Integrating Web 2.0 Technology into the Classroom

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Introduction

The World Wide Web, and Internet technology in general, is constantly evolving. Growing from early roots as a relatively static network of hyperlinked documents, Web 2.0 refers to a perceived second-generation of Web-based technologies including online communities, wikis, forums, blogs and chat rooms – technology which combines to form the basis for online social networking.

Although the name, “Web 2.0” suggests that there is a newer version of the Internet, in truth, there is no specific Web 2.0 program or software. No upgrades are required, and you won’t find system specifications for it. Web 2.0 is merely a commonly used marketing label for the rich interactivity that many online destinations now offer to their members.

Most of the technologies people think of when describing Web 2.0, such as live, real-time databases, content editors that allow instantaneous worldwide publishing, and interactive communities with blogs, forums and chat rooms… have been available since the earliest days of the Web.

Yet, the Internet is now a rich and engaging world, a robust sphere of influence that surpasses and encompasses all other forms of communication, such as video, music, sound and animation, with a layer of interactivity that allows the Internet to be non-linear and non-temporal, as well as providing new ways of communicating on an almost daily basis.

By freeing information delivery from the bounds of a linear, non-interactive, static presentations consisting mainly of text and images, the Web of tomorrow offers nearly unlimited opportunity for learning, comprehension, retention and study, as well as personal growth and exploration, excitement and creativity, to a degree that books and videos will never achieve.
Web 2.0 in Education

A recent study by the National School Boards Association and Grunewald Associates found that 96% of students online are already using Web 2.0 technologies such as blogs and social networking. What is surprising is that over half of students use these tools to talk about education, school, researching college options, and doing homework.1 The study points to the huge potential of these tools to revolutionize education.

Are kids safe from online predators while using these technologies? About a third are not as protected as they could be, according to one study by Pew/Internet.2 But as of today, only one state, Virginia, has actually instituted Internet Safety into the public school curriculum.3

In a study supported by the U.S. Department of Education, The Partnership for 21st Century Skills (P21) found that voters overwhelmingly agree: the skills students need to succeed are notably different from what they needed 20 years ago. Americans are deeply concerned that the United States is not preparing students with the skills they need to compete in the new global economy. Eight-eight percent of voters say they believe schools should be teaching 21st-century skills such as communication and technology.4

The P21 report recommendation is clear: Schools are urged to teach 21st Century Skills, and social networking and other Web 2.0 technologies represent a huge opportunity for capturing and engaging students.

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2 http://www.internetnews.com/ec-news/article.php/3652521
Saywire – The Web 2.0 Toolkit for Schools

Based on the enormous potential that online communication technologies hold for education, the demand for teaching 21st Century Skills, and the lack of available and affordable alternatives to execute on this promise, we have developed Saywire.

Saywire offers schools unprecedented security to students and schools using over 75 patent-pending features. First, unlike all other social networking technologies available, your Saywire community is defined by your school roster, not an anonymous online registration form. Our sign up process doesn’t require, nor do we collect, email addresses of your faculty and students. In fact, our eNote technology has already replaced Email for children as young as Pre-Kindergarten.

What’s more, within your Saywire community, everyone uses their real name. It’s amazing how well students behave online when their name and photo is associated with every statement, blog post, guestbook signing and chat room transcript. Now, like never before, educators can harness these 21st Century communication technologies for use in the classroom, without the fears associated with other social networking sites.

Saywire Online Communities are FREE…

and are designed specifically for use by students and teachers with a single school. School Administrators receive Database Management Tools to easily manage student memberships, organize a limitless Multimedia Archive, and create School Forums on every topic imaginable. Every Saywire member receives a personal portfolio page, multiple blogs, a guestbook, a SPAM-Free eNote inbox that safely replaces E-mail, and the opportunity to interact with every other Saywire member using everyone’s real names in a secure, sheltered, and filtered environment.
Web 2.0 Dissected

Web 2.0 technologies consist primarily of features that engage members in a community to interact with each other through multimedia. Many names have been used, and new words have been invented, to describe particular adaptations of interactive online media. Following are specific examples of these tools.
Blogs

A Blog is a shortened form of the term Web log. A Web log, or Blog, is a platform for personal publishing on the internet, somewhat analogous to a written daily journal kept in a notebook. Consisting primarily of text-based entries a Blog owner makes periodically, Blogs now form the basis for news reports, family newsletters, political commentary, and a myriad of other topics.

Many Blogging websites exist. Blogger.com and Wordpress, for example, were two of the earliest websites designed specifically for personal Blogging, and have each accumulated millions of members. By design, Blogging sites require a login, which authenticates the owner of the Blog, who then has permission to add new postings or articles, as well as edit or delete past articles. Most Blog implementations also offer a Comment feature whereby readers may post a reply to the writer’s original Blog posting.

