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Modeling Social Media in Groups, Communities, and Networks

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Abstract

This article views social networking as practiced distinctly in groups, communities, and networks. Drawing from experience coordinating a teachers' community of practice for the past decade, the evolution of what was initially a group into a community of practice is illustrated, as well as how social media enables one CoP to interact with others to become part of a distributed learning network. Participants in the networked communities continually leverage each other's professional development, and what is modeled and practiced in transactions there is applied later in their teaching practices.

Recidivism is a problem in technology training for education. Teachers can be shown how to use social media, but unless they use it themselves they are unlikely to change their practices. There is evidence that teachers trained in programs where their instructors used social media (modeled it) are more comfortable with technology than if their instructors did not themselves use these tools. This article suggests how teachers can interact with numerous communities of practice and distributed learning networks where other participants are modeling to and learning from one another optimal ways of using social media in teaching. This strongly suggests that teachers must be trained not only in the use of social media, but through its use.

Living with paradigm shift

As I was conceiving this article, I received an invitation to contribute an article on Tim Johns for a forthcoming encyclopedia on applied linguistics. This got me wondering about the need these days for a printed article written by one person on the work of another. So I looked up Tim Johns in Wikipedia and discovered, to my genuine surprise, that there is not yet an article there about him. I have three reactions: (a) I'm sure an article on Tim will appear there eventually, (b) it will be written by many, not one, (c) it will be a more comprehensive and more accurate article than one person could possibly write. I would have accepted such an invitation just a few short years ago, but my instincts on where I should go now for information of this nature point me to crowd-sourced resources freely available online in preference to typeset printed ones in a brick and mortar library.

Another incident illustrates this shift. An email arrived with regard to Webheads, a community of practice I coordinate. Someone liked the concept, wanted to apply it to a community she was at odds with (wanted to reform her community), and asked me for permission to apply this concept. I wrote her to the effect that no permission was necessary, please take what you need and share what you produce! The question was a polite one, but it had come from a proprietary, copyright mindset, whereas my online colleagues and I operate these days from a stance of shared open educational resources.

A third token of paradigm shift is my new Kindle, which I both love and hate. I love that it's always on and you can download books to it from anywhere you can access a Sprint network, but I hate that it's one of these things that ships broken from the factory, that it's so cumbersome to use outside the system that it doesn't work in the UAE where I live. I also hate that Amazon feels it can sneak onto your system and *remove* things from it because they designed it to be always open to them! (see <http://www.nytimes.com/2009/07/18/technology/companies/18amazon.html>). But I *love* that you can read comfortably on it, that you can increase font size (easy reading anywhere), that it will read *to* you text-to-speech. But I *want* to be able to load just any pdf on it and carry it around to read, or be read to, on a plane, a train, in traffic, while jogging. I *imagine* I can be in touch with others reading the same books or articles as I am. This device, or one like it, that's not broken, can revolutionize how we learn, like an mp3 player you can read from as well as listen to. That would be my kind of paradigm shift!

Modeling, Demonstrating, Practicing, Reflecting

This article is a reaction to these observations and many others like them, but also from Stephen Downes's (2007) presentation at WiAOC on learning the Web 2.0 way, where one of his slides read: "To teach is to model and demonstrate. To learn is to practice and reflect."

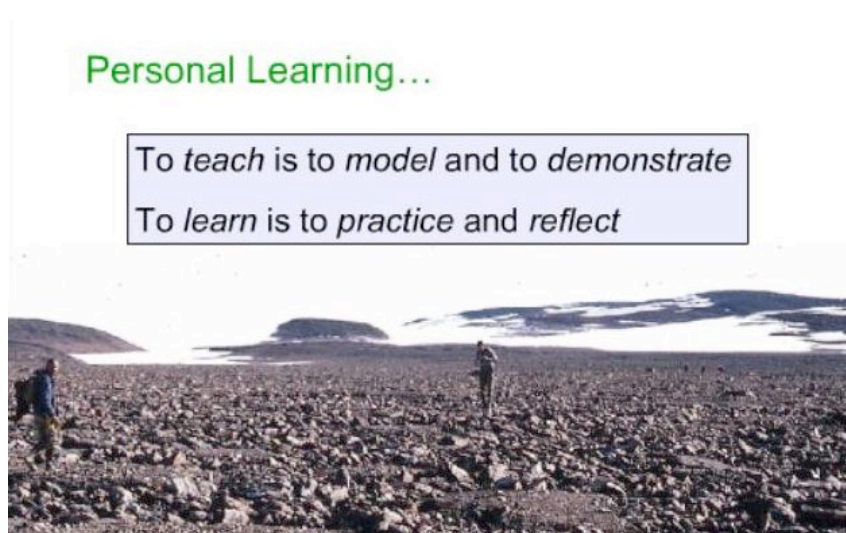


Figure 1. <http://www.slideshare.net/Downes/personal-learning-the-web-20-way> (Downes, 2007, Slide 22)

