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WEB 2.0 AND LEARNING

Harnessing the Web's Power

Whether called Millennials or digital kids, this generation of students is the first to have grown up with digital tools at their fingertips. They're always "on," texting to friends, meeting up on MySpace, and interacting with the world in non-linear fashion. They can get the information they want when they want it, follow an idea in ways that have meaning to them, and jump from one thing to the next as the inspiration hits them. (Adults call it multitasking.) When they go to work in the future, it will be in a global environment where there is a continual need for new skills and the ability to adapt.

Using the tools that students find appealing can make a difference in their learning. With the "old" Web, students could find and use information in a variety of ways. With Web 2.0 tools, students can interact with and create new information and then communicate the results to a real audience. Many of these free web-based applications are similar in function to common desktop software. And others go beyond in capacity.

All one needs is a computer, Internet access* and a browser, and very little technical expertise. The tools, like the students, are always "on," accessible anywhere there is Internet access, and many are collaborative. They include word processors, spreadsheets, blogs, wikis, podcasts, social networking, photo editing and video sharing tools, slide shows, and more. Students use them for learning and educators use them for professional development. And social networking provides an authentic audience as well as a learning community.

The importance of Web 2.0 is that the tools change the way we operate. According to TechLearning blogger Steve Hargadon, "There are times when technological innovations can fundamentally alter our practices or culture.... tools that have the power to re-create us, and I believe that is the case with the read/write Web." And these new tools are available at no cost to students and teachers. With them we can maximize students' potential.

About the Fundamentals of K-12 Technology Programs

Brought to you by *Tech & Learning* and sponsored by HP, this new series covers the educational technology topics that matter most to the profession's leaders, practitioners, and innovators. Look for other issues, where we address key subjects such as Anytime, Anywhere Learning, Infrastructure and Networking, Educational Technology Leadership, Security, 21st Century Learning and Assessment, and others.

For more information, go to
<http://www.techlearning.com/K12/Fundamentals>

Advantages of Using Online Tools

- Cost effective
- Always available
- Simple to use
- Authentic audience
- Communication and collaboration skills
- Ability to track progress and assess results

Assuring Quality

- Schools and districts should have an acceptable use policy that outlines expectations for use of online tools.
- Teachers should establish rules for collaborative learning and goals for each project.
- Teachers should create a climate for cooperation and respect.
- Students should have a role in creating rubrics and assessment.
- Groups should designate roles and tasks.
- Teachers should monitor works in progress and provide formative suggestions.

“Collaboration is a complex process, but with online tools, students can transform both the process of working with others and the product that results. They can post ideas and get feedback from others with whom they are working. They can brainstorm to narrow or expand concepts. They can discuss their ideas, share research, and collaborate on a project. And peer editing takes on new meaning when they can discuss improvements in real time.”

— Cory Plough, “Web 2.0 Tools Motivate Student Creativity,”
TechLearning.com

The 4 C's of Digital Learning: Communication, Collaboration, Creativity, and Community

Where 20th century learning focused on the 3 R's, today's students live in a globally focused world and are more sophisticated than in previous generations. They need schools to focus on a different set of goals, those of communication, collaboration, creativity, and community.

Communication

Students have always written papers and reports and submitted them for a grade. Computer applications altered the experience to the extent that students could edit one another's work and revise drafts until perfect. While the Web provides access to information and experts, Web 2.0 tools go a step beyond to offer ways of creating, collaborating and distributing the final product, and interacting with an audience. Students now can post and share their work and get comments from readers globally. The potential of a real audience means that students work harder to perfect what they want to communicate.

BLOGGING

Blogs have a variety of uses and objectives. They can provide commentary on a specific subject or serve as a personal, online journal. Most blogs combine text, images, and links to other blogs, websites, and related media. Moreover, blogs provide their readers with the capacity to leave comments and remarks. They can be designated as private and allow feedback only from classmates or specified individuals. Blogs have become popular for improving student writing and peer editing, and there is a good selection of blogging software.

