A Day in the Life of Web 2.0

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The latest powerful online tools can be harnessed to transform and expand the learning experience.

An 8th grade science teacher, Ms. S, retrieves her MP3 player from the computer-connected cradle where it's spent the night scanning the 17 podcasts she subscribes to. Having detected three new programs, the computer downloaded the files and copied them to the handheld. En route to work, Ms. S inserts the device into her dash-mounted cradle and reviews the podcasts, selecting a colleague’s classroom presentation on global warming and a NASA conference lecture about interstellar space travel.

As with all the teachers at her middle school, Ms. S keeps a regular blog where she writes about everything from homework assignments to reflections on course topics, with a full description posted each Monday morning on the how, what, and why of course material to be taught in the upcoming week.

The teachers' blogs are all syndicated using RSS—Rich Site Summary, or the more informal and descriptive, Really Simple Syndication. With aggregation software, students, parents, administrators and other teachers can subscribe and have the freshly written blog entries immediately and automatically delivered to their desktops. Professional development, communication, cross-curricular lesson planning and articulation among grade levels are all served as educators regularly read each other's blogs and learn about topics and activities taking place in the various classrooms.

The Monday reports in particular enable them to benefit by sharing strategies and materials with colleagues who teach the same subject or those in other departments. For instance, Mr. K, a

Blogging Software

- EduBlogs – edublogs.org
- WordPress – wordpres.org
- Elgg – elgg.org

RSS Aggregators

- Bloglines – bloglines.com/
- Netvibes – netvibes.com/
- Google Reader – google.com/reader

health and P.E. teacher, frequently finds ways of integrating science issues covered in Ms. S's classroom with his health topics. He knows that Ms. S will focus on genetics this week, and he will be teaching about disease next week, so he arranges for them to meet and discuss a combination assignment. In preparation for the meeting, Mr. K conducts a Web search to find the most informative sites and adds the Center for Disease Control to his social bookmarks. (See the sidebar "How to Search and Tag," below.)

Meanwhile, social studies teacher Ms. L scans through sites tagged genetics in the school's social bookmark service. Her students may need quick access to them as they discuss genetic engineering current events during class. Mr. K's CDC site appears along with others that have been saved and tagged genetics. All assignments in Ms. L's class are turned in via blogs because she finds that their conversational nature encourages students to think and write in more depth than traditional formal essays or short answer assignments. Another advantage of receiving assignments in blog format is that both she and her students can subscribe, which means all of the kids' blogs appear in her aggregator, and students can reap the benefits of seeing each other's work.

Ms. L crafts the blog assignments with an eye toward training students to think critically and to post informed, well-considered opinions. A common classroom activity, for

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How to Search and Tag

To create a combination science/health lesson, Mr. K goes to Google News and searches for diseases that are in the news, cross-referencing them with the words genetics and mutation. The search engine returns references to about 10,000 articles from news sources from around the world.

He sees several references to bird flu, so he right-clicks on the term and selects Search Google. A second browser window appears that reports 57.1 million hits, starting with a list of the top 10. The Web pages at the top are those most linked to by other pages — ranking by recommendation. Among the top links are sites from the Center for Disease Control, the World Health Organization, MSNBC, and the National Institute of Health. After selecting a facts page from the CDC, the health teacher clicks a link in the linksbar of his Web browser, adding the site in view to his online social bookmarks, what Mr. K calls his "personal digital library."

In the page that follows, the health teacher selects from a list of tags to attach to the CDC Web page. These tags serve to categorize the Web page, enabling him to assign several categories (or tags) to a single page. He selects and clicks disease, genetics, health, Mr. K, and charlestonmiddle school. Because his online bookmarks are syndicated by tag, the site he has just added automatically appears on his Disease Unit Web page.

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instance, is to have students read the blogged entries of others and write persuasive reactions — one in agreement, another in disagreement — and post these writings as comments to their classmates’ blogs. Initially, the students struggled with the task, but they eventually learned the goal was not necessarily to find an idea with which they personally disagreed but to find another side to an idea and write persuasively from that perspective. For the genetics assignment, students assume a range of positions — some that discourage work in genetic manipulation based on security, cost, and ethics, and others that support it based on the potential cure for disease, life extension, and increased food production. In response to these blogged assignments, Ms. L posts assessments in the form of comments.

A few doors down the hall, veteran English teacher Mr. P is reviewing a new batch of student wikis. In an effort to help the students become better communicators, he never provides study guides for tests, instead relying on students to construct their own study resources using their team wikis. He rewards teams that create the most useful/popular study guides.

