The 2013 Free Education Technology Resources eBook

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EmergingEdTech.com is owned and operated by Kelly Walsh

Table of Contents

Introduction

This digital booklet provides an introduction and easy access to many of the wonderful free applications and resources available on the Internet for teachers to use in and out of the classroom as part of the instructional and administrative process. This is the 2013 update of this eBook *(the 2011 edition was the first one)* and there have been a lot of updates made this year! I've added several new sections, including "(More) Flipped Classroom Resources", "MOOCs", "Teaching with Cell Phones & Smartphones", and "(More) Cloud Apps". I've also added a good deal of new iPad related content, and lots of other material throughout the book. The Facebook and Twitter chapters have been grouped under a more general "Social Networking and Social Learning Tools" chapter that includes articles about other popular social apps like Pinterest and Tumblr. As always, existing links have been checked for validity and some older material has been removed.

The majority of content in this eBook consists of edited articles originally published as blog posts on EmergingEdTech.com. After some chapters, a section of links to additional related articles is provided. I hope you find some great, fun, and productive tools here. Please feel free to share these resources with your colleagues, and to come and participate in the dialogue on EmergingEdTech.com! – *K. Walsh*

EmergingEdTech is a blog and website focused on the use of Internet and other instructional technologies and how they can be used to engage students and enhance learning outcomes. Every week we publish three blog posts that look at many different types of education technologies and ways in which educators, administrators, and students can use them in and out of the classroom.

Please stop by EmergingEdTech.com today and take advantage of the wealth of free resources and materials available there. We are also have an active presence on Facebook, YouTube, and Twitter, so feel free to use these social media applications to tap into these valuable and informative resources as well!

- Check us out on Facebook at: http://www.facebook.com/EmergingEdTech
- Visit the EmergingEdTech YouTube Channel: http://www.youtube.com/user/EmergingEdTech
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Thank you for learning about today's and tomorrow's education technologies with EmergingEdTech.com!

Chapter 1 - Blogs & Blogging Resources

Subscribing to Blogs

For those not already familiar with this, there are two common ways to subscribe to a blog.

- Email: Some blogs allow users to subscribe by simply entering their email address (and then confirming a validating email message sent to them).

- RSS: Another common technique for subscribing to a blog is to subscribe to an RSS Feed. An RSS Feed directs the blog, or a summary and link to it, to a special place where you can go and view it (as opposed to having it go to your crowded email In Box). This link provides information you need to learn how to do this: http://email.about.com/cs/rss/a/rss_spam_free.htm.

  While it may take a little investment in time to learn about this for first timers, once you are familiar with it you can easily use the process to subscribe to other blogs.

Creating your own education related Blog

There are many websites on the Internet where educators can write their own blogs. One way to do this is to become part of an organization that provides its members a place to blog, such as Educause, or Classroom 2.0. Another way to write your own blog is to set yourself up on one of the many sites that are designed to allow you to create your own domain or subdomain, where the content is entirely yours. While this may sound a little daunting to newbies, it really isn't too hard to get started. Below I have listed two such sites, both of which are free, and are very widely used.

Edublogs.org – This is a very popular blogging tool used by thousands of educators to create and host teacher and student blogs. It is easy to use, has a great deal of available functionality, and there are plenty of resources available to help you learn about using the tool.

Blogger.com – This is an extremely popular free blogging site that is also easy to use. Any "blogspot.com" blogs you come across were created here.

These brief tutorial videos introduce readers to how easy it is to use Blogger and Edublogs to start your own blog:

- **Starting A Blog On Edublogs:**
  http://www.youtube.com/watch?v=3FIk653lvkk
- **How to create a blog with Blogger:**
  http://www.youtube.com/watch?v=qOhW1mXM1yQ

A more thorough introduction to blogging in education

In 2010, I did a series of five articles in which I examined blogging in education, grouped into five categories: Teacher's Blogs, Classroom Blogs, Student Blogs, Administrator's Blogs and Educational Technologist's Blogs.

Here are links to each of the articles in the series:

- Blogging In Education Today (a multipart series)
- Blogging in Education Today, part 2 (Teacher Blogging)
- Blogging in Education Today, part 3 (Student Blogging)
- Blogging in Education Today, part 4 (Administrator's Blogs)
- Blogging in Education Today, part 5 (Education Technology Blogs)

Chapter 2 – (More) Cloud Apps

I titled this Chapter "(More) Cloud Apps" because the Internet is a Cloud, so the resources in this book are essentially all Cloud Apps *(the Internet is the ultimate Cloud, but not the only one, for example – Virtual Servers provide private 'clouds' for many organizations)*. Following are a few sections of content that discuss a variety of cloud apps such as file sharing tools and other applications that can be great for collaborating and for being able to access content from multiple devices *(Chapter 5 explores more applications for collaboration).*

Students in the Cloud – How Google Drive has Nullified Missing Homework Excuses

Contributed by Sara Garcia, a senior and Creative Writing major at California State University Long Beach.

My discovery of Google Drive came with the realization that technology has taken a huge leap in my college-aged generation. We have overcome floppy-disks, flew past CDs, tired of flash-drives, and have landed in "the Cloud"–a seemingly magical place to be.