Most Blogging platforms are designed to publish article content instantly on the public Internet for anyone to see and read, which may not be desirable for scholastic purposes. Certain sites offer Blogs that may be published only to members within the site, and are not viewable by the general public, however even this level of protection is usually not enough for school use, because membership is not verifiable.

Saywire Blogs…

are programmed for use by faculty, staff, and students. Every Saywire member receives multiple blogs, and each blog may have its own publish settings: Private, Friends-only, Faculty, Staff, Grade Level Specific, and even settings to publish Blog posts to specific groups the member has predefined.
**Blogs in the Classroom**

The National School Boards Association and Grunwald Associates found in a recent study that a whopping 96% of online students use social networking technologies such as Blogs. Schools can utilize blogs in a number of ways, from informing students on upcoming events, to discussing topics of interest to all students or particular classes. Teachers can use Blogs to post homework assignments, course materials and additional resources.

Language teachers are utilizing Student Blogs to track and publish creative writing assignments, short stories and poetry. Because Blog posts are automatically stamped with the time and date, you’ll know who waited until the last minute to do a week’s worth of assignments. Turn your students into reporters and have them document daily events at school, sporting contests, and other activities. Ask students to link to two specific articles online, and then write a Blog post that compares and contrasts them.

**Why should students Blog?**

- It engages them to write and can improve their language skills
- Provides a learning space for sharing creative ideas and receiving feedback
- Motivates them to use the web for learning
- Gives them a place of ownership and pride
- Acts as an introduction to Web publishing

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5 [http://www.nsba.org/site/docs/41400/41340.pdf](http://www.nsba.org/site/docs/41400/41340.pdf)
6 [http://edublogs.org/10-ways-to-use-your-edublog-to-teach](http://edublogs.org/10-ways-to-use-your-edublog-to-teach)
## Wikis

A Wiki is a simple type of website application that enables anyone to perform edits on the content of pages. As such, Wikis provided one of the first platforms for online collaboration. One of the most well known Wikis is Wikipedia, the free online encyclopedia that is completely managed by a vast network of volunteers.

Unlike web pages which are controlled by a single person or tightly-controlled list of editors, Wiki contributors need to understand that their words may be changed or deleted by others. Wiki authors do not claim ownership of a text.\(^8\)

Because most Wikis let anyone edit (or delete) content, they are not ideally suited for many educational pursuits, particularly in scenarios where a malicious user could delete everyone’s work. Additionally, there is generally no review before modifications are accepted,\(^9\) which limits the usefulness of Wikis in education, unless the edit and delete functions are more strictly controlled.

### Saywire School Pages...

are implemented in a similar fashion to traditional Wikis, with a few key exceptions that make them perfectly suited for use by educators. Whereas Wikis allow anyone to make edits, Saywire School Pages are editable only by authorized faculty and students who have been granted access to make changes.

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8 [http://writingwiki.org/default.aspx/WritingWiki/For%20Teachers%20New%20to%20Wikis.html](http://writingwiki.org/default.aspx/WritingWiki/For%20Teachers%20New%20to%20Wikis.html)
Wikis in the Classroom

Wikis and other online collaboration tools can be used in the classroom for a variety of uses, but Wikis, in particular, may not be as directly applicable to classroom objectives as Blogs are, due to the nature of allowing anyone to make edits. However, with a little planning, or by using Saywire School Pages as a modern replacement for Wiki technology, here are some ways to engage students to collaborate online.

• Class Notes. Let students contribute their notes to a central repository that is available for all to refer to, whether at home or at school.

• Exploration. Discover new topics together. By enabling anyone to contribute links and text, course materials can be built as you go.

• Teamwork. Build a class project collaboratively, requiring the entire class to contribute to the building of the final presentation.

• Documentation. Maintain a journal of work performed on group projects.

• Integrity. Instill trust in the group by knowing that the entire project may be deleted by any editor at any time.

• Inclusive. Create a sense of accomplishment knowing that everyone can contribute.

Forums

Online forums, message boards or discussion groups operate very similarly to Blogs, in that members can post topics and comment on other posts. The main difference between a Blog and a Forum is that a Blog is often used by a single person to comment on any particular topic that he or she is interested in on any given day or time. By contrast, Forums are best described as groups of related Blog posts and replies, typically set up by an organization or company to have a particular range of predefined topic areas.

Member-to-member forums are commonly used for software support, because it alleviates the bottleneck of having too few support technicians by turning the software’s most avid users into support staff for newer users.

Forum administrators are typically responsible for moderating forum content, managing members, and opening and closing forum topic areas\(^\text{11}\), whereas forum members may typically only post in certain forums and perform edits on their own posts. The moderator(s) of any given forum may have the ability to edit or delete posts, or move posts to a different thread.