Mr. P uses a wiki tool installed on the school’s network. He devotes one part of the wiki site to general information and resources that he and the most accomplished students can edit. This part of the site serves as the class textbook. He also maintains other parts of the site for class teams, usually four students per team. These sections have their own passwords, and team members can log in to their wikis and enter text, images, links to audio and video files, and format their content in a variety of ways. Mr. P is able to track the number of unique views for each page so that he can measure and reward teams for producing the most useful communications.

Earlier in the day, Student A had left Mr. P’s room in a jubilant mood because she’d just learned that her team produced the most useful study guide for yesterday’s test, which earned them 10 points toward level three in the class. Level three will give the team much more editing access to the class wiki and more opportunities to contribute to the class literary Web site and the literary book the students will publish at the end of the school year.

Mr. P begins adjusting the volume on the microphone that hangs from his classroom ceiling. Today's discussion about The Grapes of Wrath will be recorded and posted in an audio file as a class podcast, as are all significant class presentations and discussions. Students, parents, community members, and other educators subscribe to his podcast programs. In fact, on the other side of town, Mrs. B, the parent of one of Mr. P's students, is listening to a podcast classroom conversation about a science fiction short story the students recently read. She and other parents subscribe to the podcasts so they can more easily engage their children in conversations about school.

At about the same time Mrs. B is listening to the lively classroom discussion, her son, Student B, is keying a text message from his school desk to his social studies class team. He briefly describes an idea for putting together a video as part of their current class project on rural cultures. The video idea had occurred to him a few days earlier while he and his mother were talking about one of the lesson recordings she'd listened to. Student C happens to be in study hall when she receives Student B's message and is excited about using a video in their presentation. She immediately accesses the school's social bookmarks, looking for sites that have been submitted by their science teacher, Ms. S, tagged Podcast

A syndicated audio (or video) program produced by traditional media such as radio and television but also by individuals including educators, hobbyists, students, or anyone passionate about a topic.

Podcast Directories
Education Podcast Network epnweb.org
iTunes www.itunes.com
Podcast.Net www.podcast.net
Podcast Directory www.podcastdirectory.com
Podcasting News www.podcastingnews.com

Social Bookmarking services

This is not a new web application. There have been online bookmarking sites for many years. However, some of these services are social in nature, because people can tag the web sites that they store with keywords, and then list web sites that have been tagged with the same keyword by other users. In addition, some social bookmarking services allow the users to list other users who have bookmarked the same web sites.

Del.icio.us – http://del.icio.us/
Furl – http://furl.net/

with soil and plant growth. She identifies two sites, one from the Discovery Channel and the other from the USDA, called Ask a Worm. The idea is to create a video animation illustrating how soil quality affects cultures.

As Student C tags the sites for her team, school librarian Ms. J is conducting research on behalf of a new math teacher. She and the school tech facilitator both subscribe to all of the teachers' Monday report blogs. With access to these weekly updates, they can use a shared spreadsheet to maintain an ongoing curriculum map of what's being taught in the school. The librarian and tech educator use the map to support teachers, finding and identifying resources and strategies related to what they are teaching. Ms. J is using a blogging search engine to find some serious Weblogs about mathematics so that the new teacher can include more practical applications in her current unit on real-world math. She finds several blogs: Galileo's Dilemma (math, physics, and chemistry), Dr. Katte's Blog (engineering), and BizImpresario (entrepreneurship). The librarian then adds the three blogs to the school's social bookmarks and tags them for the meeting that she has just noted on the school's collaborative social calendar.

Social Calendar

Social calendars are online schedules that allow more than one user. A team of workers can use the services as a collaborative scheduler to manage projects and business operations.

Google Calendar – calendar.google.com
Yahoo Calendar – calendar.yahoo.com

Meanwhile, the principal is also looking at the school calendar. She is finishing up a weekly blog entry that describes happenings at the school for the next seven days, including two class podcasts, a band concert (also to be podcasted), a guest speaker, an interesting lesson about ancient civilizations, and the PTO meeting. The administrator subscribes to and scans all of the teachers' Monday report blogs for material to include in her weekly report. She always posts the blog entry by the end of the day on Monday, which is read not only by parents but also by other schools, district leadership, and people from other parts of the community and country.

Early that evening the district superintendent reads the principal's recently posted blog. He also subscribes to the teachers' Monday report blogs, finding that their writing gives him a bank of ideas for promoting the district and its efforts toward continued improvement. After he finishes the reading, he briefly accesses the wiki site where he and a

committee of educators and community members are collaborating to develop a district improvement plan. He jots down a couple of ideas that occurred to him while reading the digital conversations that have come to define the middle school. He moves on to publish the wiki version of the improvement plan, inviting interested community members to edit the improvement plan within the wiki and insert their reflections and ideas through attached comments. This superintendent truly believes that, "It takes a village..."

David Warlick is a blogger, podcaster, author, programmer, and public speaker.