July 31, 2006

The eLearning Guild's
LEARNING SOLUTIONS SM
Practical Applications of Technology for Learning e-Magazine

THIS WEEK: Design Strategies

Column by Chris Gosk on Hosting – page 15

Be Constructive: Blogs, Podcasts, and Wikis as Constructivist Learning Tools

By Joyce Seitzinger

Learning is not unlike the Borg; it thrives by assimilating technologies never originally intended for education, from the printing press to the audio cassette. (If you are not familiar with *Star Trek*, I apologize for the reference – it's a geek thing.) With the arrival of the World Wide Web, learning stepped up a gear and developed a new sub-entity, e-Learning.

In the past 10 years, most learning managers, designers and developers will have encountered HTML and XML, at least four Learning Management Systems, and probably over 15 content production tools. And now blogs, Podcasts, and wikis have arrived to no educational purpose. What will we do, Captain?

Well, we're not going to lose our heads and let the technology steer us. And we will not take evasive action by ignoring these potentially powerful tools while continuing on our course. Online learning is leaning towards a constructivist pedagogy in which collaborative learning takes an important role, so let's see how we can assimilate these newcomers into the constructive learning we strive for.

Why target these three media?

Why not look at Flickr or the hugely popular MySpace? The justification for singling out these three new media is that they are the most well-known, popular, and widely available of the new media. Podcast was the word of 2005 for the New Oxford American Dictionary and blog was the word of 2004 for Merriam-Webster. The success of Wikipedia, which con-

As social software (blogs, Podcasts, and wikis are just three examples) matures, it presents more opportunities for learners to participate actively in their own learning. Designers can now move significant learning opportunities out of "event mode" and support construction of knowledge and skill beyond the classroom and beyond traditional asynchronous e-Learning. Read this week's comprehensive survey of what is available, and expand your own learning horizons!

A publication of

The eLearning Guild

tains 1.8 million articles, has 13,000 volunteer editors, and (according to a recent study) is only slightly less accurate than the Encyclopedia Britannica, demonstrates the popularity of wikis.

Additionally all three have already become mainstream. You will find all of them in use in educational settings, either as official organizational channels or as pioneer actions by a brave educator or trainer. They are no longer "emerging technologies."

Stephen Downes, a leading expert on online learning, sees the use of open media such as blogs, Podcasts, and wikis as the key to the future of learning. In his 2004 keynote speech entitled "Reusable Media, Social Software and Openness in Education" (which you can listen to by using the link in the References at the end of this article), he notices that there seems to be a divergence between the learning content producers and the content users. While producers are trying to force everything into closed systems, the users want to use open systems. He predicts that, "When we in education cease to heed the demands of traditional producers, and open ourselves wholeheartedly to the idea that content is created, distributed, and owned by the consumer, only then will the promises of the network age be realized, and the era of online learning truly begun."

It's learning, Jim, but not as we know it — the constructivist learning beast

We can already see a convergence between these new open media tools and constructivist learning: all three require the users to construct their own content. In recent years, those involved in online learning have had a growing understanding of the benefits of constructivist online learning environments and a sense of urgency exists to see where this kind of learning can take us. Yet much online training remains page-turners, and many online university courses are only calendars augmented with copies of a professor's lecture notes. Why?

Constructivism can be an intimidating goal; it is a complex pedagogy with its roots in philosophy and psychology, going back to Kant and Hegel. That is a lot of baggage. However to examine the possibilities for using our three media as constructive learning tools it is not necessary to delve into history. Instead, let's look at constructivist learning in practical terms.

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The eLearning Guild's LEARNING SOLUTIONS e-Magazine
Practical Applications of Technology for Learning

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Learning Solutions e-Magazine™ is published weekly for members of ***The eLearning Guild***, 525 College Avenue, Suite 215, Santa Rosa, CA 95404. Phone: +1.707.566.8990
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To ensure we are all on the same page, here is one of the most concise and practical descriptions of constructivist learning I have found. Jackie Miers provides this fine summary in a report on a Learning Management System for the Technology School of the Future:

"[C]onstructivist learning should engage students in meaningful learning and ... the critical features are that the learning should be ...

- Active and manipulative, engaging students in interactions and explorations with learning materials and provid[ing] opportunities for them to observe the results of their manipulations
- Constructive and reflective, enabling students to integrate new ideas with prior knowledge to make meaning and enable learning through reflection
- Intentional, providing opportunities for students to articulate their learning goals and monitor their progress in achieving them
- Authentic, challenging and real-world (or simulated), facilitating better understanding and transfer of learning to new situations
- Cooperative, collaborative, and conversational, providing students with opportunities to interact with each other to clarify and share ideas, to seek assistance, to negotiate problems, and discuss solutions."

Gulp. Well, yes, that is a tall order whether you are in an academic or corporate training setting. The idea of an organization-wide online learning system, which will facilitate all of the above, never mind obtaining the political clout or hair-raising budget to get it off the ground, is mind-blowing. But does it need to be?

Phasers set to slice ... constructivist learning elements

Rather than going large and setting up organization-wide systems, we can start small by using only elements of constructivist learning. After reading Jackie Miers' report, David Jonassen's 1998 authoritative work on constructive learning environments, an EDUCAUSE list of learning-centered principles, as well as articles by Chris Dede, Peter Doolittle and Shirley Reushle and her colleagues at the University of Southern Queensland, I came to an incomplete but workable synthesis.

The seven elements below seem to be key components for online constructive learning. Some of these elements can overlap to some extent, such as support and social presence, but that is expected in such an organic system.

- Problem-based learning
- Learner-centeredness

- Collaborative learning
- Social presence
- Interactivity
- Support
- Cognitive tools

In the sections that follow, I provide some background details for readers who are new to constructivism. Bear with me, as this is likely to get quite dry at times. You can scan ahead if you wish. If you find yourself nodding and muttering "uh-huh, uh-huh" to yourself, you can proceed at warp-speed to the next sections (beginning with "The blog") where I will guide you to some implementation possibilities for each of the three new media, including a mix of articles and real-life examples.

Problem-based learning

Problem-based learning consists of several building blocks.

