-fact time” (Hargadon, 2008).

As noted previously, it is always a mistake not to consider the “hidden costs” of any major technology implementation, be it proprietary or open source. Klein (2007) cautioned, “Total cost of ownership is a moving target, which must be evaluated individually by an organization, according to their specific needs ad wants.” One cost-related caveat specific to Moodle has to do with an often overlooked trademark issue. Moodle is free and open source, but the “Moodle” name is trademarked and fiercely protected by Moodle Pty Ltd, a commercial organization that helps underwrite Moodle’s development costs by contracting with authorized companies who sell hosting, support, installation, custom coding, course development and consulting to to users. (For example, the Arizona Department of Education paid an authorized dealer to install and host its statewide Moodle site.) To avoid trademark violation, and organization should take care not to advertise the Moodle name if it plans to charge a fee, even cost-recovery for training (Hargadon, 2008).
E. Moodle: the nitty gritty details

● **technical quality**

By all accounts Moodle is easy to download, install, and maintain on school or district servers and is compatible with most major operating systems (Linux, Mac OS X, Windows) (Hargadon, 2008; Klein, 2007; Soloman & Schrum, 2007). In most cases, it can be installed on a local server in one click. Some schools opt to do a remote set-up through a commercial web host.

● **documentation/tech support**

In his 2008 study Hargadon described Moodle as “stable and well-supported, with extensive user and developer groups. . . . Educators using Moodle frequently share their creative uses for the program in online forums.” Free support is available at Moodle.org in the form of discussion forums, FAQs, glossaries, and links to related resources. Forums are broken down into topics such as “implementation problems,” “general problems,” and “hardware and performance.” It is possible to connect with the entire international community of Moodle users at this site.

● **license terms**

Moodle is free, **open source software** developed under the GNU General Public License.

● **cost**

Moodle has no purchase price for its use.

● **scalability**

An individual classroom teacher can download and install Moodle on his or her personal computer, or the software can be installed on a server to be accessed by an entire school system. Creator Dougiamas cited use among homeschoolers all the way up to university campuses. The largest Moodle site is Open University, the United Kingdom's largest provider of undergraduate and graduate distance learning. Their site is designed to support up to 200,000 users (Hargadon, 2006b).
● system requirements

Moodle was designed for the Linux operating system but has been tested on Windows and Mac systems.

● other requirements

Other than a standard web browser and Internet connection, no additional hardware or software is needed.

● design/user interface

Lehmann described Moodle as a “robust web portal” that provides his school “core infrastructure” and a community center (2007a). Moodle's main screen is the portal, which can be customized along the side margins with calendars, menus, news, and many other modules. (See figures 11 and 12.) The centerpiece is a list of “courses.” In the case of the SAISD home page, pictured below, the courses are actually different professional development groups. A click on a course link will take the user to the resources, activities, and forums created by and for that group.

Figure 11. Home page for SAISD's Online Learning Environment.
Figure 12. Dr. Jay Pfaffman's Moodle home page, which serves as a portal and archive of every course he has taught at the University of Tennessee-Knoxville.

- **reliability**

Due to the international developer community that works around the clock to develop new modules and utilities, regular improvements are continual (Hargadon, 2008). At Moodle.org there is a bug “tracker,” and Dougiamas even sponsors a “Bugathon” event, in which developers receive prizes for most bugs fixed, most bugs tested, and so on.

At the Classroom 2.0 support network, problems with some Moodle features have been noted in the discussion forum, primarily having to do with a lack of functionality in the blog and wiki modules. For instance, the wiki feature only works within campus firewalls, which makes off-site collaboration difficult (Lynch, 2007).

- **usability**

Reviews of Moodle at the Classroom 2.0 network are mixed, with some users feeling overwhelmed by the Moodle interface and number of modules. Lehmann reported that “just-in-time training” solved most stumbling blocks for
his faculty at the Science Leadership Academy. He also said that “the basics of Moodle are really simple to use, and it's fully integrated into everything we do at SLA” (Lynch, 2007).

In his Moodle implementation study, Hargadon cited growing interest among higher education institutions as a testament to Moodle's usability. For example, UCLA recently chose it as the portal for its distance learning programs based on ease of use, strong developer community, and functionality and variety of tools. Technology coordinator Helen Gooch of Clarksville-Montgomery County School System in Tennessee used her prior knowledge of the Blackboard CMS and spent about three hours mastering the Moodle interface (2008).

- **user features**

The default version of Moodle includes 12 standard features, including resource uploading and sharing (documents and multimedia), chat, forums, surveys, wikis, glossaries, databases, and blogs. The forum is the only feature that cannot be removed from the interface because creator Dougiamas believes it is most central to Moodle's origins in social constructivism. The forum tool allows users to engage in asynchronous learning, where they can take time to reflect, ask questions, and “socially construct a reality” in a discussion thread (Hargadon, 2006b). Other features of particular interest to a community of mentor and novice teachers are secure login and passwords; customizable layouts, themes, and templates; and member profiles.

IX. Tool: Blogs and RSS

A. In plain English

A “blog” is a web site with journal-like pages organized chronologically. After an author posts an entry, others might comment on it. Blogs that focus on issues and processes in education are sometimes called “edublogs.” Teachers and students may create blogs to extend classroom discussions, improve communication between school and home, and to engage in peer review, meaning that students can post writings or assignments and other students can respond or encourage through the comment feature. Professional development blogs empower teacher-to-teacher communication on educational theories, philosophies, and methodologies (“Educational Blogging,” 2008).
Blog tools vary in terms of flexibility, openness, and customization; there is a blog application to fit every user’s personal preference, ability level, and context. (As is the case with wikis, some teachers are willing to put up with fewer “bells and whistles” in exchange for greater control and security within the blog environment.) Most platforms permit the user to be up and running with a functional, interactive, highly customizable publishing space in under 30 minutes. At the Classroom 2.0 network for teachers, members have reviewed a variety of these tools, with WordPress and Blogger being most popular. Some, however, like the built-in blogs available inside the Ning and Moodle environments (Hargadon, 2007).