Saywire School Page Blogs…

are automatically created for every one of your school’s topic areas, from activities and events, to sports and anything else around campus that you define. This provides forum-like capabilities on all topics to every member within your school.

**Forums in the Classroom**

One of the benefits of utilizing an online forum in an educational setting is that the instructor can take a backseat and allow the students to do the talking and sharing. Educators are constantly looking for ways to increase student participation, and by utilizing a forum approach, it gives students time to formulate a response. As each student posts their response, it creates new opportunities for others to contribute. Following are some more ways to use Forums in the classroom:

- Ask students to post one comment and one question each day pertaining to what was discussed in class.
- Peer tutoring opportunities enable students to help each other.
- Each unit that is covered may have its own forum, which provides a historical record of all notes, questions and comments covered to go back and refer to later.

**Saywire Teacher Blogs…**

...can be set up for use by specific classes, and can contain posts and replies from you and your students, relevant only to the topic at hand. Essentially, a group of Blogs creates a Forum, and Saywire provides unlimited Blogs.

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Chat Rooms

A chat room is a special website or portion of a website in which participants can each send and receive text-based messages in real-time, forming one-to-one and group conversations. Chat rooms can be public (any website visitor may enter the chat room) or private (only persons invited to join the room may participate).

Chat rooms have become one of the fastest-growing segments of the Internet, in part, because they’re a fun and interactive way to make friends. Chat rooms offer an exciting communication medium through which students can participate in a collaborative virtual community by sharing resources, knowledge production, creative inquiry and active engagement.

Nearly all websites that offer chat features to the public, or to members who have registered via email, provide a level of anonymity to participants in the chat room, via a “handle” or “nickname” such as Kitty98 or TomBoy202. Due to the anonymous nature of most chat rooms on the public Internet, educators should plan and prepare their lessons accordingly. For example, children should be supervised or moderated by the teacher during chatting. They should only be given access to educational-based chat rooms. The teacher should verify up front what the topics will be discussed in the chat room, if there is advertising or links to adult material on the site, and have reviewed the site’s privacy policy and terms and conditions before considering the chat room for scholastic endeavors.

14 http://www.educause.edu/ELI071/Program/10925?PRODUCT_CODE=ELI071/SESS21
Chat Rooms in the Classroom

Teachers and students can use chat rooms to explore online roll-play. For example, students can breathe new life into literature by modernizing old dialog with current idioms. By engaging in a real-time chat that is automatically time-stamped and documented with each speaker’s name as a script-like succession of lines, plays can be enacted and conversations can take place which would be much more difficult to record with old technology. Furthermore, students at home sick or teachers in other rooms can be active in the chat virtually from any Internet-connected computer. By keeping or printing a copy of the chat room transcript, the entire conversation can be documented and reviewed.

About Anonymity on the Web

The anonymous nature of email, nicknames, chat handles and personal profiles that any user can set up to be whatever he or she wants represents a challenge for educators, because on most Internet web sites, you can never really know who the participants are. Pew/Internet found that 32% of minors online have had contact from someone they do not know.\(^{16}\) Due to these facts, educators should be very careful when selecting a chat system for use in the classroom.

Saywire Chat Rooms…

are only open to students and teachers from within your school, feature no advertising, are automatically filtered for profanity, and use participant’s real names to ensure everyone behaves responsibly.

\(^{16}\) http://pewresearch.org/pubs/613/strangers-contact-teens-online
Multimedia Galleries – Photos, Audio & Video Clips & Documents

The engaging power of multimedia is well known to educators. By combining photos and illustrations with animations and sounds, multimedia has a dramatic positive effect on the cognitive load on teaching, training and learning. Based on a review of research, seven principles of multimedia design emerge:

Individuals learn, retain and transfer information better...17...

1. When the instructional environment involves words and pictures rather than words or pictures separately (multimedia principle);

2. When the instructional environment involves auditory narration and animation rather than on-screen text and animation (modality principle)

3. When the instructional environment involves narration and animation rather than on-screen text, narration and animation (redundancy principle)

4. When the instructional environment is free of extraneous words, pictures and sounds (coherence principle)

5. When the instructional environment involves cues, or signals, that guide an individual’s attention and processing during a multimedia presentation (signaling principle)

6. Where words or narration and pictures or narration are presented simultaneously in time and space (contiguity principle)

7. Where individuals experience concurrent narration and animation in short, user-controlled segments, rather than a longer continuous presentation (segmentation principle)

17 Interactive Multimedia in Education and Training, By Sanjaya Mishra, Ramesh C. Sharma
Multimedia in the Classroom

Multimedia in the classroom today means something different than it did 5 or 10 years ago. We’re not talking here about watching filmstrips or viewing slides. Today, the ease of working with digital media on computers has turned students into photo editors, recording engineers and filmmakers, and classrooms into multimedia production environments.