- An appropriate problem – This can be a question, a case, a project, or a problem, but it will be the force behind the learning and so should be (in David Jonassen's words) "interesting, engaging, and relevant."
- Previous experience or related cases – Learners need to have previous experience to construct their own solution to understand the presented problem. This is often missing, but it can be supplied in the form of case material.
- Information resources – Learners will also need rich information resources to investigate problems and to build and test their hypotheses. Keeping in mind the fact that novices cannot distinguish between important and superficial information, a designer can help by, for instance, including some sort of evaluation of a source with an internet link.
- Authenticity – For constructive learning to work, authenticity is needed. It is achievable by providing real-world tasks and making content and skills relevant to the learner.

Learner-centeredness

Particularly when looking at online learning and the advent of lifelong-learning, one can see the growing need for students to be self-steering. Some components of this learner-centeredness are:

- Learner control – The teacher or trainer becomes a facilitator rather than a lecturer, and the learner becomes an active participant in the learning process. This learner control can lead the student to new learning strategies. Shirley Reushle and her colleagues at USQ mention learning paths, glossaries, and concept maps as possible aids for learner control.
- Active learner – The active learner can perhaps best be described by her actions. Here are some examples as described in the 2005 EDUCAUSE list:
  - identify topics, problems, cases, and make informed judgments
  - present work publicly, teach others, give peer feedback and support
  - choose how they complete activities
  - apply the material and ideas to their own context
  - can contribute to discussion, before, during, and after the class (either online or face-to-face)
- Reflection and articulation – Reflection and articulation might be the area where most meaning-making as prescribed in constructive learning is done; this can be through learning diaries or other journaling activities.
- Flexibility – This is actually two-fold. On the one hand, a flexible learning system should allow students to work at the time, place, and pace they choose, providing accessibility, convenience and freedom. On the other, the user should have flexibility to transfer her knowledge to another problem or to the work floor and to apply her skills and thought processes in new situations.

Collaborative learning

Collaborative learning is an integral part of constructivist environments.

- Learning is best done in teams – Besides being learner-centered, constructive learning is about co-constructing knowledge, i.e., collaborative learning. As David Jonassen says, "Learning most naturally occurs not in isolation but by teams of people working together to solve problems. CLEs [Collaborative Learning Environments] should provide access to shared information and shared knowledge-building tools to help learners to collaboratively construct socially shared knowledge."
- Community of Learners [COL] – In a COL, students can share information, values, and goals; the participants carry out research, discuss the knowledge they construct, make shared decisions about that knowledge, and reflect.

Social presence

An interesting element of constructive learning is the concept of social presence, the online social relationships and connections with fellow learners and an instructor or experts. At the University of Southern Queensland, they reported it can "influ-

If participants could click buttons to navigate, it was labeled as interactive learning, which was an odd assumption as one would never accept that a student flipping the pages of a book is automatically learning. Fortunately, interactivity now stands for active engagement with course elements, which can be the computer environment, the student's own learning process, the learning materials, other learners, or the facilitator.

ence the quality and quantity of interaction, enthusiasm and participation," but found that overall it was not more difficult to have relationships online than in a classroom. Consider that some students, who may be uneasy with online social interactions, should be supported in this environment.

Interactivity

In 2000, at the height of the e-Learning hype, page-turner e-Learning was a common phenomenon. If participants could click buttons to navigate, it was labeled as interactive learning, which was an odd assumption as one would never accept that a student flipping the pages of a book is automatically learning. Fortunately, interactivity now stands for active engagement with course elements, which can be the computer environment, the student's own learning process, the learning materials, other learners, or the facilitator.

Support

In Lisa Neal's list of e-Learning predictions for 2006, Alison Rossett notices that as responsibility for learning moves to the individual, learners may not be particularly skilled at learning independently and online. Her petition for 2006 is for a shift to happen from a focus on technology to guiding and developing independent e-Learners. So how can educators or trainers provide constructive support?

- Feedback – To be most effective, these should be immediate and detailed responses so the student can correct or review her actions. She can reflect on her initial answer or solution and, with the help of the feedback, construct new knowledge.
- Modeling – Another form of support is modeling, the observation of expert performance and consequent imitation.
- Coaching – Coaching support can be prompted or unprompted and can guide the student through any of the learning stages, from imitation of the expert to the skilled original learner performance.
- Scaffolding – This is a more structured form of support and often occurs within the learning system. Essentially it is the breaking up of learning into smaller steps.

Cognitive tools

As shown above, the activities required in problem-based, learner-centered learning in a social, online setting involve a high degree of variety of cognitive skills from the participants. For this reason, cognitive tools like conferencing systems or presentation tools should be included to prevent

students from overloading.

Now that I have set apart the different constructivist learning elements, let's examine how blogs, Podcasts, and wikis are already delivering them.

The blog

Five years ago, only a small percentage of us had heard of a blog and we would probably have called it an online journal or Web diary. The entire world began hearing about blogs in this context on the news when an Iraqi known as the Baghdad Blogger told his story from Baghdad during the American invasion of Iraq and its aftermath. Now Weblogs are as prevalent and ubiquitous as mobile phones in our daily lives.

BBC reporter Shola Adenekan describes what seems to be a typical story of blog usage in education at Sussex University. One of the professors there accidentally stumbled onto the use of a blog for her courses when she set up a personal blog for her own research. As she added more and more academic posts, the personal research blog slowly became a place where her students could find critical information, and a central location where she could answer their questions.

However, a blog can be much more. Will Richardson, the man behind Weblogg-ed.com (http://Weblogg-ed.com/), a widely read blog about edublogging (using Weblogs in education), equates blogging with learning. He even quit his job to pursue the possibilities of blogging in education. In his post "Reinvention Chapter 2? I Quit" (http://weblogg-ed.com/2006/reinvention-chapter-2i-quit/) he writes, "there is energy and a potential in this tool... and in these connections that for me, at least, is incredibly intriguing.... We need to get everyone, and I mean everyone access to the knowledge and people and ideas that now make up the Web. Educators need to be a part of this evolution, and maybe the revolution, too."