“Edublogs” is a “niche-specific blog host” based on the open source code behind WordPress but refined expressly for educators and students. Blogs created and hosted at Edublogs.org are free. For a price, it is possible to achieve the walled garden effect by installing “Edublogs Campus” on a local or remote server. This product enables schools to create, manage, and control hundreds of blogs within a secure environment (“All about Edublogs,” 2008). Other blog platforms offer similar education-specific solutions. Of course, it is also possible to create a secure community of blogs within Ning and Moodle, but these possess lesser degrees of functionality and customization.

In many ways, a blog is the hub of an individual’s personal learning environment (PLE). A blog can serve as a personal home page and, depending on the platform, can also function as a full-fledged web site with multiple page tabs for sorting and organizing content. What sets a blog apart from traditional web page authoring is the amazingly flat learning curve, which makes it akin to a wiki, social network, or course management system. What sets blogs apart from the other tools, however, is that they are deeply personal and reflective forums for self-expression. The point is not necessarily to engage in collaboration and open dialog; although, these are frequent and beneficial byproducts. This is Richardson’s (2006) take on how he first got hooked into blogs:

. . . I will never forget the first time I posted my opinion, and the first time someone responded to it. There was something really powerful about easily being able to share resources and ideas with a Web audience that was willing to share back what they thought about those ideas. . . . Writing to the Web is easy. And there is an audience for my ideas. Those two concepts are at the core of why I think Weblogs have such huge potential in an educational setting (p. 17).

The best way to get started with blogs is to read others’ blogs, and that is why Richardson usually begins his workshops and presentations by talking about RSS and aggregators, not the blogs themselves (Hargadon, 2006a). RSS (“real simple syndication” or “rich site summary”)
technology delivers new content directly to the user as it is generated at his or her favorite sites. Using RSS eliminates the need to continually visit these sites over and over to check for updates and breaking developments; it's all collected in one place by an **aggregator** (Richardson, 2006, pp. 76-77). RSS permits a more efficient use of time and resources over random web surfing. Guhlin (2006) explained, “In a moment, we can get the pulse of conversations, then dig deep as we need to so as to discover what is of merit.” Popular aggregators, or “feed readers,” include Bloglines, My Yahoo!, and Google Reader. Any site bearing the universal RSS icon can be added to the user's reader. (See figures 13 and 14.)

![Figure 13. The Bloglines interface, with feeds organized into folders in the left margin and new content featured in the main window.](image1.png)

![Figure 14. RSS logo.](image2.png)

Using a search engine, it is possible to scan the **blogosphere** for blogs and edublogs that relate to a particular academic area or other area of interest. In fact, any web site bearing the universal RSS icon can be subscribed to through a After adding a few blogs to his or her
and reading them regularly, the user will discover which to keep, which to drop, and which to add. The best blogs all feature blogrolls in the sidebar. A “blogroll” is simply a list of the writer’s favorite blogs. Authors of particular blogs within certain subject areas frequently reference and link to each other, creating a loose network. By regularly reading and commenting on blogs, a newcomer to the blogosphere will quickly become a peripheral member of these informal learning communities and eventually will want to start his or her own blog.

B. eMentoring Toolkit

The following online resources may be accessed at http://ementoring.wikispaces.com/Blogs:

- instructive videos about blogs and RSS, created by Common Craft
- links to exemplary edublogs created in a variety of contexts and content areas
- link to a downloadable Edublogs manual in PDF

C. The ripe environment

If a learning community genuinely wants to improve reflective practice and support self-directed learning, then it should consider diving into the blogosphere. Depending on how they are implemented, blogs can support the reflective culture within a bricks-and-mortar community, with mentors and novices reading and responding to each other’s blogs, or an individual teacher can use a blog to augment his or her personal learning environment beyond the walls of the school. Guhlin wrote, “This idea of building your own professional development network – where you find who you can learn from, ask questions of them, comment on their thoughts and links, and have them do the same for you – is one of the major benefits of blogging. . . . ” (2006). Ultimately, blogs are about connecting people with similar thoughts and passions. As Richardson said, “I think that connection. . . is really powerful and can do a lot to improve professional practice as well as what happens in the classroom” (Hargadon, 2006a).

Success also depends on a willingness to devote time on the front end for learning RSS and developing the daily practice of reading and responding to blog feeds, much in the same way that professionals read and respond to email. And time costs money. In the case of Arapahoe High School in Littleton, CO, school leaders relied on two major grants to fund a staff development model with blogs as the centerpiece. Karl Fisch, Arapahoe’s director of technology,
explained that the grant money paid for release time so teachers could explore new tools and techniques: “We felt that what our teachers needed most was the time and opportunity necessary to transform instruction to meet the needs of our students and utilize the tools of the 21st century” (2006).

In addition, a top-down commitment to collaboration and participation through blogs must be demonstrated. At Arapahoe, Fisch modeled this through his own blog, “The Fischbowl.” He is the principle author but also invites his colleagues to post thoughts and reflections. Eventually, Arapahoe teachers were required to set up their own personal blogs and post reflections on staff development topics as well as any changes they implemented in their classrooms. Occasionally, Fisch assigned “homework” by asking teachers to read and comment on each other’s blogs (2006). Sessums, who is Director of the Office of Distance Education at the University of Florida and author of an award-winning edublog, repeated this theme when he wrote about the importance of structured, collaborative environments that provide regular feedback and value diversity of opinion. “Weblogs offer several key features that I believe can support a constructive, collaborative, reflective environment. . . . It's probably also worth mentioning that without a clear intention or purpose for collaborative inquiry/reflective thinking, you cannot really expect any type of results” (2005).