On August 30th, 2012, A group of classmates and I at California State University Long Beach began internships with Cloud Sherpas, a leading CSP (Cloud Solutions Provider) and Google partner. All of our collaboration editing and creating presentations take place through Google Drive. When a business is ready to migrate to the Cloud, Cloud Sherpas provides employees with training to adapt Google Apps such as Drive that will "improve their everyday process and help the company save costs," (Jeff Miller, Director of Cloud Migration for Cloud Sherpas, in "Five Ways to Prepare Your Organization to Go More Google").

For a first-time-user without the guidance of a CSP, I discovered the benefits of Google Drive one step at a time, with fundamental trial-and-error. I started out using Google Apps exclusively for the internship, but then found myself with the urge to migrate all of my files to 'My Drive'. I set out to uncover how I could use Google Drive to my best advantage, whether it be for personal or business use.

Basic Features

For personal use, Google Drive comes with 5GB of free storage. Creating Google Docs (text documents, spreadsheets, forms, drawings, and presentations) don't take up any of your free storage. Additionally, 10GB of free Gmail storage and 1GB of Picasa storage come with your Google Apps account. Once your Gmail limit is reached, emails will be returned to their senders. With Picasa, you can organize, edit, and share photos on Google+ (Google's social-networking app). Photos that are 800 pixels or under are free to upload, and after you've hit your 1GB storage limit, you can continue to upload photos under 800 pixels at no extra cost.

Benefits

The first benefit of Google Drive is the simple drag-and-drop system that lets you view over 16 different files types and add almost anything you wish to your Drive. Documents can also be dragged into or out of folders easily, which makes sorting a cinch.

By using a free and simple downloaded plug-in called "Google Cloud Connect," Microsoft Office documents can be shared and collaborated on in the Cloud. This allows users to edit using software they are familiar with, while still reaping the benefits of the cloud: simultaneous editing, commenting, backed-up versions of documents, and sharing with multiple users without the hassle of sending multiple email attachments.

Also with the "Google Drive," app, documents can now be accessed offline. Beware, I made the mistake of thinking that all documents would automatically be viewable offline but discovered this feature is accessed manually by selecting which documents you would like to be accessible offline.

Mobility
Having access to documents on-the-go is becoming more and more essential for students and professionals. It is crucial for businesses to develop an app, or to at least maintain a website that's accessible via mobile device. Google Drive now has an app for Android and iOS, giving the power to view, edit, and share your documents from your phone or tablet.

Backup
While your documents are quite safe in Google Apps, but Google can't protect you from accidental deletions or similar mistakes. If you really want to protect yourself from these types of potential problems, you might want to consider backup services like Spanning.com.

Upgrading
You can upgrade from the free 5GB data limit to 25GB for $2.49/month, or 100GB for 4.99/month. 200 and 400 gigabyte, as well as 1, 2, 4, 8, or 16 terabyte options are also available – ranging from 9.99/month to $799.99/month. Compared to other Cloud options like iCloud or Dropbox, Google Drive's prices are more competitive and flexible. Also, if at any time you wish you downgrade your account, none of your files will be lost.

Additional Google Apps like photo and video editors, online document signers, form creators, music players, and much more are available through the Google Chrome Web Store to enhance the capabilities of Google Drive.

My Experience
As a student, the convenience of Google Drive is impeccable. I never have to worry about a computer crashing during finals week again. Since Drive backs up prior versions of my documents, I don't have to worry about accidentally deleting or saving the wrong version of a paper, and can access all of my documents from the computer lab instead of having to lug around a laptop all day.

Not to mention, I can now exchange notes with fellow classmates conveniently, and group projects have never been so easy. In class, the Cloud Sherpas interns and I have been able to chat with each other in the sidebar of a document while simultaneously editing, highlight specific sentences or words and make comments, create presentations, and collaborate on video summaries for Webinars on YouTube.

At work, I also find myself wishing I could use Google Apps. A coffee shop is not the typical place you might think of as needing to "Go Google," but with the constant changes to training materials, Google Drive could keep all employees on the same page. New standard-operating-procedures or re-certification tests could easily be uploaded and shared with all districts via Google Drive. Additionally, the monstrous book of recipes we have could be accessed via Chromebook and searched lightning-fast with OCR (Optical Character Recognition), eliminating the need for "tags", as well as many fewer paper-cuts.

Potential
The faulty flash-drive and dog-ate-my-homework excuse won't work for much longer with the

advances Cloud technology is making. Once you experience Cloud technology, it's hard to imagine things any other way. Google Drive got it right by making documents not only affordable, but always accessible.

4 Approaches to Making Sure You Can Always Access (and Never Lose) Your Lesson Plans and Notes

Guest post collaboratively written with Evan Fischer, a freelance writer and part-time student at California Lutheran University in Thousand Oaks, California.

Most teachers will agree that educating the leaders of tomorrow in today's society is something of a labor of love. Although we live in an era of unparalleled opportunity, in which literacy is practically a given and more children than ever are able to pursue their professional dreams and interests through hard work and devotion to their studies, there are certain realities that teachers at every level must face. Public schools in the K-12 range are particularly susceptible to budget cuts and overcrowding and other challenges. When you get to the college level, many entitled teens treat school like an ongoing party that is occasionally interrupted by classes, rather than an opportunity to better themselves and improve their job prospects.