Blogging for reflection and authenticity

With their background, one of the most obvious ways to use blogs in constructive learning is as an online learning journal in which students reflect on their perceptions of the learning materials and on their own learning process. In fact, most edublogs, such as Edublog Insights (http://anne.teachesme.com/) and Weblogg-ed (http://weblogg-ed.com/), are places where the educational blogger reflects on what they are learning about learning. To get a clear sense of this, track a couple of these sites for a few days and pick one you like, because of the author's tone or because their work environment resembles your own, or whatever. Now follow this blog for a few weeks and notice how the author learns from his own observations and reflections and builds on his knowledge, often fed and spurred on by the comments of other edubloggers.

Posting blogs publicly on the Web can lend a measure of authenticity to learning tasks. Charles Lowe and Terra Williams use blogs in their writing classes. They find that blogging software offers a useful cognitive tool by automating the creation, formatting, and uploading of material, freeing students' attention for the actual task at hand. But they also noticed that the addition of a real audience by posting assignments on the Web creates authentic discourse, and forces students to think more carefully about articulation. They found that the potential for actual readers, combined with feedback received, has positively influenced their students' writing skills.

Social presence and collaborative learning through blogs

The concept of journaling may conjure up lonely images, but in fact, blogs and networks of blogs can facilitate development of a community of learners and social presence.

Community of learners

A blog and its comments, or a group of blogs, can evolve into a community of learners. This was demonstrated to Konrad Glogowski, a PhD student researching the use of blogs in primary education, in December of 2005 when his class was deprived of their blogs for a few weeks while transferring platforms. In his post "Tools Interiorized" (http://www.teachandlearn.ca/blog/2005/12/07/tools-interiorized/), he writes "This experience confirmed my belief that blogging is about creating communities ... What they missed was *situated writing*, a cognitive activity situated within a specific space that fosters cognitive engagement. They missed interactions, interactions with texts and with each other *through* texts."

He further notes that students' blogging identities are so entwined with their writing that discarding the work felt wrong. Faced with new empty blogs, students were anxious to fill them. The new empty space was not "their" community, and "their" community fueled their learning.

It is tempting to assume that this phenomenon will only occur in a very structured classroom. However, look at what happens as a consequence of Glogowski's post. Will Richardson posts his reaction in "Caring about the Content" (http://Weblogg-ed.com/2006/caring-about-the-content/):

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" ... it's striking to me how much different this level of concern is compared to all the paper content we've created in the past [... and always easily discarded]... . And it's all about the investment that we make in this, the idea that what we're writing has a legitimate audience. How different it must be for these students who want to stay connected to the people and the ideas that have nurtured their learning." It appears that by creating the learning work in a community, students become more engaged with their learning and it gains a higher status with them. They "own" it.

In comments on that post, Alan Levine mentioned that perhaps the title should be "Caring about OUR Content" and offers his experiences. Another reader ("Doug") argues for "Caring about the Community." So we see how even in the discussion of this one particular case, a small community of learners arises, shares information, and builds knowledge around this topic. COLs grow almost organically, and it is easy to see how we as learning designers can facilitate such communities through blogs, whether it be in an academic or corporate setting.

Social presence

Konrad Glogowski's illustrative experiences also show the effect of social presence on learning; when the community was inaccessible, learning ground to a halt. One student asked "Are we gonna do any work until it's fixed?" Another felt odd writing unpublished in Word: "It was like – like talking to someone who was not listening." The absence of a social presence, which they usually found in their blogs, diminished the students' capacities for learning.

If your interest for using blogs in your learning situation has been piqued, then subscribing to Konrad's "Blog of Proximal Development" would be a good starting point. He was an Edublog Award winner in 2005, and his posts are usually a mix of his practical classroom experiences with insightful looks at the theory of learning.

Group blogs and the construction of knowledge

A group blog can facilitate the collaborative construction of knowledge. Tom Nelson's class is an excellent case of how a class blog can do this. We see the constructive learning aspects of collaborative learning, meaning-making, reflection, information resources, and the creation of metacognition about working together and audience awareness, in action.

You can find a description of Tom's experience in "Steps toward a Successful Classroom Blog" (http://www.cwrl.utexas.edu/?q=node/233). He divided his class into blog groups according to topic interest. He asked each group's participants to post weekly writings related to their group's topic based on their own research and fed by the posts of their group members. But instead of dictating criteria for posts, students were asked to set up their own guidelines for inclusion on the blog, deciding on content, style and length. To do this, students reflected on the goals of their blog, their audience, and their own wishes.

Tom further asked the students to target a particular audience. They did so by generating "blog rolls," lists of relevant links to other blogs about the same topic based on their research. This "blog rolling" aided students in "refin[ing] their own sense of the discourse communities that surround their group's subject" and gave them an idea of where their own writing and thoughts fit in.

The use of blog rolls has two other constructive learning benefits. Inclusion on a blog roll implies some sort of evaluation of a linked information resource as being pertinent and useful. It also allows greater networks to develop; groups of blogs that become a knowledge creation community in their own right.

The power of comments: feedback and active learning

The comments on blog posts can be powerful feedback tools; they offer immediate and detailed responses to the learner's thoughts and ideas.

On Edublog Insights (http://anne.teachesme.com/2006/02/02/comments-make-a-difference/), Anne Davis posts about her enthusiasm for comments and the opportunities for learning they offer. "Some of our best classroom discussions emerge from comments. We share together. We talk about ones that make us soar, ones that make us pause and rethink, and we just enjoy sharing those delightful morsels of learning that occur. You can construct lessons around them. You get a chance to foster higher level thinking on the blogs. They read a comment. Then they may read a comment that comments on the comment. They get many short quick practices with writing that is directed to them and therein it is highly relevant. Then they have to construct a combined meaning that comes about from thinking about what has been written to them in response to what they wrote."