No one is a teacher without being a learner, so most of us do these four things instinctively. Networks are ideal as enhancements for all four of these essential activities of lifelong learners, and they enable us to model, demonstrate, practice, and reflect constantly and effectively.

So where do we get our models day to day? As one example, at the recent ALVEAMEC/ ARCALL online conference on social networking I heard Nicky Hockley (2009) present on Edmodo and in the course of this she modeled and demonstrated how participants could join her conversation right then and there, which I did. When she'd finished I went to bed, and when I awoke next morning I found that Mary had written just 20 minutes ago asking if anyone was still there. I replied, YES I was!

When I posted my message, the time stamps updated and I realized that Mary had actually posted that 20 minutes before I had closed the lid on my laptop and gone to bed, but the real time lag was 8 hours. Still I added a new post: "This is quite interesting, the Edmodo chat we started last night COULD be a side channel some of us could maintain throughout the social networking conference." Later, I showed Edmodo to my students, who seem to like its look and feel, as well as safety and privacy, so I've started using it as a back-channel to my face-to-face classes. All of these actions illustrate how I saw something modeled and demonstrated, reflected on what it meant to me, and applied my reflections to my practice, as Stephen suggested in the slide I have used often since hearing him present in 2007.

Modeling, demonstrating, reflecting, and practicing are what drive the development and dissemination of knowledge within a network. As I wrote elsewhere recently: "teachers who practice autonomy in their own professional development formulate heuristics for harvesting knowledge within their personal learning spaces, and thus stand a better chance of inculcating the desired behaviors in their students, thus increasing the likelihood of producing potentially autonomous and lifelong learners. But it is a percolative process. In order to teach (to model and demonstrate) one must constantly learn and re-learn, and this means that one must practice the behaviors one models (how else to model them?) and reflect on the ramifications of those behaviors, as we do in writing and reading this article, from each of our nodes connected to one another through our interlaced learning networks" (Stevens, 2007, pp. 28-29).

Early Pouncers

Another example of a community modeling and demonstrating amongst its members, and in so doing reaching out to contiguous networks, is the Webheads' recent experiences with Google Wave. Ever since Wave was first introduced in an 80-minute YouTube video last May <http://www.youtube.com/watch?v=v_UyVmITiYQ>, its general availability was anticipated by many whose practice involves collaboration, but it was not until October that Google started sending out invitations to trial the product.

What does an application like Wave need in order to achieve traction? It needs a network. As it did when it introduced Gmail, Google sought to regulate traffic to its servers by introducing the beta product on an invitation-only basis. To help invitees seed their networks, they sent multiple invitations to those who got their invitations directly from Google. They knew that for a network to form, people in your network need invitations, otherwise your Wave is dead in the water.

The Webheads community addressed the problem (that we needed invitations in order to play) in a wiki, created by one of its members, Seth Dickens, on October 25, barely 3 weeks after the first invitations went out. The wiki allowed anyone (*anyone* could write on it, not just Webheads) to leave an email address if they needed an invitation, and those who had spare invitations would give one to someone in need. The system worked to organize a quick and robust Webheads Wave, a sandbox for teachers to try out the tool and to model and demonstrate and practice with one another.

In observing not only our community but others at the edges of my personal learning network (PLN) doing much the same thing, I realize that we have seen in action precursors to early adaptors, *early pouncers*, people who pounce on a technology the moment it's released. Networks provide the framework for this to happen.

Paradigm Shift Across Communities and Networks

Paradigm shift results when many people in a community or network follow the same process of seeing things modeled and demonstrated for one another in such a way that after considered reflection and weighing of the old and new ways of addressing a problem, they gradually alter their practice. I have set out ten aspects of paradigm shift that we see today applied to education.