If you are like most teachers you probably spend just as much time outside the classroom working as you do teaching in front of the student body. This is time spent preparing lesson plans, grading work, and racking your brains to find ways to keep your pupils interested in the coursework and engaged in the learning process. It is a tough profession for the teacher that truly wants to see each and every student reach their potential.

Thankfully, there are a few tools out there that can help to make your job a little easier. There are many free software applications available that offer a variety of approaches to storing, managing, and using lesson materials. Following are a number of web-based tools and some insights into how they can assist teachers in the roles, and help to make sure you never lose learning content.

Edmodo – A popular free web-based course management tool for K-12
Edmodo is a fantastic tool that you can use in the classroom to enhance the student experience while making your own job a lot easier. With features that allow you to keep a calendar, post assignments, start class discussions, and even accept assignments and post grades, this program is like a virtual classroom that can keep your students engaged both in and outside of the school setting while helping you to keep everything organized and in one place. Plus, it can be used via computer or with mobile devices like smartphones and tablets, making it fairly versatile. And whatever you store in Edmodo stays there *(they make sure everything is backed up and secure – that's part of what makes these kinds of services rock!).*

Free File Sharing (and Collaboration) with Google Docs
A simpler approach, focused on storing and sharing access to files, is Google Docs. *[Ed. Note: in 2012, Google evolved Google Docs into a subset of functionality under the product moniker, "Google Drive" – KW]*. Google Drive is very popular and provides a word processing document format, spreadsheets, presentations, file storage, and more, and you can import and export widely used formats like Word, Excel, and PowerPoint. Another powerful aspect of documents on Google Drive is the ability to allow for collaborative editing.

Here are a few resources where you can learn more about using Google Apps for Education (a variety of free Google solutions for teachers and schools):

- The official "Google Apps for Education Page": http://www.google.com/enterprise/apps/education/
- The "Google Apps" forum on Classroom 2.0: http://www.classroom20.com/group/googleappsforeducation.

Free Cloud Based Note Taking & File Storage Apps
For an even simpler approach, consider cloud storage and sharing tools that allow you to create lesson plans at home and access them at school, or take notes during classes and use them at home to tailor your classroom activities. These tools come with app versions for different platforms, making it possible to access your files from different devices, and always have them at your fingertips:

- **Simplenote** (simplenoteapp.com): Simplenote is focused on note taking, as opposed to file storage. This freebie that lets you jot down notes, tag them, and organize them for later reference.
- **Evernote** (evernote.com): A hugely popular tool similar in functionality to Simplenote.
- **Dropbox** (dropbox.com): This is not a note taking app, but an this application offers 2GB of online storage that you and access from anywhere. This way you can store and access files of any type from any devices that can read those files.
- **Box** (box.com): "Secure, scalable content-sharing that both users and IT love and adopt." This is app is similar to Dropbox.

Read on to learn more about some these and other similar apps.

4 Free Tools for Sharing Files with Students

Contribution by Wes Burns, tech writer with a focus on the cloud storage industry who runs several personal websites.

Way back when I was still in school, at least half my teachers shared things online. Whether it was syllabuses or lecture notes, teachers posted documents online all the time. The one drawback

was that many times, teachers used school-issued software to share these files online. This software was frequently buggy and/or difficult to use.

There's a better way to share files with students. Well actually, there are *several* better ways to share files with students. The following online storage tools use the power of the cloud to give you free storage and simple file sharing.

As an added benefit, these tools translate well into real-world experience for students. It is safe to bet that at least several of your students will be exposed to these tools (or similar tools) when they enter the workforce.

The following file sharing tools are free to use up to a certain limit. Each tool offers a couple gigs of free storage space that you can use to post things online and to receive documents from students. If you work primarily with text documents, presentations and spreadsheets, a few free gigs will last a long time.

Without further delay, let's get to the good stuff:

1. Dropbox
www.dropbox.com

Dropbox is a big player in the online file storage game thanks to its simple setup and powerful features. The file sharing options for Dropbox are flexible and make it easy to share documents with students. Just create a free Dropbox account and specify a folder on your computer. Any file that you store within that folder is saved online.

You can then share any of these files by clicking on that file and creating a download link. From there, you can send that download link to any number of students. All they have to do is click on the link and download the file. Students do not have to create an account to access these files; all they need is the download link.

2. Facebook
www.facebook.com

We could argue the pros and cons of educators having a Facebook presence for days but that's a whole different conversation. For now, let's just leave it at this for simplicity's sake: some

educators actively engage their students via Facebook. If you're in the pro-Facebook camp, there's a new file sharing feature that you might like.

Facebook recently announced that it has added file a file sharing feature for all Facebook Groups. This feature allows you to upload and share files with all group members. Every file type except for music and .exe files can be posted to the group for public downloads. The only limit is that files must be 25 MB or smaller.

3. Box.com

www.box.com

Box.com is a major competitor to Dropbox and offers a similar set of features. You can sign up for a Box.com account and get 5 GB free. Any file that you store in your Box.com account can then be shared by generating custom download links. Give those links to your students via e-mail and they can download any file with ease.

If you upgrade to a business account ($15 a month), you'll get more file sharing features. Paid accounts let you share entire folders with your students. You can then store as many files in there as you want and your students will have access to every file. You can also edit permissions and give students the ability to post their own files in the shared folder.