MICROBLOGGING

Keeping in touch with a group of people and being able to share brief ideas and ask questions has taken hold with Twitter, a site that allows users to state their point in 140 characters or less and have followers read it on computers and cell phones. Educators have adopted this tool to stay in touch with peers.

PODCASTING

Podcasting allows students to create audio content and distribute it on the Web. It is like a radio broadcast but online. Students can create reports and school news shows, practice foreign language speaking, document observations on a field trip, and share their work with a real audience. Teachers can find relevant and free education recordings online and also share their own. Any digital audio player or computer with audio-playing software can play podcasts.

Collaboration

Student collaboration is a complex process, but with online tools, they can transform both the process of working with others and the product that results. Students can post ideas and get feedback from others with whom they are working. They can brainstorm to narrow or expand concepts. They can discuss their ideas, share research, and collaborate on a project. And peer editing takes on new meaning when they can discuss improvements in real time. The new tools allow teachers to track changes and watch the progress of individual students in the process.

WIKIS

We think of Wikipedia as the epitome of a Wiki because it is the most familiar. Technically, a wiki is a collaborative writing space that allows users to read, add, and edit text and files. These files can include sound, movies, and even links to other websites. Students can post ideas and get feedback from other students with whom they are working. They can bounce ideas back and forth expanding or narrowing their original concepts. They can discuss their ideas, share research, and collaborate. Teachers can view the history to see changes and track what each student has contributed.

Creativity

While schools are good at honing students' skills, they often miss capitalizing on student creativity as a way to enhance learning. Web 2.0 tools allow students to write a story and use copyright-free photos to

“In the business and education world alike, the concept of collaborative technology continues to shape our thinking. The notion of techies huddled in isolation in front of monitors has given way to the concept of sharing data and/or ideas across the office or across the ocean. Students, professionals, or like-minded hobbyists can now be linked online by more than mere discussion boards or chat rooms.”

— Jon Orech, “Wikis Make Learning Wicked Fun,” *TechLearning.com*

set the scene, illustrate an event, or provide examples. When students use their own photographs, their creativity and seriousness are enhanced. In addition developing video documentaries is another way in which teachers can tap into the power of student creativity for learning. Web 2.0 sites like Flickr for image and video hosting and tools like Picasa for photo editing provide the means.

PHOTOS, VIDEOS, AND COPYRIGHT

Photo and video editing and sharing are successful because they enhance online collaboration and community as well as providing a real audience. Flickr offers Creative Commons licensing so that users can share content and use photographs for non-commercial use legally. Since a Creative Commons license can be included with a photo, it provides standards for the way photographs can be reproduced or used, which is most often copyright free for students.

Community

While young people use social networks to interact on a personal level, schools can tap into the phenomenon for student learning and professional development. Virtual communities are learning spaces that serve as electronic communities of practice where you find groups of people who have a common topic or theme for learning and who deepen their knowledge and expertise by interacting on an ongoing basis. According to *TechLearning* blogger Sheryl Nussbaum-Beach, “A burgeoning body of opinion suggests that virtual learning communities are becoming the venue through which agents for change operate. The potential is enormous, as knowledge capital is collected and the community becomes a sort of an online brain trust, representing a highly varied accumulation of expertise.”

EDUCATION NETWORKING

Schools can create communities of learners in which students’ tools, work, peers, and audience are all in one place. According to educator Alex Couros, “Creating and administering a private social network is an excellent method for establishing a safe social learning experience. At this time Ning seems to be the easiest and most complete tool for network creation.”

Educator Vicki Davis creates educational networks for her students. She says, “When you’re doing a global collaborative project and trying to merge your classroom with students around the world, you need something easy, manageable, and user friendly to quickly build the connections between students that must collaborate without ever having met. This sort of network facilitates communication.”

She also has a network on Ning for all of her students who can post their weekly reflections and questions and answers in a private place where there can be a lively open debate and they can share photos, videos, podcasts, and more.