1. **Pedagogy** – Educators must shift from didactic models of “teaching” to constructivist ones emphasizing “learning.”
2. **Networking** – Educators need to move from regarding learning as an isolated activity (as assumed by Ryerson University for example, in accusing Chris Avenir of cheating for forming a study group on Facebook <http://www.thestar.com/News/GTA/article/309855>) to connectivist models along the lines of communities of practice and personal/distributed learning networks.
3. **Literacy** is moving from its last-century dominance by print media and tending toward multiliteracies approaches which can more appropriately accommodate how people articulate and communicate when a plethora of digital tools and connectivities are available.
4. **Heuristics** – The most productive models of organizing learning are moving from top-down client/server relationships between repositories and seekers of information to peer to peer ones, where those with knowledge and those seeking it treat each other

equally, often reversing roles frequently as seekers and providers of knowledge and content.

5. **Formality** – Degree of formality in education is moving from power-centric models with traditionally defined roles to much more informal models where fear of being exposed as not “knowing” is replaced with encouragement of exploration and discovery by all involved in the learning process. This increases the chances that F.U.N. (Frivolous Unanticipated Nonsense) will enter that process, as opposed to its being driven by a set of activities with predictable outcomes.
6. **Transfer** refers to the means by which knowledge is shared and implies that educators avoid lecture modes (where students “sit and get”) in favor of modes where experts move off center stage in favor of learners (to become a “guide on the side” where they model and demonstrate).
7. **Directionality** of knowledge transfer is trending from “push” systems, like email, where content providers (including spammers, advertisers, and office wags pushing cute attachments) control what comes your way; to “pull” systems e.g. those using tagging and RSS to aggregate what recipients request to see, on demand.
8. **Ownership** is trending from the proprietary models prevalent toward the end of last century (e.g. Microsoft Windows and Office; Blackboard LMS, Sound Forge, Camtasia) to open source models (Linux, Open Office, Moodle), greater availability of freeware (Audacity, Camstudio and uTIPu), and the ascendancy of OER’s (open educational resources).
9. **Sharing** – Educators are viewing copyright not as something that limits the use of intellectual property but along the lines of the Creative Commons model, which allows content to be shared and remixed within parameters that credit its creators and specify fair use.
10. **Classification** of learning objects, websites, bookmarks, photos and music, and even filing of email is moving from taxonomic models to folksonomic ones, where the most effective systems for organization and subsequent recall are not fixed and pre-ordained ones (taxonomies) but ones where stored objects are categorized by multiple users who simply tag them on the fly and so invent organic, flexible systems of retrieval (folksonomies) that would otherwise be chaotically stored in “the cloud,” unmanageably irretrievable via taxonomic system.

Transforming from Group to Community

A group calling itself Webheads has been meeting synchronously at least once a week since 1998, and asynchronously daily during most of that time. Webheads was originally an effort at teaching EFL online among collaborating teachers Maggie Doty, Michael Coghlan, and Vance Stevens. When the Writing for Webheads group of students and teachers formed in 1998, participants were distrustful of sending their pictures to strangers on the Internet, and even to reveal their real names. I had the idea to help participants get to know one another by putting their pictures up at a static web page I maintained. Eventually, as trust was

established, someone sent a picture in, then another. Then a couple more came, and before long we had a gallery of faces at our web pages, quite unique at the time.



Figure 2. Writing for Webheads: <http://sites.hsprofessional.com/vstevens/files/efi/webheads.htm>

Webheads in Action (WiA), <http://webheads.info>, was formed as part of a 2002 session of EVO (TESOL sponsored 6-week courses given free each year via Electronic Village Online, <http://evosessions.pbwiki.com/>). Membership in WiA has since increased to hundreds of educators who engage in helping each other pursue lifelong, just-in-time, informal learning through experimentation in the use of social-media and computer mediated communications tools. Among its many accomplishments in online collaboration, the Webheads community has already mounted three free international online conferences, the Webheads in Action Online Convergences (WiAOC) in 2005, 2007, and 2009 (see <http://wiaoc.org>, <http://webheadsinaction.org>, and <http://webheadsinaction.ning.com/>).