4. SugarSync

www.sugarsync.com

SugarSync is a popular alternative to Dropbox and Box.com. This storage company offers 5 GB of free storage space with full access to all the features. Free accounts never expire and you won't be bugged to upgrade. If you never go over your 5 GB of storage space, you will never have to pay to use SugarSync. If you do decide to upgrade, you can get 30 GB of storage space for $4.99 a month.

Both file sharing and folder sharing are supported by SugarSync. You can share any file by uploading it to your account, right-clicking on the file and generating a direct download link. Entire folders can also be shared. As the owner of the account, you can customize the permissions so that students are either restricted to downloading files or are able to upload their own files. You can also password-protect folders and files.

Chapter 3 - Collaboration & Brainstorming Tools

In this chapter we offer a brief selection of some free tools that provide various ways to collaborate and brainstorm. Many applications lend themselves to collaboration, so this is by no means an exhaustive listing, but there tools are fun, powerful resources that can be a great way to engage, share, and collaborate in and out of the classroom.

Mind Mapping & Idea Mapping Tools

This first set of tools lend themselves readily to brainstorming and other collaborative efforts. There are dozens of applications on the Internet that fall into this group. Here are a few tools I have frequently come across mention of on sites focused on the use of internet technologies in education: Bubble.us, Mindmeister.com, and Mindmapper.com.

Bubbl.us *(note that this is spelled correctly – there is no "e")*
This free tool allows users to easily create bubble maps, which can be exported in various formats, saved (by exporting and re-importing them in an appropriate format), and edited collaboratively. I found it very easy to use. There was no apparent "help" tool, but I found some helpful information available at blog.bubbl.us. Included there was this explanation from Ben Davis about how Bubble.us helped his students to network, "Typically I have trouble getting them to get excited about word webs. However, they were VERY excited about doing this. The guys loved how the bubbles exploded when you deleted them, and the girls loved the colors. However, the thing they seemed most interested in was the fact that they could network."

Mindmeister.com
Mindmeister appears to provide similar functionality to Bubbl.us, for a fee. A free 30 day trial is provided, and for academic users there is a highly reduced fee, and a custom subdomain can be licensed. Mindmeister has received a number of awards. "Demogirl.com" has made this brief (3 minute) video available to provide some quick insight into this application.

Mindmapper.com
This is another application that charges, but also provides a free trial, and a reduced fee for academic use. This is an impressive looking site, with an array of offerings, support, FAQs, and much more. The product comes in Professional, Standard, and Academic versions, as well as MindMapper Jr. for kids. There is a Feature Comparison chart to help users determine which product offering might be best for them. Frankly, it looked like a pretty significant investment in time was necessary just to understand the various versions of the product and what they had to offer, but at the same time, it appeared that this site may meet more sophisticated requirements than the simpler sites mentioned above. A "deeper dive" may be warranted in a future posting.

If you want to try this category of software out, you can hardly go wrong with Bubbl.us. If it's feature set isn't rich enough, you can trial one of the other tools above. **To investigate this category of application even further, Wikipedia's list of mind mapping software is a great resource.**

Collaborative Documents

Google Docs has become very popular (in 2012 Google Docs transitioned to a subset of Google Drive), and Zoho Office Suite is a great alternative to the Google offering.

Google Docs/Drive (drive.google.com)
You must create a Google Account in order to use Google Drive, but once that is done, sharing and collaboratively editing documents is very easy. Google Drive offers word processing documents, spreadsheets, presentations, and forms (which appear to actually be for surveys). Naturally, the use of each of these tools differs in various ways from other tools (such as the ubiquitous Microsoft Office), but it is not too hard to learn the different command sets. Advanced functions can be tougher to figure out, or may simply not be available. There is extensive help available at http://support.google.com/drive/.

The collaboration process is simple: invite another user to collaboratively edit a document by sending them an email using the "Share" function. The invited user will get an email, and will also see the shared document in their Google Drive menu, and can simply open it and edit along with the original user. I imagine it might get rather confusing if a lot of users were editing a document at the same time, but in my test the process was quite manageable, as one user's changes quickly showed up in the other user's copy of the document. There is a revision history maintained automatically.

Zoho Office Suite (www.zoho.com)
As with Google Docs, I tested the Zoho Office Suite by creating a couple accounts, starting a new document (in Zoho Writer), inviting someone (my second account) to collaborate on the document, and then edited the document as both users. The process was straightforward. As with Google, a revision history is provided, but (unlike Google) one has to be in 'locked' mode (not sharing the document) in order to access it.

Using the different Zoho apps could take some learning, and each Zoho application has an FAQ page (under the Help menu) that provides links to extensive tutorial information. For example, here is the FAQ page for Zoho Writer. In addition to their free service for individuals, Zoho also offers a Business edition for free for up to 10 users, which provides email with "your personalized domain based email id", as well as "other

features and functionalities that are specifically designed to address the needs of an organization."

Both Google Drive and the Zoho Office Suite are highly functional environments for collaboration, and each also offers a wide array of additional application tools. The bottom line is that they are both solid apps and you're really not going to go wrong with either one of them.

Social Learning Tools

Following are a couple applications designed specifically for education that leverage social networking and workgroup collaboration elements. These tools also provide functionality similar to the Learning Managements Systems that are commonly used in higher education. See Chapter 12 for insights into the use popular social networking tools in the educational context.