Learning communities must also be prepared to make allowances and set parameters for the deeply personal nature of blogs. Lehmann writes a blog from the perspective as principal at Philadelphia’s innovative Science Leadership Academy. He also encourages his faculty to keep blogs but not without prior professional development “so they understand how to use this rich communication tool as a reflective, pedagogical tool – not as a place to vent” (Warlick, 2006b). Warlick recommended that school districts take proactive measures rather than prohibit teacher participation in the blogosphere. The first step is understanding the three categories of teacher blogs – independent, professional, and instructional. An independent blog is completely unrelated to the teacher’s classroom role and, therefore, is not an edublog. Instructional blogs tend to be more student-centered, and professional blogs (the focus of this inquiry) are more teacher-centered. Warlick then outlined guidelines for dealing with each type of teacher-authored blog. His specific guidelines for ensuring quality professional blogs from teachers are as follows:

1. Convene a committee and rewrite web publishing policies to reflect the new Web.
2. Present the new policy to teachers in a proactive, promoting way.
3. Select a blogging tool or service and configure it in order to leverage its best features.
for promoting the school’s goals and mission.


D. Eyes wide open

Web-based tools with their high volume of user-generated content will always be subject to content filtering and Internet blocks. Blogs are no different. So, the first order of business before implementing blogs in a school context is to make sure the chosen platform is compatible with the school network. If it’s not, then it may be wise to find a blog program that can be installed and hosted on a school server, such as Edublogs Campus or Moodle. (Moodle is actually a CMS, but it has a blog module.)

Tens of millions of blogs currently populate the Internet, which must certify blogs as the easiest of all Web 2.0 tools to take up. With everyone from Kindergartens to “elderbloggers” publishing web content via blogs, it is doubtful the average classroom teacher with college education will struggle the the nuts-and-bolts of blog publishing. But what they lack in technical complexity, blogs make up for in the kinds of practical and pedagogical concerns they raise for teachers. One of the hallmarks of Web 2.0, and especially blogs, is heightened transparency and openness, but this fact may always limit teacher participation (Fisch, 2006; Guhlin, 2006; Sessums, 2005). Owing to their deeply personal and expressive quality, blogs may overwhelm teachers who don’t know how to project an appropriate online identity or how to formulate readable and meaningful comments and reflections. Here are some issues educators must consider when authoring a blog:

- Should I maintain anonymity, cultivate an online personality, or just be myself?
- Should there be a disclaimer on my blog in which I claim my opinion as my own and no one else’s?
- Would my learning improve if I spent less time on my personal blog and more time interacting with users in communal spaces, such as high-traffic discussion forums and social networks?
- Do I fully understand my school system’s web publishing policies? (Lubke, Sept. 16, 2007)

In the end, some teachers will remain reluctant to participate. Guhlin indicated that “some
people don't want to make their thinking known to others. Or, sadly, they do not believe their thinking is worthy of being shared” (2006). Sessums echoed this sentiment: “If participants do not see themselves of having anything of value to contribute, they might see this whole endeavor as a grand waste of time” (2005). Learning communities can address non-participation by anticipating teachers’ concerns and working continually to foster collaborative culture.

E. Edublogs: the nitty gritty details

- technical quality

Establishing a blog at the Edublogs website is easy and requires no installation or complicated start-up procedure. The registration process is simple: create a user name, supply an email address, certify the educational purpose of the blog, and select a domain name (can be the same as the user name) and a title for the blog. In a few seconds an activation link is sent via email, followed by a second confirmation that includes a password.

An Edublogs user manual with step-by-step directions to guide the first-timer is available in the form of a downloadable PDF at the Edublogs official companion blog, called *The Edublogger* (Waters, 2008).

- documentation/tech support

Edublogs support exists in a variety of forms, all of which may be accessed online. At the Edublogs site, users can read FAQs, participate in forums discussions, and view a collection of short video tutorials. The official companion blog, *The Edublogger*, includes an entire section titled “Getting Started with Edublogs.” Here, the aforementioned introductory manual may be downloaded in PDF, and users can browse a collection of links, mainly dealing with the pedagogical uses of Edublogs.

- license terms

There are no complex licensing terms with Edublogs, but users who choose to pay subscription fees for the companion product, Edublogs Campus, are subject to a services agreement which outlines terms and conditions for appropriate use, payment for services, client liability, termination, and so on.
• **Cost**

Edublogs is entirely free and without ads. Edublogs Campus requires subscribers to pay an annual fee that scales according to the number of active blogs the subscriber hosts. The fee ranges from $500 to $6500 per year.

• **Scalability**

An individual Edublogs account comes with 100 MB of free upload space, equivalent to one yard of books on a shelf or two conventional encyclopedia volumes. An Edublogs Campus account is scalable in terms of active users; an annual fee of $6500 entitles an organization to unlimited numbers of users. There are no limits to storage space or bandwidth.

• **System requirements**

All that is needed is an Internet connection and standard web browser.

• **Other requirements**

No additional hardware or software is needed.

• **Design/user interface**

The standard Edublog interface includes two views: a “dashboard” view where all the editing and content production takes place and the standard view that readers and visitors see. The look and feel of the blog can be customized with templates. Through a simple point-and-click process, users can choose from more than 90 different templates with a distinct themes and layouts. (See Figure 15.) A blog owner can further customize the sidebars with interactive, modular tools, or “widgets.” There are many widget options, such as search, links, calendar, and archives. This heightened level of personalization is a central feature of blogs, distinguishing them from group spaces like wikis and discussion forums. The blog interface can be the hatching ground for the user's online presence and digital identity. (See figures 15 and 16.)
At the dashboard, users can toggle between a **WYSIWYG visual editor** or the code editor, depending on their degree of technical savvy. The visual editor includes a window that closely resembles a word processing interface. The user may click the “save” button at the bottom and come back to the content later for continued editing, or the user may click the “publish” button to instantly send the content to the front page of the blog. (See Figure 17.)
Figure 17. The Edublogs “dashboard” view where new content is created, formatted, and edited.

- **reliability**

Edublogs sometimes experiences “slow patches” due to server problems (Hargadon, 2007).