Yet every day, in every classroom across America, students and teachers miss opportunities to document individual and group accomplishment and highlight achievement, at least in part because they lack easy-to-use tools to manage it. The top motivators for students are personal gain, prestige, pleasure and security.\(^{18}\) If this were not so, would schools continue to publish their honor roll, the student newspaper, and keep a trophy case, or even track student’s grades?

But athletes and scholars are not the only ones who deserve to be recognized. Learning happens every moment, and growth occurs in everyone, regardless of ability. Simply by taking a photo or recording a video of all project participants and posting the top student projects each week, teachers could provide the recognition needed to turn passive students into eager contributors.

In the past, school newspaper editors and the yearbook staff have historically provided the filter for what gets highlighted, featured, and remembered by the student body. Now, using Web 2.0 technologies, anyone can contribute, and everyone can be recognized for their contributions, in real-time, not just once a year at the awards ceremony.

Given the widespread use of digital cameras and the affordability of digital image and video editing software, schools have fewer and fewer excuses for failing to take advantage of the power of multimedia to enrich the lives of students. Forward-thinking

\(^{18}\) http://albertateacherlearner.com/9_st_motivators.htm
schools are now implementing multimedia and technology in everyday classroom settings as part of the curriculum, and many schools have added courses in multimedia production, but few tools exist to help teachers easily manage the growing collection of digital files their students amass each year. Aside from the cost of technology, one of the biggest barriers to technology adoption in schools is the time required for teachers to learn software and platforms.\textsuperscript{19} Therefore any multimedia program must be both affordable and easy to learn and use.

Multimedia and modern communication technology have created a multi-dimensional read-write web that encourages exploration and collaboration. Classroom 2.0 is about educational goals, how learning happens in global networks and the possibilities for students to be legitimate contributors – owners – of their own education.\textsuperscript{20} That means engaging students in the active creation and building of course materials, and involving them in the teaching process. Rather than simply watching filmstrips and writing papers, today's learners need and deserve more robust learning platforms than ever before, because the skills they will need to survive in the 21st century will be centered on these tools. Parents and voters have recognized this. It's time for educators to take the reins and lead our kids to tomorrow by providing a foundation that they can understand and relate to.

\textbf{Saywire Multimedia Galleries…}

are organized around your school’s specific activities, events, clubs and sports. All material is stored by year and features a unique, patent-pending captioning utility that ensures names are entered accurately and quickly.

\textsuperscript{19} http://nces.ed.gov/surveys/frss/publications/2000102/index.asp?sectionID=7
\textsuperscript{20} http://k12onlineconference.org/?p=150
Email

Since the dawn of the Internet, teachers have been using Email to communicate with other teachers and school administrators. Colleges even provide their students with campus email accounts upon registration. Email has virtually replaced faxing and sending letters for modern business. But since Email technology is not safe for minors, most educational institutions forbid emailing, instant messaging, and other forms of social networking during school. Few, if any, services have been created that guarantee safe and secure email service for kids. Filtered email services such as Gaggle are one notable exception here, but even they cannot guarantee SPAM-free or adult-oriented unwanted messages will never be shown to minors.

Because students are forbidden from having an email address, teachers have simply ignored using email as a communication tool in the classroom. But if kids entered first grade already possessing a safe electronic communication medium that worked like email, and it was available to teachers, guidance counselors, and school administrators, how could they use it in the classroom? Would they? Surely emailing homework would be an acceptable alternative to paper and pencil, among a myriad of other uses.

Saywire eNotes...

are a safe alternative to email, appropriate for children of any age. They work just like a regular email account, but since no email server is involved, students will never receive SPAM or unwanted communication, guaranteed.

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Summary

Most people believe that our schools are failing to teach kids the 21st century skills they will need in order to succeed in the future. Even as the price of technology continues to drop, computers keep getting faster, and nearly all teens are exploring online social networking, schools have not only fallen behind other countries, but administrators have fallen behind of their own students.

Communication technology, particularly real-time and collaborative online communities, represents an enormous draw for teens. Kids are eager to use these technologies to further relationships and discuss education because it is fun, convenient, instantaneous and interactive. Schools are nearing the 1-computer-per-student promise they made in the last decade.

Doctors no longer use 19th century practices on their patients; likewise educators have a duty to incorporate modern technology into the classroom. The power to harness multimedia, Blogs, Forums, Chat Rooms and other Web 2.0 technology, safely, for educational pursuits, is now in your hands.

What will you do with Saywire? Make a statement.

Saywire...

The Platform for Classroom 2.0. Find out more at Saywire.com.
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