DIGITAL CLASSROOM 2.0

Web 2.0 describes World Wide Web sites that use technology beyond the static pages of earlier Web sites. The term was coined in 1999 by Darcy DiNucci and was popularized by Tim O'Reilly at the O'Reilly Media Web 2.0 conference in late 2004.

Web 2.0 suggests a new version of the World Wide Web, it does not refer to an update to any technical specification, but rather to cumulative changes in the way Web pages are made and used.

A Web 2.0 site may allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to Web sites where people are limited to the passive viewing of content.

Examples: social networking sites, blogs, wikis, video sharing sites, hosted services, Web applications, and mashups.

Web 2.0 can be described in three parts:

- Rich Internet application (RIA) — defines the experience brought from desktop to browser whether it is from a graphical point of view or usability point of view. Some buzzwords related to RIA are Ajax and Flash.
- Web-oriented architecture (WOA) — is a key piece in Web 2.0, which defines how Web 2.0 applications expose their functionality so that other applications can leverage and integrate the functionality providing a set of much richer applications. Examples are feeds, RSS, Web Services, mash-ups.
- Social Web — defines how Web 2.0 tends to interact much more with the end user and make the end-user an integral part.

Web 2.0 draws together the capabilities of client-and server-side software, content syndication and the use of network protocols. Standards-oriented Web browsers may use plug-ins and software extensions to handle the content and the user interactions.

Web 2.0 sites provide users with information storage, creation, and dissemination capabilities that were not possible in the environment now known as "Web 1.0".
Web 2.0 sites include the following features and techniques, referred to as the acronym SLATES by Andrew McAfee:

**Search**
Finding information through keyword search.

**Links**
Connects information together into a meaningful information ecosystem using the model of the Web.

**Authoring**
The ability to create and update content - the collaborative work of many rather than just a few. In wikis, users may extend, undo and redo each other’s work. In blogs, posts and the comments of individuals build up over time.

**Tags**
Categorization of content by users adding "tags" — short, usually one-word descriptions — to facilitate searching, without dependence on pre-made categories. Collections of tags created by many users within a single system may be referred to as "folksonomies" (i.e., folk taxonomies).

**Extensions**
Software that makes the Web an application platform as well as a document server. These include software like Adobe Reader, Adobe Flash, Microsoft Silverlight, ActiveX, Oracle Java, QuickTime, Windows Media, etc.

**Signals**
The use of syndication technology, such as RSS to notify users of content changes.

A third important part of Web 2.0 is the Social web, a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences.

- Podcasting
- Blogging
- Tagging
- Curating with RSS
- Social bookmarking
- Social networking
- Web content voting
IN THE CLASSROOM
Web 2.0 technologies can provide students with more engagement through greater customization and choice of topics, and less distraction from their peers.

Will Richardson stated in *Blogs, Wikis, Podcasts and other Powerful Web tools for the Classrooms*, 3rd Edition that, "The Web has the potential to radically change what we assume about teaching and learning, and it presents us with important questions to ponder: What needs to change about our curriculum when our students have the ability to reach audiences far beyond our classroom walls?"

**Web 2.0 tools are needed in the classroom to prepare both students and teachers for the shift in learning.**

*Self-publishing aspects as well as the speed with which their work becomes available for consumption allows teachers to give students the control they need over their learning. This control is the preparation students will need to be successful as learning expands beyond the classroom.*

By allowing students to use the technology tools of Web 2.0, teachers are giving students the opportunity to share what they learn with peers.

Some are concerned that these technologies could hinder the personal interaction of students: they often bring with them: narcissism, gossip, wasted time, 'friending', hurt feelings, ruined reputations, and sometimes unsavory, even dangerous activities.

Web 2.0 calls for major shifts in the way education is provided for students.

**One of the biggest shifts is the fact that education might be collaboratively constructed.**

This means that students, in a Web 2.0 classroom, are expected to collaborate with their peers. By making the shift to a Web 2.0 classroom, teachers are creating a more open atmosphere where students are expected to stay engaged and participate in class discussions. In fact, there are many ways for educators to use Web 2.0 technologies in their classrooms.
“Weblogs are not built on static chunks of content. Instead they are comprised of reflections and conversations that in many cases are updated every day [...] They demand interaction.”

As long as the students are invested in the project, Weblogs give students a public space to interact with one another and the content of the class.