And learners value comments. In his post that I cited earlier, Konrad Glogowski remarks on his stu-

Imagine a course on courtroom judgments for a law firm. You can create various Podcasts to relate the personal views of witnesses, accused, and lawyers as well as perhaps the lawyer's closing statements. Hearing the voices of the stakeholders in the case will lend an authenticity perhaps more difficult to attain when reading about the case on paper. It is possible to add some reflection questions at the end of each Podcast. Law firm employees can listen to these Podcasts in their own time as often as they like, then come together in the classroom or online to discuss the case.

dents' deep disappointment when they discovered they could not transfer the comments with the posts to their new environment.

It is almost impossible to be a passive learner when reading comments on your own posts and responding in comments to other's blog posts. It forces learners to engage higher cognitive skills. You cannot just browse, you need to ponder, formulate an opinion about what's read, and then effectively articulate those thoughts; in other words be an active learner.

And best of all, this feedback need not all come from the trainer or teacher or the automatic LMS feedback system; peer and audience comments are equally valid feedback. This moves us further away from the "sage on the stage" role and provides more of the desired learner-centeredness.

The blog as a low-budget problem manipulation space

A problem manipulation space does not automatically entail expensive simulations. As David Jonassen says in his writing on CLE's, it can be enough to ask learners "to articulate their solutions to problems and then to develop a coherent argument to support that solution." One possible way of doing this is through the creation of fictional blogs by fictional stakeholders in a situation similar to your learners' situation. The blog posts can be prepared in advance, but when active the instructor can adjust them to respond to the learners' explorations. How would that work? Well, imagine for instance a course on time management in which employees follow the daily life of a fictional employee through his blog. He posts about his upcoming appointments, his crisis when his colleague is on vacation, and agonizes about what project to tackle first. Then you ask learners to comment on his posts with suggestions based on their own experiences, and what they have been learning in the regular course material. This is just one way of creating a low-budget problem manipulation space.

See Sidebar 1, at right, for more information to help you start blogging.

Podcasting in education

A Podcast is nothing more than an MP3 file. You can record a Podcast with a microphone and software on your computer, or by calling it in via phone to a service. Podcasts do not require a mobile MP3 player. Users can access them through PCs and through mobile phones. The use of RSS enables listeners to subscribe to certain Podcast feeds and receive new Podcasts as they become available for download. (See Sidebar 2 on page 9 for an explanation of RSS.)

Many in education have noticed the possibilities for Podcasting. In her 2006 Learning Circuits article "Trend: Podcasting in Academic and Corporate Learning" (http://www.learningcircuits.org/2005/jun2005/0506_trends), Eva Kaplan-Leiserson mentions how Podcasts can assist auditory learners and non-native speakers, create an alternate channel of material review, provide feedback for students, make it possible to review lectures or training, and provide supplementary content.

And even back in 2004, D'Arcy Norman and Steve Sloan offered the following ideas in the post "Podcasting for Education" (http://www.darcynorman.net/2004/10/30/podcasting-for-education):

- To facilitate self-paced learning
- To allow faculty to offer advanced and or highly motivated learners extra content
- To make available recorded interviews with external experts
- To allow guest speakers the ability to present once, but to many classes
- To offer a richer learning environment

Because Podcasts are one-way traffic, their use for interactivity, constructing knowledge, and collaboration may appear limited. However, there are

Sidebar 1 *Get blogging*

Blog hosting

If you are a blogging novice, you are best off using a blog hosting service. You won't need to install anything on your computer or server. Just create an account and you can begin posting. These services usually also provide some ready-made templates which you can personalize. Here are three such services:

Blogger (http://www.blogger.com/start)
LiveJournal (http://www.livejournal.com/)
Edublogs (http://www.edublogs.org/) – free blogs for education professionals

Installing a blog on your own site

If you want more control over your blog, to customize its looks or perhaps add functionality, or if you want to keep a blog on your organization's intranet, it is best to install blogging software on your own site or server. Some of these are open source, so would be no cost to you, apart from running your server. Here are some of the most popular blogging software tools.

Wordpress (http://wordpress.org/)
Greymatter (http://noahgrey.com/greysoft/)
Movable Type (http://www.sixapart.com/movabletype/)
Typepad (http://www.sixapart.com/typepad/)

Group Blogs

Bloggers with a common interest can pool their knowledge and maintain a blog together. With most blogging tools, it is possible to add different users to one blog and so allow several people to post. For educational or training purposes, this means it is possible to create work groups with, for instance, an assignment to keep a blog on a particular topic.

other effective applications for Podcasts in constructive learning.

Hearing aid: the use of Podcasts in case-based instruction

In his article on CLEs, David Jonassen pleads for the use of multiple related cases to convey the complexity of most problems. He gives the example of providing "divergent personal interpretations of [a] dilemma" in a case where ethical dilemmas need to be solved. But how can this be done through Podcasting?

Imagine a course on courtroom judgments for a law firm. You can create various Podcasts to relate the personal views of witnesses, accused, and lawyers as well as, perhaps, the lawyer's closing statements. Hearing the voices of the stakeholders in the case will lend an authenticity perhaps more difficult to attain when reading about the case on paper. It is possible to add some reflection questions at the end of each Podcast. Law firm employees can listen to these Podcasts in their own time as often as they like, and then come together in the classroom or online to discuss the case.

This is related to Jonassen's thoughts on learner "buy-in." The problem context is its physical, organizational, and social environment. Its representation should be such that learners feel they are engaged in an authentic problem and that they have the full picture.

The use of simulations to enable this buy-in and authentic learning has been gospel in e-Learning, but the expenses were often prohibitive and not justifiable. With Podcasting, simulations become affordable. For example, it is easy for designers to create an "overheard" conversation between stakeholders or people affected by the learning problem.

Up close and personal: Podcasting feedback and social presence

When work groups or a class work together to produce a Podcast, and this is published on the Web, the comments received can be just as powerful as those described by Anne Davis above.

Jo McLeay describes a case in point on her blog The Open Classroom. In "Podcast Conversations" (http://theopenclassroom.blogspot.com/2006/01/Podcast-conversations.html) she describes a Podcast exchange that took place between a class and a Doubting Thomas. The class had created a Podcast on the False-Wikipedia-Entry-Incident, which was so insightful that someone who heard it did not believe this class could

Sidebar 2 *Planet RSS*

What is RSS?