- **usability**

The Classroom 2.0 forums include lively debate over which blog platform is friendliest. It’s a toss up between Blogger and WordPress (on which Edublogs is based). Some Classroom 2.0 network members complained about the many “confusing” options within Edublogs, but overall, the reviews are favorable, such as this testimonial from an educator based in Bangkok, Thailand: “I especially love Edublogs as a tool for teachers due to the social networking that has developed as the community of edubloggers using Edublogs grows and grows.” The teacher continued by citing Edublogs’ “ease of use, simplicity of design, expanding features that we need in education, privacy and safety for users, and educational focus” (Hargadon, 2007).

- **user features**

Here is a short list of user features most relevant to teachers who want to use
Edublogs to enhance their school-based **learning community** or to extend their **personal learning environments**: online video tutorials for new users, secure login, comment management, file uploads and content sharing (including videos, **podcasts**, photos, and other images), customizable pages, and the ability to create static web pages. In addition, Edublogs just launched a new forum feature that teachers may add in just a few clicks. In doing so, it is now possible to host a discussion **thread** around a specific topic as an extension of face-to-face professional development or classroom activities.

X. **Policy 2.0: Changing AUPs and Attitudes**

Of the many enabling conditions and barriers that affect the viability of web-based learning communities, one of the most important to consider is the school system's policy regarding use of technology and, particularly, the Internet. Many schools drafted guidelines to govern student and teacher use of the Internet when widespread access first became available (Soloman & Schrum, 2007, p. 144). These rules and guidelines, when taken together, are often referred to as **acceptable use policy**, or “AUP.” Eventually, when Congress passed the Children's Internet Protection Act (CIPA) in December 2000, all schools had to certify they had Internet filtering mechanisms and AUPs in place to remain eligible for funding through the federal “E-rate” program (**CIPA: FCC Consumer**, 2006), well ahead of the current explosion of social and participatory software applications available online. Unless periodically updated between then and now, these outmoded AUPs only reflect “a consumable Web, a technology where people went to find and use information. . . . Therefore, it may be time to shake out those old AUPs and re-dress them for the read/write Web” (Warlick, 2006a).

A. **Impediments to change**

If outdated policies are allowed to remain “on the books,” so to speak, school systems run the risk of community members interpreting them in a manner that inhibits, rather than facilitates, adoption of web-based tools. Yet, systemic change is slow. Examples of cutting-edge policies are hard to come by. Revision efforts may be hampered by an absence of models to guide districts in the formulation of progressive, forward-thinking policies that embrace, or at least acknowledge, Web 2.0.

One impediment to change frequently cited by teachers and instructional technologists are the Internet content filters required by CIPA. There are **threads** all over the **blogosphere** about filters, censorship, CIPA, and Web 2.0. Many of these discussions concern a lack of access
to some of the very same applications reviewed in this inquiry. Spotty, inconsistent blockage of blogs, wikis, and networking tools persists at schools around the nation. Until the access issue is resolved, it is impossible for learning communities to fully innovate on the web.

However, content blocking represents but a small barrier to change. In fact, CIPA contains wording that allows “an authorized person” to disable Internet filtering when it prevents adults from accessing sites for “bona fide research or other lawful purposes” (CIPA: FCC Consumer, 2006). A more serious factor that might explain a school’s reluctance to facilitate web-based learning communities is the loss of site-based control over members’ actions and behaviors. McLeod (2006) called it the school administrator’s “essential conundrum.” Even those administrators who strive to make technology accessible to teachers and students cannot possibly keep up with the constant, burgeoning array of web-based tools. Further, these tools are not hosted by school servers, making it difficult for administrators to exercise oversight. McLeod, an educator and an attorney, admitted there is no clear solution that allows teachers unfettered access to the pedagogical potential of Web 2.0 without compromising schools’ “legal and moral responsibility to monitor appropriate usage.” Unfortunately, schools often respond to the dilemma by enforcing strict web-publishing policies that prohibit teacher- and student-created web content not hosted on school servers.

Another possible explanation for why learning communities are slow to take up Web 2.0 is an overall lack of intentionality or conscious policy making regarding the read/write web, which an outside observer might interpret as a result of benign neglect, at best, or ignorance, at worst. Thus, we have situations like this, as described by a media specialist/librarian in Georgia, USA, who started an unsanctioned Ning network for her school faculty:

_We go by the official AU policy . . . . There is really nothing about blogs, wikis, social networks, etc. I think our district shies away from getting too detailed because they don’t want to open a can of worms. I am just speculating it, but sometimes I think they take this approach in hopes that if they don’t draw attention to it, then they don’t have to deal with it. I do know “Wordpress” is the officially approved blog host by curriculum, but there is nothing in writing about this — it is just what has trickled down to us, and I truly doubt most teachers know this._ (personal communication, Sept. 30, 2007).

In his 2007 K12 Online Conference keynote, David Warlick described three brand-new conditions converging on our classrooms: info-savvy students, a new information landscape, and an unpredictable future. He warned, “We’ve tried to ignore them, we’ve tried to contain them, and to even block them out. But the best thing we can do is to realize that these three converging conditions can actually become new boundaries off of which we can gain traction.”

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Warlick used the metaphor of airplanes, which travel in invisible but established flight paths and which still need runways for take offs and landings. It is unsafe for airlines to operate without flight manifests and air traffic controllers. Similarly, it is ill-advised for educators to establish online learning communities with an under-the-radar, ask-forgiveness-not-permission approach.

So, how can a school system encourage and facilitate responsible and educationally valid use of Web 2.0 for reflection and collaboration within learning communities? What are the best practices that enable some schools to stay current with 21st century information and communication technologies? My search for answers to these questions revealed the need for reform on two fronts: AUPs and attitudes. In other words, systems must adapt to the new, participatory web explicitly, through the wording of policy, as well as implicitly, through the positive and visionary attitudes of administrators and technology leaders – a component of what I have referred to throughout this inquiry as “the ripe environment.” I will first take up the issue of policy reform.