For example, Laura Rochette implemented the use of blogs in her American History class and noted that in addition to an overall improvement in quality, the use of the blogs as an assignment demonstrated synthesis level activity from her students. In her experience, asking students to conduct their learning in the digital world meant asking students "to write, upload images, and articulate the relationship between these images and the broader concepts of the course, [in turn] demonstrating that they can be thoughtful about the world around them.”

**THE FUTURE**

WEB 3.0 or Semantic Web

The Semantic Web and personalization.

Where: “…the computer is generating new information”, rather than humans.

Futurist John Smart, lead author of the Metaverse Roadmap, defines Web 3.0 as the first-generation Metaverse (convergence of the virtual and physical world), a Web development layer that includes TV-quality open video, 3D simulations, augmented reality, human-constructed semantic standards, and pervasive broadband, wireless, and sensors.

Web 3.0's early geosocial (Foursquare, Yelp, etc.) and augmented reality (Layar, etc.) are an extension of Web 2.0's participatory technologies and social networks (Facebook, etc.) into 3D space.

The rise of statistical, machine-constructed semantic tags and algorithms, driven by broad collective use of conversational interfaces, perhaps circa 2020.

Web 3.0 will enable the use of autonomous agents to perform some tasks for the user. Rather than having search engines gear towards your
keywords, the search engines will gear towards the user. THEY WILL ALREADY KNOW!

This is being implemented right now in:

**THE INTERNET OF THINGS:**
“Things other than traditional computers using internet, or wireless networks, to monitor and change our lives.” - Jp

Nike bracelets

Health Tracking Applications and reliable, cheap, fast Biometric sensors - these will change and benefit mankind

A Blood Sugar device that can see through skin to read blood levels is already in use in some places.

Our homes and appliances are now networked, with real-time statuses and amazing possibilities for efficiency and time-saving.

iBeacon - when a device is detected in a store, the area will ‘light up’ and pertinent information will appear.

**CLASSROOM:**
The possibilities for the Internet of Things are amazing:

**IMAGINE:**
A classroom of tablets connected, with real time information sharing, video, search, and collaboration.

Devices that will track your schedule and classrooms, as well as make you aware of bus schedules, traffic, exams, reports, and all sort of related activities.

**NOW:**
**Facebook** - the Grand Daddy . . . opened a world of interactive communication, began as a way to communicate with classmates at Harvard, then Universities, and spread like wildfire.

**Google+** is similar to Facebook.

**Google Hangouts** - Real Time video or audio chatting with multiple people. Older technology, only this time it is free, stable, and works well
**Dropbox/Box/Google Drive** - Internet based storage drive, where you can upload any number of file types, and share them. These keep your files non-local, which is great in earthquake country!

**iCloud/Google Docs/One Drive**

These three services are Gold for School work.

**All offer:**
- Document Creation
- Document storage
- Full, robust Web Apps that rival desktop versions
- Free, reliable storage and backup
- Access to your files from desktops and portable devices

Some differences:

**iCloud** is Free, interfaces great with Apple’s ecosystem, great looking documents are easy. If you make a change on your iPad, it nearly instantly reflects on your desktop and iPhone versions of Pages. The apps for iOS cost a little bit of money, as do their desktop counterparts, although they’re far cheaper than Office, and you can read and write and export in traditional MS Office formats. Also: not so great with real-time collaboration, although it’s coming.

**Google Docs** Free Across the board, but no Desktop Apps. Fantastic collaborative features of documents. You and a colleague can be signed in to the same document and be in different countries, and you can watch each other edit or add the document, as well as post notes on what you’re doing. Also: very robust sharing settings with tons of control.

**OneDrive/MS OFFICE LIVE 360** Syncs with devices and desktop applications. The big reason to use this is the extremely robust MS Office history. The files you make will be perfect across devices and desktops. No worries about compatibility and file conversion changing anything. Interface is very familiar. BUT: There are pricey subscription costs (Note: Academic pricing is much more affordable) - Last: MS Office ONLINE is Free with signup! You need to sign in to a browser, and you have no local copies on your tablet or computer if you’re not on the internet, but it’s FREE! Yes! It works even on the iPad, but no so well on an iPhone or Android!
All of these tools are wonderful for doing ClassWork without being chained to a computer Lab or desktop computer. Best of all? They’re all very affordable for students and instructors alike.

Q & A