Blogs, Podcasts, and wikis all make use of Really Simple Syndication or RSS. Will Richardson explains RSS as follows in "Blogging and RSS" (http://www.infotoday.com/MMSchools/jan04/richardson.shtml): "Weblogs (and an ever-growing number of other sites) generate a behind-the-scenes code in a language similar to HTML called XML. This code, usually referred to as a 'feed' (as in 'news feed'), makes it possible for readers to 'subscribe' to the content." These feeds can be collected, displayed and manipulated in an aggregator known as an RSS reader, and can also be added to spaces like MyYahoo and MyMSN.

The power of RSS is that it collects all the latest news and media on the user's "interest scanner" and puts it all in one searchable, readily available place. So instead of opening your browser and first visiting Yahoo for your entertainment news, checking whether there any items you haven't read yet, and then opening another window to read the BBC's sports news, it is all collected for you in one place. This makes it a powerful learning and teaching tool. Imagine, as Will Richardson does, a "Subscribe to Class 6a's Homework Page." Teachers could have the latest assignments at their fingertips in real-time.

RSS and RSS aggregators can be seen as the driving force behind the boom in blogs, Podcasts, and in wikis of the last years. And the new kids on the block, Flickr and MySpace (albeit in a roundabout way) also support the use of RSS.

The little orange blocks

So how do you find RSS feeds? There are pointers strewn throughout most sites, probably even those you visit on a daily basis. Up until a few months ago, they were mainly little orange blocks with "RSS" or "XML" written in white letters. Now many aggregators provide their own icons. Visit one of my favorite sites, 43Folders (http://www.43folders.com), for an example. Scroll down a bit and, on the right-hand side of the screen, you will see 16 different icons.

RSS Readers

There are many different RSS readers. Visit these sites to see which RSS reader will suit your need:

Bloglines (online tool and probably the most popular)
(http://www.bloglines.com/)

FeedDemon (desktop) (http://www.newsgator.com/NGOLProduct.aspx?ProdId=FeedDemon)

NewsGatorInbox (integrates with Outlook) (http://www.newsgator.com/NGOLProduct.aspx?ProdID=NewsGator+Inbox)

NetNewsWire (Mac OS X)
(http://www.newsgator.com/NGOLProduct.aspx?ProdID=NetNewsWire)

Live Bookmarks (integrated in Mozilla's Firefox browser)
(http://www.mozilla.com/firefox/livebookmarks.html)

Can I make RSS Feeds?

Yes, you can and it won't cost you a thing. Most blogging, Podcasting, and wiki software will take this out of your hands and create your RSS feeds automatically.

have done it. His Podcasted comments and their reactions created a true Podcast conversation that Jo says "... really shows the potential of this technology and the learning that can happen."

And again, this is not an option limited to the classroom nor is it necessary to publish on the Net. The potency of feedback also goes for published Podcasts posted on a corporate intranet, which share insights taken away from a course or seminar.

Another use for Podcasts is as an aid in establishing social presence. Think about asking learners to upload an introductory Podcast, or, as a teacher, providing personal feedback on assignments through mini-Podcasts.

Reflection Podcast

For the student who is not a strong writer, Podcasts enable him to choose another medium for reflection. He can record his thoughts on a PC or mobile phone, listen to it and ponder his thoughts, consequently add to or edit this recording, and post it. And, as the rise of video or vodcasts is predicted by both Stephen Downes and Karl Kapp in Lisa Neal's list for 2006, the potential for reflection and articulation only expands.

The i in iPod: Learner-control and flexibility

The learner-control and flexibility that Podcasting provides is surely the most obvious way in which it can support constructive learning.

Self-paced learning

By recording a lecture and making it available for download, a professor can increase learner control. The student can listen to the lecture at a time when they are most receptive to it. And they can repeat it if they feel the need.

The 2005 Newsweek article "Professor in your pocket" (http://www.msnbc.msn.com/id/10117475/site/newsweek/) calls this recording of lectures course-casting. The technology allows the easy addition of guest speakers and primary-source material. "Some professors actually act more like DJs than Ph.D.s, composing musical intros, adding gong sounds, jokes, and other aural cues to emphasize important ideas on the digitalized version of their lectures." This counters parental concerns about students missing lectures, and therefore missing social interactions. One of the professors is dispensing with live lectures altogether. Instead, he will make his Podcast lectures mandatory listening, and will hold group discussions based on those lectures instead.

Interview with an expert

An interview with an expert is another excellent way of using Podcasts in constructive learning. The expert can simply relate her knowledge once and learners can access it at their convenience and as often as they need. And not just the participants in this course, but also in next year's course. An added advantage is that the expert does not need to visit. These are clear benefits for larger companies who may, until now, fly their oil-drilling experts to lecture at all their facilities.

One can also use the expert Podcast to supply modeling. Experts can comment on the case in question, or provide articulate reasoning as they perform a task that will also be asked of the learners.

See Sidebar 3, below, for some helpful information on Podcast creation.

Sidebar 3 *Get Podcasting*

Creating a Podcast

Creating a Podcast is as simple as recording an MP3 file directly on your computer's hard drive, using a microphone and any of a number of audio utilities. You can also subscribe to online services that allow you to use your telephone (mobile, landline, or VOIP) to "phone in" your spoken report, interview, or other information. At the most basic level, that is all it takes.

Of course, it will take a bit more effort to create a decent quality Podcast that you would use in a training setting. You can find a number of guides to creating a Podcast on the Web and in books. (*Editor's Note: The eLearning Guild will publish a guide to Podcast creation in the near future.*)

Podcast creation software

Audacity (open source) (http://audacity.sourceforge.net/_
Gabcast (record with your phone or VoIP) (http://www.gabcast.com/)
Propaganda (not free) (http://www.makepropaganda.com/)
Garageband (Mac OS X) (http://www.apple.com/ilife/garageband/)

Podcast hosting and publishing

When you've created your Podcast, you need to put it somewhere and let people know where to find it. Many blogging tools now also allow the hosting of Podcasts on their service, as do spaces like MySpace and MSNSpaces. But audio files are large, so there are usually some limitations. Here are some specific Podcast hosting and publishing services.