B. AUPs

Because most existing AUPs reflect the requirements of the 2000 CIPA legislation, they often consist of long, prohibitive lists and nothing more. But these policies and the Internet blocking software used to back them up, are simply no longer relevant and workable in a Web 2.0 world. As Johnson (2007) and Warlick (2006a) have both maintained, the new Web raises concerns that have less to do with access of dangerous content and more to do with production of it. Regrettably, some systems have responded in “knee-jerk” fashion by instituting blocks on all sites that promote content production and sharing (blogs, wikis, chat, and social networks). These measures are problematic because they indiscriminately zero in on formats regardless of content. Johnson wrote that such blanket bans are equivalent to “banning all magazines because Penthouse is published in magazine format” (p. 11). Also, increased awareness of proxies and “blocker-busting sites” along with the surge of mobile-networking devices (i.e. cellphones) in schools and workplaces mean that the industrious user will always find a way to navigate around pesky filtering mechanisms (pp. 10-11).

Some AUPs do address user behavior on the Internet, with specific language, for example, that forbids posting of full names (of youth), contact information, and photos (other than group shots). One Internet behavior that has drawn a lot of attention and has recently worked its way into policy statements is “cyberbullying,” which is the misuse of digital technology to repeatedly harass, intimidate, or terrorize another person (Franek, 2005/2006, p. 39). In his article, “Foiling Cyberbullies in the New Wild West,” Franek outlined instructional approaches, talking points, and
web resources to help teachers and administrators curb the problem. He even provided a sample cyberbullying policy.

While Franek raised important points about issues of respect, dignity, and digital citizenship on the Internet, I am concerned about efforts to draft layer upon layer of policy to address each and every potential misuse and abuse of digital technologies. Cyberbullying is indeed a serious and harmful outgrowth of online culture, but, ultimately, it is just the digital expression of a societal problem that has affected children, teachers, and administrators for generations. Cyberbullying is captivating because it demonstrates the corruption of two distinct features of the participatory web: first, users communicate and interact behind carefully constructed and maintained online identities that can lead to a false sense of anonymity and immunity; second, users enjoy the emotional, social, and intellectual satisfaction of push-button publishing, which sometimes leads them to post irrevocable mistakes. “Simultaneously, the power and speed of technology has made it nearly impossible to contain a regrettable action or keep it confidential” (Franek, 2005/2006, pp. 39-40). Ironically, Web 2.0 is blamed for wiping out contemplative forethought entirely, even as tools like discussion boards and blogs earn pedagogical points for supporting asynchronous learning and increased reflection time.

Rather than implement specific policy against cyberbullying, why not draft policy in favor of the safe and ethical management of online identity and instant publishing? Why not provide models of the effective use of spaces for content creation? This is precisely what the technology leadership sought to do in Saugus Union School District (CA) and Arapahoe High School (Littleton, CO). Both entities have AUPs that list best practices for web publishing, albeit specific to blogs. (See “related links” at the eMentoring Toolkit for links to these and other AUP resources.)

Reform begins by taking a proactive approach, dusting off those old AUPs and reframing them as “web publishing policies” (Warlick 2006a). At minimum, the policy should contain some wording about appropriate posting of names and photos, but it should not stop there. In my review of sample AUPs from around the nation and world, I noticed a preoccupation with managing student online behavior, with little or no mention of teachers. One of the recommended “next steps” contained within a 2007 report of the National Academies Teacher Advisory Council touched on this: “Technology policies and purchases of computers and networking equipment in schools should take into account the use of the equipment by teachers as well as students” (Enhancing Professional Development, p. 31). In fact, a valid and effective policy will guide the entire school community: students and teachers, but also administrators,
support staff, and parents. Warlick advised: “It is essential that your new technology use policy is designed not merely as a preventative tool, but as an enabling document that promotes effective uses that solve problems and accomplish goals” (2006). He suggested four steps to guide the process of policy revision, reprinted here:

1. Establish goals for the use of read/write web tools. These goals should range through administrative functions, classroom management, and instructional objectives.

2. Itemize and describe specific uses of read/write web applications that you will promote and support, tied to the goals established in the first section.

3. Briefly but clearly identify those activities that will not be allowed. These might include conducting business, advertising commercial products or services, defaming the character of others, and jeopardizing in any way the safety of students.

4. Plan your document or ancillary materials to serve as instructional resources that might be used in the classroom. Provide teachers with guidelines and procedures that not only govern student use of technology, but also help them to understand and put into practice basic foundations of information ethics.

C. Attitudes

Refinement of the actual wording of technology policy must occur in tandem with building a coalition of concern among all education stakeholders. Citing Arapahoe High School as a model, Richardson (2007) commented,

Many schools are rewriting their acceptable use policies to cover the uses of social technologies and web publishing. . . . But again, I think this requires more than just good policy. It requires that we start conversations with all of the constituents in a school district so that everyone gets a chance to think about the complexities that this environment now presents.

And even the best policies contain wording that is best interpreted through ongoing discussion and communication between stakeholders. Johnson, an educational technologist in Minnesota, critiqued both CIPA and his own district's AUP for their “ambiguous” language. In a move reminiscent of Richardson's “conversations,” Johnson's district formed a “technology advisory committee,” consisting of teachers, parents, students, business leaders, college faculty, and librarians. Rather than defer to the AUP, which was last revised in 2005, the committee meets regularly to tackle procedural decisions. For instance, the committee decided that the district's Internet filter should be programmed at the least restrictive setting, giving teachers

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more professional discretion in the classroom concerning web site evaluation. This decision also places more responsibility on teachers to monitor student access of the Internet and to model personal filtering skills. Johnson reported the decision “honors the spirit of intellectual freedom” and “could not have been reached without a variety of voices heard during its making. It has held up well, even as Web 2.0 resources have come available” (p. 12).

A culture shift of “administrative support” is also critical to the formation of viable online communities. Soloman and Schrum (2007) wrote, “If a school or district administrator is committed to implementing new technologies, the staff will get the message. Leadership starts at the top, even if the support comes without a leader actually using many of the tools him- or herself” (p. 128). One way to build this support of PD 2.0 is to invite the instructional leadership into virtual learning communities or to encourage them to pursue online professional development opportunities or courses (Enhancing Professional Development, 2007, p. 17 and p. 30). At the very least, it is important to share evidence of positive and fruitful online learning experiences so principals can make informed decisions (p. 30).