Edmodo.com

Edmodo positions itself as a "private communication platform built for teachers and students". When I first checked it out in 2010, I signed up for an account, and had my 8th grade son sign up, and we spent some time trying the application out. I came away feeling good about the application's potential for instructional use. Its education-specific orientation, and group-focused approach position it as a uniquely suited application for educational use, and it is very much worth checking out. The site has evolved considerably since then, and has around 5 millions of users as of early 2012.

Room21

Room 21 is a "21st Century Social Learning Platform". John Zoccola from Superstar Learning (Room 21′s parent company), wrote to me explaining that educators, "are using a new social learning and achievement platform called Room21. It is a Facebook-like environment designed for peer collaboration and to create Learning Communities online." The site is free and allows all members of the learning community - students, parents, teachers, and administrators, to become engaged in the process.

Chapter 4 - Educational Games & Gamification

The Internet is ripe with free games that can be helpful to teachers and students alike. Of course, there are also a lot of lesser-quality tools out there, and sites that will burden your computer with viruses and the like, so it helps to have a vetted list to work from. In this chapter, we provide a number of nice educational game sites and some other gaming tools, but first we'll start with a few sections about the benefits of educational gaming. Note that if you're using iPads in the classroom, the chapter on iPads contains lots of educational game information for the popular tablet.

8 Research Findings Supporting the Benefits of Gamification in Education

There are myriad ways in which "gamification" can play a positive role in the educational setting. Tess Pajaron sent me a great article from Open Colleges about "The Virtues of Daydreaming And 30 Other Surprising (And Controversial) Research Findings About How Students Learn". One thing that really struck me about this article is how many of these findings indicated benefits that can come from the use of gaming in education. Some of the findings directly addressed the subject, while others were indirectly indicative of potential positive outcomes of gaming in an instructional context.

Of course, the "gamification" of educational generally refers to the idea of incorporating gaming elements in instruction and instructional tools, such as the use of digital badges in an online learning application. But with findings such as those below indicating that game playing can enhance the learning process, it is logical to assume that the use of gaming mechanics and concepts in educational tools and processes can also yield benefits. Naturally, it is left to the

reader to draw their own conclusions after perusing this content and the original published sources cited.

1. Game playing can develop a positive attitude towards mathematics for children

Mathematics can be a dry subject, "full of repetitive problems, formulas, and exams". According to research from Deakin University, incorporating games in the curriculum dramatically alters student's attitudes about math. "More kids were able to articulate positive emotions surrounding math, as well as an increase in confidence about different concepts. There was more energy for math, more motivation, and ultimately more success. It seemed that playing math games helped to alleviate the tediousness of repetitive problem solving."

2. Video games can lessen disruptive behaviors and enhance positive development in ADHD children

A study from The Australian Journal of Educational & Developmental Psychology, focused on the use of video games to help children with ADHD, indicated that a video game designed to teach kids how to control their breathing and heart rate had a significant impact on their behavior *(note: the sample size was small and more research is needed).* This finding certainly runs contrary to the idea that video games make children 'hyper' or that ADHD is a result of overuse of video games.

3. Children who construct their own video games experience increased cognitive and social growth

Research outlined in the Lookstein Online Journal indicates that "children show cognitive growth when they are given the task of creating their own video game. In order to develop such a game, students must use prior knowledge, create links between scenes, and take control of their learning through trial and error. Children must use logic, survival skills, and generate new ideas and solutions in order to complete the game."

4. Mature make-believe play provides the most beneficial context for children's development

"Imaginative scenarios, in which children take on roles, props, themes, and collaborate with other children, is one of the most crucial avenues for development." Many different games provide such scenarios, offering an opportunity for development. Of course it is also very important that kids also have time to play in traditional social groups. In an article written by the National Association for the Education of Young Children, the argument is made that "play is an ever-evolving skill that children must be guided through. The classroom must allow room for play-based scenarios, as they are one of the building blocks of learning. It is within this context that children build the preliminary skills for advanced academic understanding."

5. Play-based learning increases children's attention span

"In this study done by the Australian Journal of Educational and Developmental Psychology, researchers took a closer look at how teacher's beliefs regarding early education influence the classroom environment. A group of teachers partook in the study and here were some of the findings.

- When teachers have confidence in a child's ability to learn independently, the child/teacher relationship is stronger.
- When teachers have confidence in a child's ability to learn independently, the child/teacher relationship is stronger. Teachers are then able to take a more "facilitative" role and observe the student actively learning. The educators also recognized that when children are allowed to learn through play, there is far less time spent on behavior management. A child's attention span is also longer.
- Play-based learning shifts the focus of learning from the outcome or goal, to the process."

6. Playing scary and violent video games help children master their fears in real life.

While many studies have been done centered on the negative impacts and consequences of prolonged use of video games, a study by Cheryl K. Olson appeared in the Review of General Psychology that suggests there are numerous psychological benefits to playing video games.

"In boys who struggle with stress, fear, and anger- negative emotions that can have violent consequences- video games acted as a safe alternative for the release of pent up emotion. There were other findings as well, comprising the fun of 'unreality'- experimenting with a world where natural laws are suspended- plus the fun of challenge, mastery, and playing with different identities. These findings reveal that video games can be an alternate way to release negative emotion, and help children alleviate their innate desire for risk and adventure."