Odeo (http://www.odeo.com/)
Podbean (http://www.podbean.com/)
Podomatic (http://podomatic.com/)
Switchpod (http://www.switchpod.com/)

How often should I update my Podcast?

Podcasting is not radio. You are not required to fill a half-hour show nor are you required to publish it every week on the precise same hour. The best guideline for updating your Podcasts is when you have something new to share.

Wikis in education

Linda Schwartz and her colleagues examined 24 university wikis to generate a list of selection criteria for the use of wikis. They collected their findings in their 2004 article "Educational wikis: features and selection criteria." They found that few are used for distance learning purposes, "... yet wikis can provide an efficient, flexible, user friendly and cost-effective interface for collaboration, knowledge creation and archiving, and student interaction."

Brian Lamb's "Wide Open Spaces: wikis ready or not" gives an honest introduction to wikis (http://www.educause.edu/pub/er/erm04/erm0452.asp). He offers a history of the wiki and describes some examples of academic use ranging from a "Romantic Audience Project" to supporting writing instruction. He also warns about the pedagogical challenges and technological considerations involved in wikis in an educational context. Tracking changes can be a challenge, course management can spiral out of control, attribution of work can be difficult, and there is a lack of hard security and privacy. Another issue is plagiarism, which appears to be accepted practice among wiki contributors.

Overcoming wikiphobia

Many educators and trainers write and Podcast about their successful and enjoyable blogging and Podcasting experiences in education. But such experiential information sources for using the wiki in learning in general and online learning in particular are much scarcer on the ground. One of the few sources I found worth a visit is Paul Ellison's blog section on Wiki Teaching (http://www.nycwp.org/paulallison/newsItems/departments/wikiTeaching).

Perhaps the issues Brian Lamb warns us about are the inducing factors for what can be called wikiphobia in trainers, teachers, designers, and learning managers alike. The main objection appears to be, "But anyone can change anything." Of course, that is the point of learning together in an open environment. So let's look at some tips to overcome wikiphobia.

- It is possible to host a wiki in your protected corporate intranet environment, protecting sensitive information.
- If you work with younger learners, it is of course your duty not to expose them to "weirdos on the Net." You can take two steps. Like the corporate environment, you can take the wiki behind closed doors. Or you can still publish everything on the Web, but limit who can make changes to the wiki, so you can screen users. That way you can allow parents or interested teachers to take part, but protect young minds.
- Start with baby steps. Before implementing a wiki in your training, get some experience as a wiki participant yourself. Go to the Wikipedia, find one of your pet interests or hobbies, and see what you can do to improve or add to that Wikipedia entry.
- Wikis have a form of social control entitled Soft-Security. Brian Lamb describes it as follows, "Think of an open wiki space as a home that leaves its front door unlocked but doesn't get robbed because the neighbors are all out on their front steps gossiping, keeping a friendly eye on the street, and never missing a thing."
- The built-in versioning abilities of wikis mean no earlier version of a page need be lost. If some crackpot does get through and "ruins" a page, the administrator can restore an earlier version.
- But perhaps most importantly; it doesn't really matter whether some overbearing know-it-all posts a lot of nonsense to the "final draft." In wikis, there is no real final draft, but even finishing a draft is really not as important as the process of collaborating with fellow participants to attain that draft.

The constructive wiki

The 2005 EDUCAUSE Learning Initiative "7 Things You Should Know About Wikis" states that wikis can provide individual interactivity, collaborative learning, cognitive tools, authenticity, and more; all constructive learning elements. "Wikis might be the easiest and most effective Web-based collaboration tool in any instructional portfolio. ... a wiki's versioning capability can show the evolution of thought processes as students interact with the site and its contents. These collaborative projects help promote 'pride of authorship' and ownership in the team's activities."

Wikis seem to be the ultimate tool for constructive learning, providing a problem manipulation space, cognitive tools, learner-centeredness, and social presence through communities of learners, interactivity, and support, all in one place.

Problem manipulation space

David Jonassen sees the problem manipulation space as the very place for meaningful interaction with the problem, so a wiki is almost by definition such a problem manipulation space.

"Aiming for communal constructivism in a wiki environment" (http://kairosnews.org/node/3809) is the story of a teacher named Heather, which accurately depicts this meaningful interaction. She par-

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ticipated in a wiki with the aim of developing a joint online document. In this reflection, she examines her own wiki learning after failing to successfully implement a wiki in her classroom:

"As a newcomer you begin to understand the established community's shared knowledge, and you learn where you can introduce your voice in the discussion. Your words then become absorbed by the group, and 'refactored' as they say in wiki-speak. And, as others come to understand your ideas, it becomes their own, and new thoughts spring from your page, in a very literal sense: new links. The wiki, in a constructionist sense, becomes 'an object to think with.' Issues of ownership become blurry, yet the social support and feedback system still provides a sense of accomplishment and pride."

Cognitive tools

The discussion, formatting, posting, and tracking tools are cognitive tools, automating tasks to allow participants to focus on the shared construction of content instead.

Learner control and community of learners

Each member of a wiki can change anything about an article, but it is considered bad form to change anything without consent of the community. In that way, it is both learner-centered and community-centered. The individual active learner can concentrate on a piece of an article she wants to improve on, but she will have to negotiate and argue to have her idea or interpretation accepted by the group.

Linda Schwartz and her colleagues touch on the concept of social presence in wikis. "Wikis may also exhibit some of the elements that Wenger ... considers fundamental to the creation of successful communities of practice – among them, a virtual presence, a variety of interactions, easy participation, valuable content, connections to a broader subject field, personal and community identity, and interaction, democratic participation, and evolution over time. Many wikis also have a core group or individual that takes active responsibility for directing the community."

The wiki can become an umbrella for learning in your institution; supposing that community does not just consist of this year's students. You can keep the wiki online and let next year's class add to it, and the next ... .

Interactivity

You only have to read Heather's story and Lisa Schwartz's findings to note that there is room for both meaningful interactions with the content and with other learners in wikis.