Definitions of Terms

Web 2.0: Rather than a new version of the Web, the term Web 2.0 refers to changes in the ways software developers and end-users use the Web. According to publisher Tim O’Reilly, “Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as a platform, and an attempt to understand the rules for success on that new platform.”

Blog: Web log or chronological online personal journal with reflections, comments and often links to other Web sites produced by the writer. Others may subscribe to a person’s blog, which allows them to read it and write comments in response.

Podcast: A syndicated audio (or video) program produced either by traditional media, such as radio and television, or by individuals, including educators, hobbyists, students, or other enthusiasts passionate about a topic.

Image Editing: The ability to manipulate, enhance, and transform images. Simple edits include cropping and removing red-eye; more complicated techniques are working with light, contrast, layers, and making substantial alterations.

Social bookmarking: A Web-based service where shared lists of user-created Internet bookmarks are displayed. These bookmarking sites are a popular way to locate, classify, rank, and share Internet resources.

Social networking: A social network focuses on building online communities of people who share interests and activities, or who are interested in exploring the interests and activities of others. Most social network services are web-based and provide a variety of ways for users to interact, such as e-mail and instant messaging services. Social networking has created powerful new ways to communicate and share information

Vlog: (*short for video blog*): A term used to describe a blog that includes or consists of video clips. Typically updated daily (or with regular frequency), vlogs often reflect the personality or cause of the author.

Wiki: A type of Web site that allows visitors to easily add, remove, or otherwise edit and change some available content.

Definitions adapted from Wikipedia



“However you choose to do it, implementing Web 2.0 resources in your classroom via interactive multimedia lessons can be an easy and fun process, and adds richness and depth to students’ learning experiences. Teachers who are interested in creating more engaging and interactive lessons can explore the resources available to them and produce a better learning experience for their students than ever before.”

— Amy Capelle, “Web 2.0 Enhances Learning,” *TechLearning.com*

Tools for the 21st Century

According to Clay Shirky in “Here Comes Everybody,” “The most profound effects of social tools lag their invention by years, because it isn’t until they have a critical mass of adopters, adopters who take these tools for granted, that their real efforts begin to appear.” Below are some tools that educators are finding useful.

GOOGLE’S SUITE OF APPLICATIONS (PARTIAL LIST)

Blogger (www.blogger.com)

Gmail (mail.google.com)

Google Docs and Spreadsheets (docs.google.com)

Google Earth (earth.google.com)

Google Maps (maps.google.com)

YouTube (www.youtube.com)

Picasa (picasa.google.com)

BLOGS

Movable Type (www.movabletype.org)

Wordpress (wordpress.org)

Classblogmeister (www.classblogmeister.com)

WIKIS

Wikispaces (www.wikispaces.com)

PBWiki (pbwiki.com)

SOCIAL NETWORKS FOR EDUCATION COMMUNITIES

Ning (www.ning.com)

Imbee (www.imbee.com)

IMAGE AND VIDEO STORING AND EDITING

Flickr (www.flickr.com)

Photoshop (<https://www.photoshop.com/express>)

Premiere (www.adobe.com/products/premiereexpress)

OTHER EXAMPLES

Slideshare (www.slideshare.net)

Bubbleshare (www.bubbleshare.com)

Twitter (twitter.com)

Visual Thesaurus (www.visualthesaurus.com)

Online storage and file sharing (box.net)

Resources

WEBSITES TO LEARN WEB 2.0

<http://www.techlearning.com/story/showArticle.php?articleID=196604472>

WEB 2.0 TOOLS AND TIPS

<http://www.techlearning.com/edge/archives.php>

WEB 2.0: NEW TOOLS, NEW SCHOOLS

http://www.iste.org/source/Orders/isteProductDetail.cfm?product_code=newtoo

THE WEB 2.0 PROJECTS BOOK

http://www.terry-freedman.org.uk/db/web2/doc_page4.html

**Wireless access point and Internet access required. Availability of public wireless access points limited.*

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