7. Chess makes kids smart

Patrick S. McDonald is the Youth Coordinator for the Ontario Chess Association and he has compiled a number of papers and selected research highlighting the benefits of chess, with a specific focus on how it education. Chess makes students, "slow down, concentrate, use precise thinking, [and use] both inductive and deductive reasoning, as well as recognizing difficult and complex patterns." There are plenty of online chess games, so this is yet another way in which computerized gaming can have a positive impact on a child's educational development. That being said, using a traditional chess set is a wonderful experience, so be sure to encourage students to try that as well, and provide access to chess set if you can.

8. Music and movement augment children's language capabilities during the preschool years

"Research shows that children who engage in music from a young age have a more finely tuned ability to speak and communicate. Though much of modern education focuses primarily on visual sight for learning, the auditory processes are critically important for language acquisition. The younger the child, the more important music becomes. Children who engage in music from a

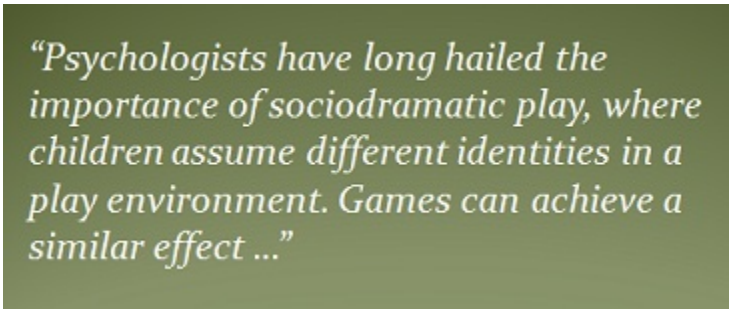
young age have a more finely tuned ability to speak and communicate." Gamers know that background music is a part of many electronic games, and now we know that this exposure to music provides yet another benefit of gaming in the instructional context!

The Gamification of Education and Cognitive, Social, and Emotional Learning Benefits

Contribution by Jane Wolff. Jane Wolff writes on behalf of Sopris Learning, developers of learning resources for children & schools. Sopris Learning offers many tools & resources including a math curriculum & a reading fluency assessment.

The current trend towards the increased use of games and game mechanics in instructional situations could probably have been foreseen quite some time ago. Stretching right back to the primitive gaming technology of the ZX Spectrum in the early 80′s, kids were hooked. As a wider variety and higher quality of educational games have been produced, it is really no surprise that educationists have gravitated towards further use of them as tools in the learning environment. Is this necessarily a positive development, however? A recent article on the subject makes for interesting reading.

In 2011, Joey J. Lee, Ph.D and Jessica Hammer, an Assistant Professor and Graduate Fellow from Teachers College Columbia University in New York, published this paper on the subject, entitled *Gamification in Education: What, How, Why Bother?* According to Lee, gamification can be applied to three different learning areas – namely, those covering 'cognitive', 'emotional' and 'social' needs of students.



'Cognitive' benefits include the development of problem-solving skills. Players must complete progressively complicated sequences of actions which may cover areas such as physics, maths, languages or spatial awareness. Successful completion of levels lead to the reward of more and more difficult levels, providing constant motivation to strive harder and constantly develop skills. This is perhaps the most obvious of the benefits, but the next two may be of equal, perhaps greater importance.

Gamification can, according to Lee, be a powerful tool in addressing the child's 'emotional' needs. Games have the unusual ability to turn positive emotional experiences into positive ones.

Simply put, in order to achieve success in games, failure must be experienced several times first. In a formal teaching environment, the negative emotions felt during initial failure would be far more extreme, and difficult to turn around into something positive. Not so in games. The failure is expected – inevitable even, which detracts from the feeling of despondency. When the success follows, as the level is eventually completed, the student's previous feelings of negativity have been entirely eclipsed by the satisfaction of having finished the level.

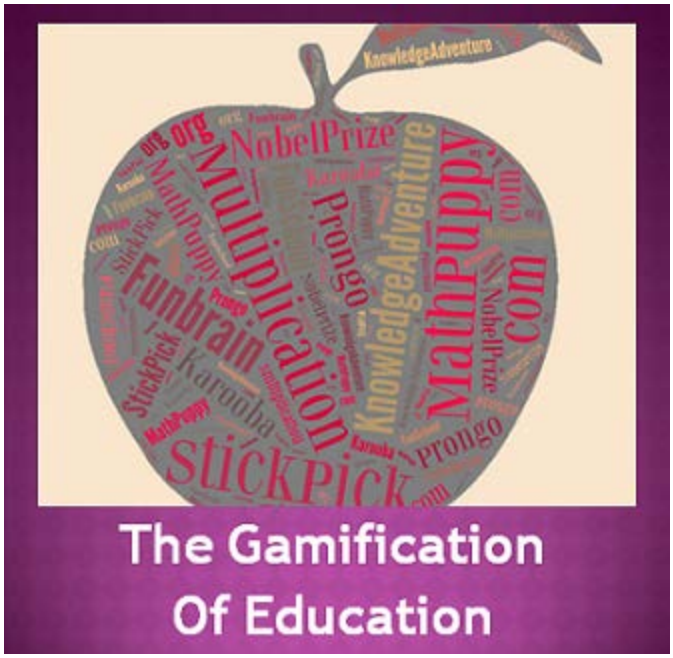
The 'social' benefits of gamification may not be immediately apparent, since gaming has a rather unfair image of being an antisocial activity as games are often played alone. This does not mean that social skills are being compromised however. Lee argues that in the player assuming new in-game personas, they are exploring many aspects of their own personalities. Psychologists have long hailed the importance of sociodramatic play, where children assume different identities in a play environment. Games can achieve a similar effect, through inventing new characters for children to 'be' with different powers, strengths and personalities. By this same principle, children who cannot settle into a school environment can use a school-based gamified environment to assume the role of a student. Since Nasir & Saxe (1993) claimed that students are more likely to succeed if they have a 'strong, school-based identity', this could be one of the most subtle, but powerful benefits of gamification.