Support

Although it is not mandatory for wiki users to "lurk" for a while before posting, there appears to be an automatic form of modeling by new users; they model their participation on how other wiki contributors communicate, act, and write within the wiki.

Another form of support that often occurs in wikis is coaching. Topic experts or prolific writers will take a newcomer under their wing and guide them through their first few contributions.

Sidebar 4, below, will help you get started with wikis.

Conclusion: Engage

Looking at the evidence one can conclude that not only are blogs, Podcasts, and wikis effective, they are also affordable tools for constructive learning. They can facilitate key elements of constructive learning such as problem-based and collaborative learning, learner-centeredness, cognitive

Sidebar 4 *Getting started with wikis*

The trouble with wikis

Many people are intimidated by wikis, but the facts are simple: if you can type, you can wiki. A very useful step-by-step guide to getting started can be found at wikiHow – The How-To Manual That Anyone Can Write or Edit (http://www.wikihow.com/Start-a-Wiki)

Wiki Hosting

The services below will allow you to kick off your wiki after creating an account.

Wikihost (http://wikihost.org/)
JotSpot (http://www.jot.com/)
Wikia (http://www.wikia.com/wiki/Wikia)

Wiki Software

Here is wiki software that you can install on your own site or server.
Mediawiki (of Wikipedia fame) (http://www.mediawiki.org/wiki/MediaWiki)
Tikiwiki (http://tikiwiki.org/)
Dokuwiki (http://wiki.splitbrain.org/wiki:dokuwiki)

Compare wikis

Find the wiki that suits your need by reading Carl Challborn's and Teresa Reimann's technical evaluation report "Wiki Products: A comparison" (http://www.irrodl.org/index.php/irrodl/article/view/229/312) which examines wikis for use in education.

tools, social presence, interactivity, and support.

The applications mentioned and demonstrated in existing examples in the eclectic list above, are only a fraction of the ways in which blogs, Podcasts, and wikis are being used to achieve constructive learning. One theme that seems to emerge across all three media is the concept of ownership and participation.

If you are unable to begin with large organization-wide constructivist learning systems, then blogs, Podcasts, and wikis can be powerful tools to get started with constructivist learning on a small scale, even if it's only as an addition to a traditional training or course. Any of these open media could be a fully-fledged part of a CLE, and conceivably a combination of these tools could constitute an entire constructivist learning environment in its own right. We have the constructivist theory, we have the constructivist tools, it is now up to us as online learning designers, developers, tutors, and managers to be constructive. Engage.

References

"Blog" picked as word of the year. (2004, 01-12-2004). Retrieved 08-12-2005, 2005, from http://news.bbc.co.uk/1/hi/technology/4059291.stm

Aiming for communal constructivism in a wiki environment. (2004, 24-05-2004). Retrieved 30-01-2006, 2006, from http://kairosnews.org/node/3809

Wordsmiths hail podcast success. (2005, 07-12-2005). Retrieved 08-12-2005, 2005, from http://news.bbc.co.uk/1/hi/technology/4504256.stm

Wikipedia survives research test. (2005, 15-12-2005). Retrieved 15-12-2005, 2005, from http://news.bbc.co.uk/1/hi/technology/4530930.stm

7 Things You Should Know About... Wikis. (2005). *Educause Learning Initiative*

Adenekan, S. (2005, 23-01-2005). *Academics give lessons on blogs.* Retrieved 10-01-2006, 2006, from http://news.bbc.co.uk/1/hi/education/4194669.stm

D'Arcy, N. (2004, 30-10-2004). *Podcasting for Education*. Retrieved 02-01-2006, 2006, from http://www.darcynorman.net/2004/10/30/podcasting-for-education

Dede, C. (2001, October 15-17, 2001). *Leadership in Educational Innovation via Learning across Distance.* Paper presented at the Networking 2001 Conference, Brisbane, Australia.

Doolittle, P. (1999). *Constructivism and Online Education*. Paper presented at the Online Conference on Teaching Online in Higher Education.

Downes, S. (2004, 07-09-2004). *Reusable Media, Social Software and Openness in Education.* Retrieved 10-01-2006, 2006, from http://www.downes.ca/archive/04/09_07_news_OLDaily.htm

Edbauer, J. (n.d.). *Steps toward a Successful Classroom Blog*. Retrieved 01-02-2006, 2006, from http://www.cwrl.utexas.edu/?q=node/233

Educause. (2005, 01-02-2005). *Learner-centered Principles*. Retrieved 02-02-2006, 2006, from http://www.educause.edu/ir/library/pdf/NLI0547A.pdf

Glogowski, K. (2005). *Tools Interiorized*. Retrieved 01-02-2006, 2006, from http://www.teachandlearn.ca/blog/2005/12/07/tools-interiorized/

Jonassen, D. (1998). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional Theories and Models* (pp. 215-236). Mahwah, Erlbaum.

Kaplan-Leiserson, E. (2005). *Trend: Podcasting in Academic and Corporate Learning.* Retrieved 04-01-2006, 2006, from http://www.learningcircuits.org/2005/jun2005/0506_trends

Lamb, B. (2004). Wide open spaces: wikis, ready or not. *EDUCAUSE Review, 39(5)*, 36-48.

Lowe, C., and Williams, T. (2004, 21-07-2004). *Moving to the Public: Weblogs in the Writing Classroom*. Retrieved 18-01-2006, 2006, from http://blog.lib.umn.edu/blogosphere/moving_to_the_public.html

Miers, J. (2004). *BELTS or Braces? : Technology School of the Future.*

Neal, L. (2006). *Predictions for 2006*. Retrieved 08-02-2006, 2006, from http://www.elearnmag.org/subpage.cfm?section=articles&article=31-1

Reushle, S., Dorman, M., Evans, P., Kirkwood, J., McDonald, J., and Worden, J. (1999). *Critical Elements: Designing for Online Teaching*. Paper presented at the ASCILITE99 Responding to Diversity, Brisbane, Queensland.

Richardson, W. (2004). Blogging and RSS. *MultiMedia and internet@schools, 11*(1).