Early in the course of these activities, the *group* came to think of itself as a *community*. Some community characteristics are:

- Photographs and voice/webcam communications enable group members to see the human behind the text message and enhance bonds leading to a sense of community

- Scaffolding one another's practice by modeling to one another and answering each other's questions
- Showing evidence of caring, such as interest in personal vignettes, individual accomplishments and setbacks
- Developing and defining a group culture through a set of mutual understandings negotiated via numerous modalities of communications

We came quickly onto the notion of communities of practice. An illustration of transition through this phase can be seen in the way the gallery of faces appears in Second Life where Webheads started meeting (among many other places) in order to further their practice. The picture is from an island in Second Life developed by The Consultants-E <<http://www.theconsultants-e.com/>> called *Eduction*, on which Graham Stanley built a hut especially for Webheads.



Figure 3. <http://flickr.com/photos/94794165@N00/410359410/>

Diffusing Knowledge Throughout Networks

Webheads in Action rapidly evolved from a group into a community of practice, but now the evolution of social media has enabled the Webheads CoP to interact with others to become part of a much wider distributed learning network. WiA's transition from CoP to involvement with other communities was greatly enhanced through our encounters with the Worldbridges communities (see Lebow, 2006, <http://worldbridges.net> and <http://edtechtalk.com>). Mutual interests within the various communities were corroborated when Jeff Lebow, worldbridger-in-chief, took out a domain for Webheads in Action and set up a Drupal there.

Figure 4. <http://webheadsinaction.org>

Keeping in mind what constitutes learning, and how modeling, demonstrating, reflecting, and practicing are enhanced via social networking, and how paradigm shifts have been operating on our networks since the turn of the century, we gain insights into what differentiates groups, communities, CoPs, and networks (see Downes, 2006, for more on groups and networks). Webheads has progressed through the various phases to interact with others so that theoretically any one member or node in any one community has access to *all* the knowledge within the network.

We can conceive of CoPs as bubbles overlapping in a Venn diagram. The total of all the bubbles would be the network as conceived in connectivist terms. The CoPs are themselves important to the sharing of information within a community, but the fact that nodes within the CoP are connected with nodes outside the CoP in essence brings infinitely more knowledge into the community.

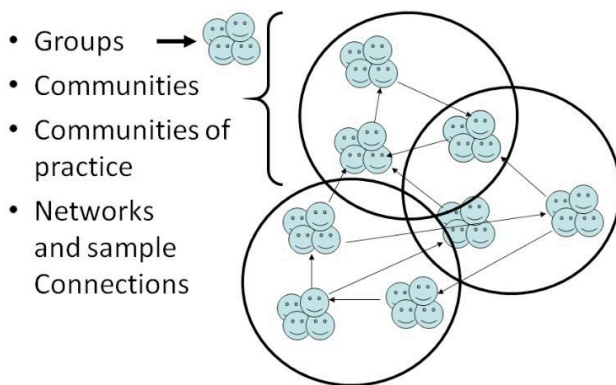


Figure 5. <http://www.slideshare.net/vances/the-webheads-and-distributed-communities-of-practice>, Stevens, 2009a, Slide 9

Various perspectives of how knowledge is propagated through networks have addressed the problem of information overload. Information is essentially raw data and is disconnected and of itself of little use beyond the scope of factoid. Communities and networks help us to aggregate, filter, and assimilate this information into some kind of knowledge structure and then disseminate it throughout the community or network. Nik Peachey (2009) addressed exactly this concept in his presentation recorded at the recent AVEALMEC/ARCALL online conference on Social Networking.

Downes (2005) has written and presented much on the concept of diffusion of knowledge within distributed learning networks, as has Siemens (2006). Siemens has long espoused the notion of connectivism, famously summarized as “The pipe is more important than the content within the pipe.” (Siemens, 2004, n.p.). Here, Siemens means that it is more important to nurture a system of connections between knowledgeable people (the pipe) than to be concerned with what these knowledgeable people know (the content within the pipe) since this content can be directed as needed to anyone with appropriate connections within the pipe.

By whatever name—distributed learning networks (DLN’s), or personal or professional learning networks (PLNs), or personal learning environments (PLE’s)—all provide direct (and indirect) contact with many people in one’s network, each possessing a reservoir of knowledge which contributes to the entire pool of knowledge residing in the network. This can be accessed through listservs or sometimes almost instantaneously through Twitter or RSS feeds, or Skype, or instant messaging. Therefore the knowledge possessed by any individual, or node in the network, is the sum total of all aggregated knowledge within that network. It is to this that we ascribe the incredible power inherent in distributed learning networks which often comprise to some extent communities of practice.