XI. Engaged Leadership, Engaged Followership

Creating, managing, and participating in an online community requires discipline, coordination, risk-taking, and a whole new set of skills and norms on the part of the user (Downes, 2007; Folkestad, 2007). In this case, “skills” do not involve discrete sets of behaviors that lead to mastery of tools and gadgets; those kinds of skills are less and less a concern, as many of the new Web applications are highly usable and intuitive. The skills Downes referred to reside in the affective domain -- “soft skills” necessary for successful synchronous and asynchronous learning. These values and norms are traditionally transferred from leaders to new members as they are inducted into communities (Nussbaum-Beach, 2007). But who trains the leaders?

In a 2007 article at the TechLearning Blog titled “Virtual Communities as a Canvas of Educational Reform,” Sheryl Nussbaum-Beach offered some helpful guidelines for leaders. Her description of the “community organizer” appropriately captures the level of engaged leadership needed for a thriving Tapped In group, Ning network, or any online community:

Typically, the community organizer fosters member interaction, provides stimulating material for conversations, keeps the space organized and helps hold the members accountable to the stated community guidelines, rules, or norms. They also build a shared culture by passing on community

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history and rituals. Perhaps most importantly, community organizers are keenly aware of how to empower participants to do these things for themselves. Community organizers use their group facilitation skills to help all members of the community to become active participants in the process. They work hard behind the scenes to support socializing and relationship- and trust-building. . . . Having a core group who is willing to chime in on a variety of topics, keep the conversation rolling, and self-monitor the conversations is critical.

In addition to engaged leadership, vital learning communities are composed of engaged followers. Followers must be advised of the norms and conventions of online learning. Just to be clear, I am not referring here to codes of conduct, “netiquette,” or guidelines for appropriate use. While important, these are more objective rules that members must typically agree to before they are allowed to join. Rather, engaged followership depends upon the cultivation of certain daily habits and attitudes to ensure a meaningful experience (in addition to a safe, ethical, and responsible one). According to Folkestad (2007) these are the “survival skills” of collaboration and collective action that lead to improved competency in organizing, navigating, and managing risk in electronic learning environments.

What are those habits and disciplines? Based on my own observations and practice as well as the recommendations of others (Downes, 2007; Folkestad, 2007; Lubke, 2007), I have compiled a set of norms for followership:

- Cultivate an online presence and maintain it. Decide if you want to use a screen name or your real name, and then be consistent with it when joining and participating in online communities. This is the name that will appear on your membership profiles as well all your posts and comments. (I use my real name.)

- Create an email account using a web-based service such as Hotmail, Gmail, or Yahoo. Your webmail address is also part of your online presence and will maximize the just-in-time learning afforded in virtual communities. As opposed to an email client, which is usually institutionally based (at a school or work site), your webmail account provides anytime, anywhere accessibility from any computer with an Internet connection. You can keep this account separate and use it exclusively for your online professional development, or you can consolidate your accounts using email forwarding.

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Many interactive web sites and learning communities allow users to develop personalized **home pages** and membership profiles for free. Take advantage of these opportunities because an attractive membership page with visual elements increases the likelihood of other members interacting with you.

Create an **avatar** or edit a thumbnail photo of yourself that you can upload with your profile when you join a new community. Save and re-use this image as often as needed. (I use a real mugshot of myself, closely cropped to meet size requirements, which are usually 48 X 48 or 128 X 128 pixels.)

Write a short (100 words or less) biographical sketch of yourself and, when the opportunity is available, upload it along with your photo or **avatar**. Your bio should emphasize the themes, topics, personal interests and passions that drive your professional development activities. This is another way to build your online presence, and it encourages other learners to connect with you.

Read all FAQs, help forums, and tutorials. This will familiarize you with the various user features and potential pitfalls that you may encounter at a site.

In addition to FAQs and help forums, another way to evaluate the quality of interactivity and usability at a site is to look for forums or discussion boards where you can **post** questions and engage with others.

The best virtual communities archive forum topics and make them searchable. Before posting a question or adding a new topic, search the archives to see if someone else has already done so. Sometimes you can revive discussions simply by posting a new comment and inviting a response from the membership.

When you begin posting comments and questions at various sites and communities, check to see if email notification or RSS is available to help you track others' reactions to your posts. Use these features to stay engaged in forum and **blog** discussions.

Produce and share without fear! Referring to the love of learning that best characterizes toddlers, not adults, Folkestad (2007) stated, “We need to regain our natural, innate curiosity and love for sharing. We need to get back to our origins when we are not afraid to make mistakes.”

One thing is for certain: the success of **Web 2.0** as a professional development

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intervention absolutely depends on an attitudinal shift regarding technology. Technology must be approached with curiosity and a sense of play. As Harvard's Chris Dede said, “Maybe the real thing about online professional development is not whatever content we put into it, but the process of experiencing it, and experiencing something that is like what kids experience” (Enhancing Professional Development, 2007, p. 6).

In a 2007 post at his Connectivism blog, Siemens summoned forth a “mindset of experimentation,” which dispels the myth that tech savvy is determined by age, i.e. “digital immigrants” versus “digital natives.” Deep learning through and about technology can occur for individuals of all ages provided our efforts are anchored in communities of practice -- classroom communities, collegial communities, virtual communities, or a combination. Without these support networks, we are no better off than members of the younger generation, many of whom Siemens claimed only understand technology at a “utilitarian level.”

Glossary

**NOTE:** Unless otherwise noted, most of these definitions are adapted from the glossary at [http://www.learningcircuits.org/](http://www.learningcircuits.org/), a site dedicated to e-learning resources by the American Society for Training and Development.

**acceptable use policy (AUP)** outlines the guidelines, procedures, and responsibilities for using technology within a school or school district (Soloman & Schrum, 2007, p. 144).

**aggregator** a web-based tool that collects new content from RSS subscriptions, allowing the user to skim or read new information from favorite web sites, blogs, and news organizations all in one place. Examples include Bloglines.com, Google Reader, and My Yahoo! (Richardson, 2006, pp. 76-77).