Lee does pertinently point out that gamification may not be suitable in all learning environments, and must be implemented according to a solid educational model, grounded in research. When used correctly however, it can be an effective educational tool, helping to provide a positive learning experience, even where learning difficulties exist.

Introducing a Game-Based Curriculum in Higher Ed

Contribution from Justin Marquis, Ph.D., a blogger for the OnlineUniversities.com blog Education Unbound, where he writes about education news, technology, and lifestyle. Justin holds a doctoral degree instructional systems technology and teaches educational technology at the undergraduate and graduate levels.

The gamification movement is in full-effect with its fair share of proponents and opponents. Those in favor of the idea most often cite student motivation and the ability of games to simulate real world circumstances so that learners can safely explore these environments without endangering themselves or others. Those on the other side of the argument think gamification is just a fad and that there is no real transfer of what is learned in games to the real world. There is enough research on both sides to support either point of view, but perhaps those most opposed to the incorporation of games into their curriculum just don't know where to begin? For those on the fence, here is guide for getting started with introducing games into the higher education classroom.



Why Games in Higher Ed?
Drawing on game designer Jane McGonigal's inspired thinking about using games to make the world a better place, there are four reasons that gaming is an excellent fit for higher ed:

- **Urgent Optimism:** Incorporation of games specifically designed to align students with real problems centered in the discipline being studied, provides learners with a sense of urgency to solve the problems they encounter, and gives them a sense of optimism, both in terms of solving the immediate problem and any other problems they may encounter.
- **Social Engagement:** Games provide the content, structure, and medium for focused social interactions aimed at solving problems. In the gaming environment, in the classroom, and all across campus, the injection of game-based problems provides students with a reason for learning, interacting, and working together in ways only rarely seen on the traditional campus by extending learning beyond the classroom and beyond the campus.
- **Blissful Productivity:** People are happiest when they are working hard toward attainable goals. Gamification helps students to become blissfully focused on virtual problems by asking insightful questions and developing solutions to real issues.
- **Epic Meaning:** Theory without application has little place in a world that is all about hands-on experiences, interacting with the world, and creative thinking. Students learn best by doing and college should be about helping students to change the world. The gamification of higher education bridges those two areas by providing students with the skills and knowledge needed to effect the changes they want to see in the world.

These are the big reasons to include games in the higher education curriculum, but they are not the only reasons. Having fun and being engaged are some of the most appealing side effects of a game-based curriculum on students. The question remains – where to begin?

Getting Started with the Game-based Classroom

Starting slowly is the key for those new to gamification in higher education. Trying to jump straight into a game-based curriculum is not only ill-advised, but probably impossible. Introducing games into the classroom will require a conscious plan and a slow incorporation of game elements in the early stages of course design. Here's how to start:

1. Determine the course objectives and do some basic searching to see if others are meeting similar objectives with games or if there are games that could be used to meet specific learning goals. An excellent place to begin both looking for resources and connecting with a community that will be happy to support gamification efforts is at Games for Change. This community dedicated to the use of games in learning provides F2F meetups as well as a wealth of options for connecting with others online.
2. Once several suggestions for games that might meet the learning objectives have been found, sit down and play the games to determine if they meet the course goals. Keep in mind that it takes @40 hours to complete many games, so start planning and playing early in the process. There are also many smaller games that can be equally useful in the classroom and that don't take much time to learn – Angry Birds is one example that could provide an excellent introduction for physics students.
3. While playing, start thinking about the logistics of using games in the classroom. Will students be required to purchase the game? Does the classroom have enough computers or is an appropriate room accessible? Will the campus IT department support the installation of games? If not, are there online options available?
4. Also, begin to think about how to evaluate student success in playing games. Most games have built-in feedback and progress is easy to track. Will students be required to reach a certain level, fulfill certain game objectives, or just play for X number of hours? Decide based on actually playing the game, what best aligns with the course objectives.
5. Finally, think about where the game best fits into the curriculum. Is it an introduction to a concept, a transitional activity, or a summative exercise? Remember that there will also need to be time allowed to either teach students to play or for them to learn on their own. Some games can have a steep learning curve, so be ready to help students at first.

These are some of the basic steps for getting starting in thinking about how games could support learning in the higher education classroom. Another option to consider is having students make their own simple games. There are hundreds of free resources available for this and having students create the games themselves opens up a whole new array of learning possibilities. Either way, gaming can provide a refreshing spark in any field. Once gamification has started, it is just a short hop to creating an entirely game-based curriculum.

10 Free Educational Game Sites

In 2009, I searched out and visited a bunch of sites with free educational games and selected the ten I thought were most useful and appropriate to education. In addition to a brief overview of each site, I have also attempted to define the grade range that each site is applicable

to. Most of the sites listed here are geared towards K-12 (with many leaning towards K-6 or so), but some do have fun games that will challenge the Higher Ed student and adults as well. Take one for a spin today!