Distributing knowledge is what communities and networks are all about. Downes has a simple illustration of what it means to ‘know’: Where’s Waldo? Once you know where Waldo is, you can’t not know. But these days it seems, there is too much information available, and we need increasingly to get our minds around more of it in order to keep up with and ‘know’ how to perform competently in our work. Wenger, McDermott, and Snyder (2002, p. 6) promote the CoP model as an anecdote to the fact, as he puts it, that “increasing complexity of knowledge requires greater ... collaboration; whereas ... the half life of knowledge is getting shorter.” Dave Cormier (2008) suggests a rhizomatic model of learning to deal with increasingly rapid obsolescence of knowledge. In this model, knowledge is seen as springing up wherever the tendrils, given its rhizomatic nature, are able to reach.

What these notions, theories if you will, suggest is that connection with others in a network is of prime importance in having access to a wide repository of knowledge. On one level we experience this when we turn to Google or Wikipedia to answer in minutes if not seconds a question that in the past might have sent us to a library, but more often than not would have remained unanswered due to the logistics involved. PLN/DLN’s can help to resolve problems of a more intractable nature as well. An example has just come to me by means of my own

PLN/PLE. As I was writing this, Gavin Dudeney posted to the Webheads listserv that he had needed to help a student in Syria resolve a problem with Java that was interfering with a synchronous connection they were trying to establish, so he sent a message out on Twitter asking for the regional solution and “within five minutes” was put in contact with someone in Syria who know about the problem and had a solution (see http://groups.yahoo.com/group/evonline2002_webheads/message/24571).

As another example of how knowledge spreads across my own PLN, this article and the presentation from which it derives both utilize Creative Commons images on the Internet, causing me to reflect on where I had learned about Creative Commons in the first place. This was *not* something I read about in a book or magazine article. Perhaps I came across the concept in a blog, or heard about it in a podcast. After a while, having participated in one way or another in conversations in which Creative Commons often came up, I saw that respected peers were modeling for me how I should use it myself, so I reflected on that, and put it into my own practice. I learned for example that you can search Google Images with a filter for creative commons licensing, and so some of the images used here are used with permission given in advance by the content creators to remix, with attribution.