**asynchronous learning** interaction between instructors and students occurs intermittently with a time delay. Examples are self-paced courses taken via the Internet, online discussion groups, and email.

**avatar** in online environments, a virtual digital image representing a person. The term comes from a Sanskrit word meaning an incarnation in human form.

**blog** (web + log) regular journal-like entries published on a web site for public viewing. Blogs usually contain links to other sites along with the thoughts, comments, and personality of the blog’s creator. Also “weblog.”

**blogosphere** a collective term encompassing all blogs and their interconnections. It is
the perception that blogs exist together as a connected community (or as a collection of connected communities) or as a **social network** (from Wikipedia.org). Also “edublogosphere.”

**chat** real-time, text-based communication in a virtual environment. Chat can be used in e-mentoring for questions, feedback, and group discussion.

**Classroom 2.0** a network of teachers interested in 21st century tools and technology, created using the Ning platform (from the Classroom 2.0 home page, [http://www.classroom20.com/](http://www.classroom20.com/))

**course management system (CMS)** a centralized software application or set of applications that facilitates and streamlines the process of designing, testing, approving, and posting e-learning content, usually on web pages. Also “content management system,” “learning management system” (LMS) or “virtual learning environment” (VLE).

**cyberbullying** occurs when a person (often a child, preteen or teenager) is bullied, harassed, humiliated, threatened, embarrassed, or targeted in someway by another person (often another young person) through the use of Internet, cell phones and other forms of digital technology (from Wikipedia.org).

**digital citizenship** the practice of legal and ethical behavior on the Internet

**discussion board** forum where users can **post** messages for others to read, often resulting in a discussion **thread**

**Edublogs** a **blog** platform created especially for educators and students (from “All about Edublogs,” [http://edublogs.org/about/](http://edublogs.org/about/))

**edublog** a **blog** written by someone with a stake in education. Examples might include blogs written by or for teachers, blogs maintained for the purpose of classroom instruction, or blogs written about educational policy. The collection of these blogs is called the “edublogosphere” by some, in keeping with the larger **blogosphere** (from Wikipedia.org).

**eMentoring** a computer mediated, mutually beneficial relationship between a mentor and a protege which provides learning, advising, encouraging, promoting and modeling, that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-

**freeware** software that can be downloaded, passed around, and distributed without any initial payment. Though freeware does not cost anything, it is still copyrighted, so other people can't market the software as their own (from the Sharpened Glossary).

**home page** a document that has an address (URL) on the Web, is maintained by a person or a group, and contains pointers to other pieces of information.

**knowledgebase** a specialized database that stores the intellectual content possessed by an organization. Any piece of information that a worker knows can be considered content and can be archived in a variety of formats, such as presentation slides, text documents, audio and video files, and so forth.

**learning community** a group of people who share common values and beliefs, are actively engaged in learning together from each other (from Wikipedia.org). See also **online community**.

**learning portal** any web site that offers learners or organizations consolidated access to learning and training resources from multiple sources.

**mentoring** a career development process that matches less experienced workers with more experienced colleagues for guidance. Mentoring can occur either through formal programs or informally as required and may be delivered in-person or by using various media. See also **eMentoring**.

**Moodle** a course management system (CMS) available in a free, open source software package to help educators create online learning communities. “Moodle” is an acronym for “Modular Object Oriented Dynamic Learning Environment” (from Moodle.org).

**Ning** a free, web-based platform for creating, extending, and customizing a social network (from the Ning.com home page, [http://www.ning.com/](http://www.ning.com/)).

**online community** a meeting place on the Internet for people who share common interests and needs. Online communities can be open to all or be by membership only and may or may not be moderated. Also “virtual community.”

**open source software** software for which the original program instructions, the source code, is made available so that users can access, modify, and redistribute it.

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open technologies technology resources that are provided to the user with complete documentation and are relatively free of restrictions on their use, modification, and redistribution. Open technologies are typically divided into three categories: open source software (i.e. Moodle, Mozilla Firefox, and the Linux operating system), open standards (i.e. IMAP and SIF), and open content libraries (i.e. Wikipedia) (Klein, 2007).

personal learning environment (PLE) a network both real and virtual that is created, controlled, and managed by the learner to achieve personal learning goals. Also “personal learning network” or “PLN.”

podcast (iPod + broadcast) a way to distribute multimedia files such as music or speech over the Internet on mobile devices (iPods and MP3 players) and personal computers. The term refers to both the content and method of delivery, and the host or author of the podcast is often called a “podcaster” (Soloman & Schrum, 2007, p. 57).

post to publish content on a discussion board, wiki, blog, or web site

RSS (real simple syndication or rich site summary) technology that lets users subscribe to new content as it is generated at their favorite web sites so they don't have to visit the sites themselves to check for new information (Richardson, 2006, p. 75)

social constructivism a learning theory that considers how social groups construct things for one another, collaboratively creating a small culture of shared artifacts with shared meanings (from Moodle.org)

social network a web site that provides users with a range of tools to help them construct personal home pages and locate and connect with other users with similar interests and backgrounds (Glaser, 2007)

synchronous learning real-time, learning event in which all participants are logged on at the same time and communicate directly with each other. In this virtual classroom setting, a moderator typically guides the session and "calls on" participants. In most platforms, participants can use a whiteboard to see work in progress and share knowledge. Interaction may occur via chat, audio, video or some combination. See also videoconferencing and teleconferencing.

Tapped In a web-based learning environment that is one part social network and one part collaborative conferencing tool with capabilities for real-time, text-based
conversation (chat) as well as discussion boards for asynchronous learning

teleconferencing two-way electronic communication between two or more groups in separate locations via audio, video, and/or computer systems. See also videoconferencing.

thread an asynchronous series of messages on a particular topic on a discussion board that mimics synchronous conversation. In a threaded discussion, it is possible to post a reply to a particular commenter, or to the forum as a whole.