Richardson, W. (2006, 07-02-2006). *Reinvention Chapter 2 – I Quit.* Retrieved 08-02-2006, 2006, from http://www.Weblogg-ed.com/2006/02/07#a4638

Richardson, W. (2006, 05-02-2006). *Caring About the Content*. Retrieved 08-02-2006, 2006, from http://www.Weblogg-ed.com/discuss/msgReader$4618

Schwartz, L., Clark, S., Cossarin, M., and Rudolph, J. (2004). Educational wikis: features and selec-

If you are unable to begin with large organization-wide constructivist learning systems, then blogs, Podcasts, and wikis can be powerful tools to get started with constructivist learning on a small scale, even if it's only as an addition to a traditional training or course. Any of these open media could be a fully-fledged part of a CLE, and conceivably a combination of these tools could constitute an entire constructivist learning environment in its own right.

tion criteria. *International Review of Research in Open and Distance Learning, 5*(1).
Tyre, P. (2005, 28-11-2005). Professor In Your Pocket. *Newsweek*.

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Additional information on the topics covered in this article is also listed in the Guild Resource Directory.

Column – Chris Gosk

Hosting Considerations for e-Learning Content

Are you looking for a checklist that addresses hosting requirements? We have it for you in this week's column!

Companies all over the globe are creating rich self-paced e-Learning content for hosting and delivery to students via the Internet. Unfortunately, many companies underestimate the support and system considerations needed in order to deploy and deliver e-Learning courseware.

Here's an overview of system and procedural considerations that support self-paced e-Learning content delivery success.

When hosting self-paced e-Learning (Web-playable) content, consider these three primary areas:

Content hosting environment

Connectivity – The content hosting server must be Web (http:) accessible, with adequate bandwidth to support the estimated concurrent usage.

Continuity – Control for system uptime, monitoring, revision control, security, and support.

Capacity – To help alleviate the demand for bandwidth and system resources from many students accessing the same training content at the same time, and to improve overall availability and performance of the content, consider a content distribution network.

Best practices

- Use a third-party hosting center that has the proper redundancy and security architecture in place.
- Funnel all content through a single control point that provides proper storage, back-up, and revisioning procedures.
- Use a content caching and distribution partner to help minimize bandwidth uses, server capacity, and the negative impact of "flash crowds."

Student environment

Web Access – The student PC settings must enable the student to obtain access to the e-Learning course via the internet or intranet environment.

System Settings – The student must have the proper browser and browser settings to ensure that the e-Learning course plays properly (each e-Learning course developed will specify its own set of unique system settings and browser requirements)

Software – The student must have the proper software (in some cases) to support playback of the desired media files in the e-Learning courses, such as Macromedia Flash®, Adobe Acrobat®, etc.

Best practices

- Make every effort to standardize your e-Learning development to minimize student PC impact.
- Avoid plug-ins or unsigned ActiveX controls. Corporate firewalls, virus software, or other PC operating restrictions often block these technologies.
- Create a system-check tool that validates the end-user PC settings in advance of the e-Learning to ensure they have the minimum and optimal system settings to play the e-Learning. Provide the means to quickly and easily upgrade the students' PC settings or obtain the proper plug-ins. This will minimize support calls and reduce the number of students who abandon the course.

Learning Management System

SCORM or AICC – If student tracking (time spent in course, completion status, bookmarking, scores, etc.) is desired, consider using a learning management system (LMS) that supports either SCORM or AICC specifications.

Content Location – In many cases the content hosting environment must be co-located in the same physical domain as the LMS in order for e-Learning course tracking to occur using the AICC and SCORM specification. Work-arounds from service providers may allow cross-domain tracking.

Content Authoring Tool – Not all content is plug-and-play with every LMS. Special considerations may be necessary for the content types and their ability to interoperate with your LMS.

Course Administration – Specify a resource to set up the content in the LMS and to assign that content to a user – an LMS administration function.

LCMS – Consider an integrated LCMS product if the learning program needs to enable prescriptive learning, course level questions, reporting and analysis, or the ability to search text within a course. Each LCMS or LMS provider will offer different functionality.

Best practices

- Set up a testing environment that closely mirrors the actual deployment environment, including PC type and configuration, typical internet or intranet connection and speed, and LMS or LCMS.
- Conduct a content briefing with the student help desk team before deploying the e-Learning courseware into a production environment.
- Ensure that your LMS supports your e-Learning development tools – not all development tool vendors provide troubleshooting support for tracking issues.

Many things can go wrong within the delivery chain *after* course creation. Follow the same rigorous procedures and controls as for commercially available software.

If you address and monitor these three critical areas, you will be well on your way to successful content development and delivery to your student population.

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The eLearning Guild is a Community of Practice for e-Learning design, development, and management professionals. Through this member driven community we provide high-quality learning opportunities, networking services, resources, and publications. Members represent a diverse group of managers, directors, and executives focused on training and learning services, as well as e-Learning instructional designers, content developers, Web developers, project managers, contractors, and consultants. Guild members work in a variety of settings including corporate, government, and academic organizations.

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Guild Benefits	Associate	Member	Member+	Premium
eLearning Insider	✓	✓	✓	✓
Annual Salary Survey	✓	✓	✓	✓
Past Conference Handouts	✓	✓	✓	✓
Resource Directory – Access & Post	✓	✓	✓	✓
Info Exchange – Access & Post	✓	✓	✓	✓
Job Board – Access Jobs & Resumes	✓	✓	✓	✓
Job Board – Post Resumes	✓	✓	✓	✓
Job Board – Post Jobs	✗	✓	✓	✓
Guild Research – Online Briefings	✓	✓	✓	✓
Guild Research – Reports	✗*	✓	✓	✓
Guild Research – Archives	✗	✓	✓	✓
Learning Solutions e-Magazine	✗*	✓	✓	✓
Online Events Archive	✗	✗	✓	✓
Online Forums	$	$	✓	✓
Face-to-Face Conferences	$	$	$	✓*
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Event Fee Discounts	✗	20%	20%	20%
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✓ = Included in Membership ✗ = Not available $ = Separate fee required

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