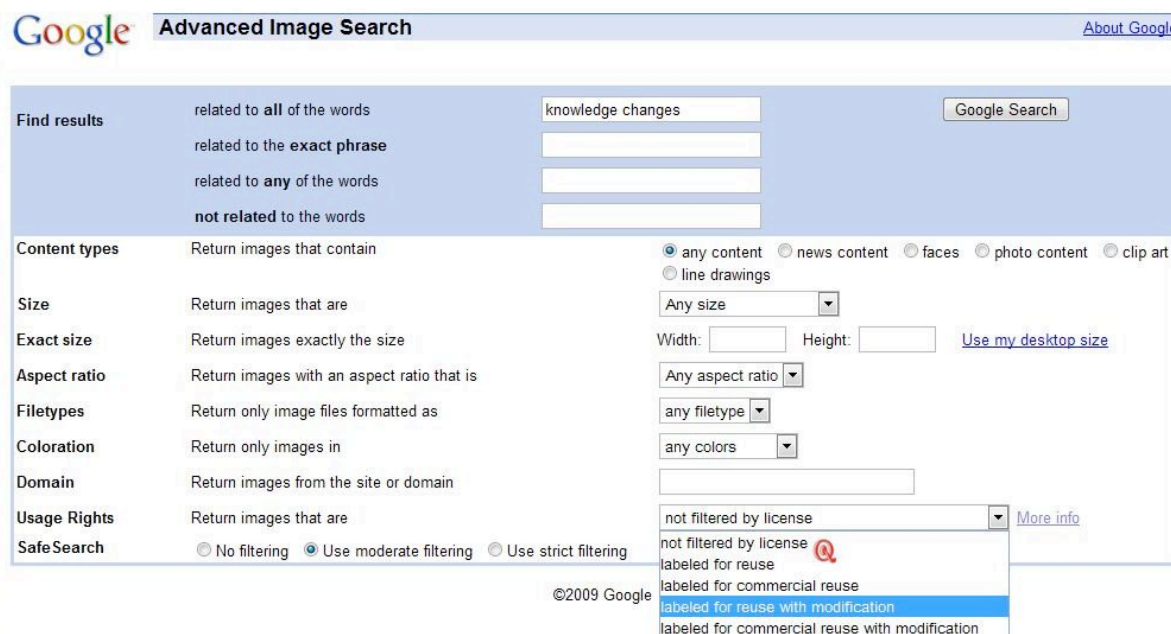


Figure 6. Advanced Image Search Window

Implications

It follows that a major key to success in keeping current in one’s field is in nurturing productive contacts within a network. Whereas students last century were taught how to use *Readers’ Guide* (in my day) and public Internet and library search skills as we entered the new century (see for example the 21st Century Information Fluency project, <http://21cif.com>), the skill of leveraging networks is increasingly important in the 21st century in plumbing and

aggregating knowledge when that knowledge base is forever changing at an increasingly accelerated pace. For appropriate use of online social networks to be taught in schools, teachers themselves must be familiar with their impact on learning. One problem is that teacher-trainers without sufficient experience with technology and who are rooted in old-school methodologies are simply not modeling new age learning behaviors for their trainees by showing them how to reach out to networks.

Even when training is provided, recidivism can be a problem. At the TESOL conference in Denver, Jack Richards touched on what teachers need to *know* in order to practice effectively. He said research indicates that teachers don't necessarily activate the knowledge they are exposed to in training curricula. The example he gave was on reverting to traditional methods rather than utilizing knowledge about communicative language teaching (Richards, 2009: 4), but the same applies to knowledge of technology. Derick Wenmoth addressed this specifically, noting similar findings regarding recidivism after training in his keynote at the K-12 Online Conference (Wenmouth, 2008).

In order for training in pedagogical affordances of networking to take hold it is crucial that teachers be trained not only *in* social media, but *through* its use. Those who use social media in their professional networking find this self-evident, but there is at least anecdotal evidence for the need for modeling by mentors. For example, Kathy Clesson, speaking during Cheri Toledo's presentation at the 2007 Future of Education online conference, cited her findings that teacher-trainers who use technology with their students do indeed render those students more amenable to integrating technology in the way that they pursue their own lifelong learning (Toledo, 2007). Furthermore, teachers need to be shown the connections between their use of social media in their personal and professional lives. Glogowski and Sessums pointed out in their presentation at the WiAOC 2007 conference their surprise that student teachers who were already using technology with online acquaintances in their after-hours social networking were not carrying this over into their professional teaching practices.

This disconnect is apparent in the way that many conferences are organized and structured. Many such gatherings do little to encourage real-time connectivity for either presenters or participants. George Siemens remarked recently that face to face conferences were falling 'unacceptably' short on utilizing networking potentials for participants (Stevens, 2009b, at 54:48 *min:sec* into the recording).

This was acceptable in the past because participants who relied on having the opportunity to touch base with each other once a year traditionally might have only been able to exchange letters or emails during the intervening months between conferences. But the new dynamic suggests that connectivity where contacts only meet face to face falls far short of interacting with them in online environments as well. Fortunately, there are many venues for doing just that, and for many practitioners, these are taking on greater importance in professional development than interaction in face to face environments. At the very least, one could say that interaction in online spaces facilitates greater productivity when the interactants eventually do meet face to face.

People entering the workplace now are deluding themselves if they think they can stay current in their field for long based on what they learned in college. Fortunately, there are few teachers actually doing that. Teachers typically are constantly improving their skill sets through attendance at conferences and workshops and participation in online communities of practice (CoPs), and administrators should be encouraging them to continue to do so through reduced teaching loads and allocation of and other resources.

Teachers are somewhat empowered to take control of their professional learning environments, but what about their students, who in grade-school are often made to switch off their cell phones and work from behind firewalls that are anything but net-neutral while they are in school? David Warlick says that teachers are “master learners;” in other words they are lifelong learners who have through training and experience refined the process to the point where they can serve as guides to students. As to how that learning should take place at any stage of the process, he says (rather emphatically, it’s a video recording) in his 2007 K12Online keynote that it is an “insult to our children” to separate kids from their online networks by forcing them to switch them off when on school premises.

Solutions

Of course, we are all learning constantly. Also, we learn well what we choose to learn. Yet there are people at institutions who are charged with seeing that staff are making progress in professional development and often this entails helping them come to grips with developments in technology. However teachers might avoid workshops if they sense that their attendance there is directed top down, as something prescribed by an administration or coordination team that may or may not have its finger on the pulse of what its staff needs with regard to professional development. Such “training” might be regarded as additional burdens to what teachers already have to cope with in the course of their hard workdays.