URL (uniform resource locator) the address of a page on the Web, example: http://ementoring.wikispaces.com/

user-generated content information captured and published digitally by one member for other members of an online community to access. Formats for content include text, audio, video, animation, simulation, and more.

videoconferencing using video and audio signals to link participants at different and remote locations. See also teleconferencing.

visual editor a program that allows the user to quickly design a web page without writing code; the user can add, edit, and format elements in an interface that closely resembles a word processor. See also WYSIWYG.

walled garden with regards to content, refers to a closed set or exclusive set of information services provided for users. This is in contrast to providing users access to the open Internet for content (from Wikipedia.org).

Web 2.0 a much-contested term that is often used to describe the newest generation of the Internet that is highly interactive and built on user-generated content; blogs, wikis, social networks, and podcasts.

web-based a term used to describe tools, programs, and software applications accessed via an Internet browser over the public Internet, rather than through a personal computer or internal network server

whiteboard an electronic version of a dry-erase board on which participants in a virtual classroom can write, draw, and brainstorm. Also “smartboard” or “electronic whiteboard.”
wiki an interactive, editable web site built and maintained by a community of users who share an interest in a specific topic (Richardson, 2006, p.8)

Wikispaces an “out-of-the-box,” online application for writing, editing, and publishing web sites called wikis

WYSIWYG (“what you see is what you get”) pronounced “wiz-e-wig,” describes any application that enables the user to create content on the screen that is an almost exact representation of the final product once published. Examples of WYSIWYG programs include all the popular desktop publishing applications.

List of Works Cited


This was a scheduled discussion (7 p.m. EST) moderated by Pam Berger for Tapped In members and guests who are interested in exploring and discussing the use of Web tools and strategies in K-12 education. The topic to be explored was Ning, a social networking platform, but general questions about Tapped In and other web-based tools were also fielded and addressed.


This was a scheduled discussion (7 p.m. EST) moderated by BJ Berquist for new
members and guests who want to learn more about the Tapped In interface and user features. The Tips and Tricks sessions are regularly scheduled throughout each month and are described as “virtual field trips” through the Tapped In “campus.” Participants learn how to maximize their Tapped In memberships and how to get the most out of future visits. Topics include creating and updating a member profile, locating and joining special interest groups, and using various chat conventions.


This is a 19-page, step-by-step start-up manual for new users of the Edublog platform. It’s available in PDF at the above URL.

In this 20-minute video presentation, online learning expert Stephen Downes describes web-based technologies that support teachers and learners in the creation of personalized learning environments. These environments are characterized by three principles: interaction, usability, and relevance. Downes works for the National Research Council, Institute for Information Technology, in Moncton, New Brunswick, Canada.


SupportBlogging! has been set up for students, teachers, administrators, parents, and others to promote an understanding of the benefits of educational blogging. The current backlash against social networking sites has the potential to overshadow the benefits of educational blogging. This site provides materials, links, and resources for decision-makers as they determine policies for their schools and districts regarding the use of blogs.


On Feb. 8-9, 2007, a National Research Council planning committee hosted a workshop to explore use of online learning technologies. This 88-page report discusses advantages, obstacles, and next steps.


Retrieved October 25, 2007, from K12 Online Conference 2007 Web site:

http://k12onlineconference.org/?p=198

This is a three-part podcast that describes how students in a teacher preparation course at Colorado State University are learning to use Web2.0 tools to create and maintain distributed learning communities. The presentation describes how students are sharing knowledge and leveraging the power of collective decision making.


A description of the TLINC program, a joint venture between the National Commission on Teaching and America’s Future and three university-district communities. Online communities were created to link new teachers, teacher candidates, and experienced teachers and faculty.


The Teachers Learning in Networked Communities (TLINC) project was developed by a design team led by the National Commission on Teaching and America’s Future, with the Education Development Center, SRI International, International Society for Technology in Education, and Pepperdine University. TLINC was piloted in four district/university partnerships in Colorado, Maine, Texas, and Washington. At the time the article was published, the project was still evolving, so there is little information about practical implementation or outcomes. The authors describe several barriers and enabling conditions that must be considered when creating learning communities.
http://www.pbs.org/mediashift/2007/08/digging_deeperyour_guide_to_so_1.html

Independent School District Web site:
http://itls.saisd.net/enews/ITS_newsltrs/011106_wc.htm#blog

Message posted to http://www.techlearning.com/showArticle.php?articleID=177100339

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Message posted to
http://www.classroom20.com/forum/topic/show?id=649749%3ATopic%3A45465&page=1

In this discussion thread started by Steve Hargadon at Classroom 2.0, educators from
around the world weigh in on their favorite blog tools, noting both successes as well as
pitfalls. All threads in this multi-part series (with topics ranging from videoconferencing
to wikis and more) are helpful for novices who are in the process of selecting web tools
for use in the classroom and professional development. Each discussion thread
includes numerous responses from n-the-trenches teachers, who share their candid
reviews of a variety of tools based on real classroom experience.

http://www.k12opentech.org/implementation-study-3-moodle

http://www.ciconline.org/thresholdsummer07

http://www.learningcircuits.org/ASTD/Templates/LC/LC_OneBox.aspx?NRMODE=Published&NRORIGINALURL=%2fglossary&NRNODEGUID=%7bA1A2C751-7E81-4620-A0A3-52F3A90148EB%7d&NRCACHEHINT=NoModifyGuest#P


Supporting documents for Klein’s presentation are available in PDF at this address:
https://webapps.sagus.k12.ca.us/community/jklein/weblog/439.html


These standards provide direction for designing a professional development experience that ensures educators acquire the necessary knowledge and skills.


This page includes an embedded video titled “Wikis in Plain English” and an exhaustive list of potential uses for wikis in the classroom. It also features links to specific wiki applications, examples of classroom wikis, articles and research on wikis, and many other resources.


This is a post from Wilkoff’s blog, Discourse about Discourse. “The ripe environment,” according to Wilkoff is “the simultaneous personal and public experience of using all of the tools at the teacher’s disposal to tear down walls, collaborate with each another, and question the traditional role of technology in the classroom.”