The solution is to offer workshops bottom up, which means that they would be something that staff would organize themselves. Ideally there would be staff who would feel themselves a part of a community of practice and who wish then to engage other members of the community in activities and discourses which would improve the practice of all its participants. CoPs reverse the directionality of the impetus to learn. Rather than there being an onus on teachers to shape up and learn prescribed technologies, the message of these events is more like, “Hey, some of us think we have discovered some new tools that will help our teaching, why don’t we get together and you can show us what you’ve discovered lately, so we can all learn from one another?” In this format, teachers model and demonstrate to one another what they might then pass on to students, and if they do this through social media then they’ll learn about the next generation of social networking technologies as they work together. In other words, rather than fighting technology and considering it a burden, teachers will be using it in ways they can see might be effective with anyone assuming the role of student. But in order for this to happen, teachers need to be given some relief from non-stop teaching and marking, at least the ones who would be willing to get this going.

Communities of practice thrive online. Etienne Wenger has made extensive studies of communities of practice funded in part by Xerox corporation in an attempt to get its workers interacting along the lines of successful Japanese models, but as Wenger has conceived the concept, it is not possible for employers to jump start communities of practice, rather they must create an environment encouraging their growth (see Wenger, McDermott, and Snyder, 2002; and Wenger, 2004, for a brief explanation and bibliography).

This assumes then that management is aware of the need for helping its staff make the necessary paradigm shift. Kim Cofino (2008) wrote an excellent blog post listing conditions for getting an institution to make “the shift to a 21st century learning environment.” While recognizing the importance of management providing “official acknowledgment of the vision and philosophy and clear expectations that change will happen,” Cofino sees the need for someone to work with staff as designated change agent to help make sure the infrastructure is in place, make clear why change is needed, help formulate a framework for change that sets out clear roles for each staff member, one who doesn’t just troubleshoot but publicizes success, and who can help ensure that models for change are translated into curriculum.

The way forward seems to me for people to realize they are in a paradigm shift and for those who are farthest along in making that shift to help others to bridge the gap to the other side. Because it is a paradigm shift, the old ways of managing this transition may not be the most effective. Part of the shift is a realization that there are many opportunities for networking through use of social media, and that these are impacting how people might organize themselves to take responsibility for their own learning in ways that management might interfere with in trying to manage things in more traditional top-down ways. In other words, rather than set up a series of professional development workshops taking place at times that might not suit everyone’s schedule, teams of teachers might be encouraged to organize training sessions that would utilize synchronous and non-synchronous social media tools. These sessions might not be called ‘training’ sessions outright. There are many models that might seed development through communities of practice: use of Nings, for example, or holding spontaneous un-conferences (un-professional development sessions, un-training events). Bar camps, LAN parties, and speed-geeking are all formats that focus spontaneity, informal learning, and class-roots energy into positive learning outcomes for participants (check out <http://classroots.org/>; and more information is available on the other concepts at Wikipedia).

Some tools and awarenesses for community and network -based professional development (all can be easily Googled or dot com’d) are:

- Social networking: Ning, TappedIn, EVO, WiAOC
- Social bookmarking: Delicious, Diigo
- Groups: YahooGroups and GoogleGroups
- Microblogging: Twitter, Plurk, Pownce, Edmodo, Twiducate
- Instant messaging: Yahoo Messenger, Skype
- Blogging and podcasting: keeping current via RSS

- Wikis: PBWiki, Wikispaces
- Aggregation: Yahoo!Pipes, Technorati, Pageflakes, Netvibes, Protopages, iGoogle, Addictomatic, Spezify

The bottom line is that, whereas meeting face-to-face has its place in professional development, it does not hurt and most likely maximizes productivity to interact with colleagues as frequently as possible in online spaces as well, and this is where distributed communities of practice interacting with each other through greater distributed networks is key to learners' and teachers' (master learners) keeping current in their practice and confident in their level of competency at work.

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- A recording of that presentation is here: <http://tinyurl.com/vance091106wiziq>
- The slides are posted here: <http://www.slideshare.net/vances/modeling-social-media-in-groups-communities-and-networks-socialnetworking-2009-online-conference>



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