Funbrain (Grades K through 8): This popular site from Pearson Education features 'Arcades' specific to Math and Reading, along with the 'Classic Funbrain' games such as Math Baseball and Grammer Gorillas. Funbrain also has resources specifically for teachers, organized on this Teacher's home page.

Discovery.com's Games (Grades 3 and up): Dozens of activities, organized into 4 categories: Games, Quizzes, Puzzles, and Interactives. This is a high quality site, and it was recommended by several instructors in my children's classes. I enjoyed trying out some of these games, and the site is part of the overall Discovery.com site, which is rich with informative and fun content.

Sheppard Software (All Ages): This site provides a wealth of free games, puzzles, quizzes, and more. An impressive, rich resource of fun educational games and activities. No registration required. I have to say that I personally enjoyed this site quite a bit, partaking in quizzes, completing puzzles, and checking out the many resources there.

FunSchool (pre-K through Grade 6): If you go to the Parents & Teachers section on this site, the games are grouped by Preschool, Kindergarten & 1st Grade, 2nd & 3rd, and 4th and 5th. The site offers more than 300 interactive games and activities that are fun and easy to use. Activities include matching numbers and shapes for preschoolers and geography, math and history for third through sixth graders.

National Geographic Channel's Games Site (Grades 3 and up): This site features a variety of games and interactives and leans towards various science and history based adventures and activities, rather than the traditional subjects-specific types of games on many other sites. There's a lot of cool stuff here, like Fossil Hunts, Journey to the Edge, Rhino Rescue, Monster Fish of the Congo, Earth in Balance, and How Taboo are You?

PrimaryGames (Grades K through 6): Lots of fun games here, covering common subjects like Math, Language Arts, Social Studies, Science, and more.

Educational Games (and Simulations) on NobelPrize.org (Grades 6 and up + Higher Ed): As stated on the site, "These games and simulations, based on Nobel Prize-awarded achievements, will teach and inspire you while you're having FUN!" This is one of the more high end sites in terms of the level of content. Challenging fun for middle school students, high schoolers, college students, and adults.

Prongo (pre-K through middle school): The games here are divided by age level (3-6, 6-9, 9-12). This is a fun site with a dozen or more games in each category.

Childtopia (pre-K to 6): This site has versions in 5 languages, and 9 categories of activities, including Games, Learn to Draw, Listen and Reading Comprehension, Learn to Draw the Numbers, and so on. It appears to be predominantly Spanish based on the ads that surround the playing area. There is a premium version that eliminates ads and provides a full screen interface for just $12/year.

7 Free Online Educational Game Sites

In summer of 2011, my son Dylan went out and found and 7 more sites for a new post and some new fun resources, and here they are:

Most of these sites offer games that are appropriate for K through 6, with a few offering some games applicable to students in grades 7 and higher.

Knowledge Adventure (http://www.knowledgeadventure.com/)
"Knowledge Adventure has been making educational games for kids for over two decades. Working with child experts, developmental psychologists and educators, it produces games loved by parents and children alike. The fun educational games created by Knowledge Adventure have won many awards, including the iParenting Media Award, the Toy Man Award of Excellence and the National Parenting Seal of Approval, to name a few. Here is Knowledge Adventure's collection of one hundred fun, free online educational games for kids."

Learning Games For Kids (http://www.learninggamesforkids.com)
"Educational games are a great tool for building foundation math and language skills that today's elementary school curriculum requires. These online learning games and songs for kids are fun, teach important skills for preschool and elementary school kids and they're free. Want educational games that help build skills in math, language, science, social studies, and more? You've come to the right place!"

Multiplication.com (http://multiplication.com)
"This site contains the techniques, tips, and secrets used by master teachers!"

Play Kids Games (http://www.playkidsgames.com)
"Play Kids Games provides free online kids games that are both fun and educational. Aimed at ages pre-K through middle school, Play Kids Games offers kids a safe environment to discover their abilities and learn new skills with interactive and fun computer games."

Hooda Math (http://hoodamath.com/games)
This site contains math games organized into three sections: Geometry Games, Arithmetic Games, and Logic Games. The Hooda site also contains a variety of additional resources for math teachers and students.

4Kids.org (http://www.4kids.org/games)
"Take a break from your homework and kick back with these fun games from Academic Skill Builders! Click a game button below to play." Site contains many games, grouped into these categories: Language Arts, Addition and Subtraction, Multiplication & Division, Fractions and Ratio Games, Angels & Coordinates, and 'Fun Stuff'.

Math Playground (http://www.mathplayground.com)
"Welcome to Math Playground, an action-packed site for elementary and middle school students. Practice your math skills, play a logic game and have some fun!"

PowerPoint Jeopardy in the Classroom

This is a great way to have some fun and reinforce learning in the classroom (or at home!). In the 2011 eBook, we had a link to one Jeopardy game using PowerPoint, but as of Aug 2011, that template link wasn't working any longer, so I dug up a few others:

Here's a couple replacements to try out - some are blank, some are pre-filled:

- http://elainefitzgerald.com/Jeopardy1Template.ppt
- http://jc-schools.net/tutorials/PPT-games/Jeopardy.ppt

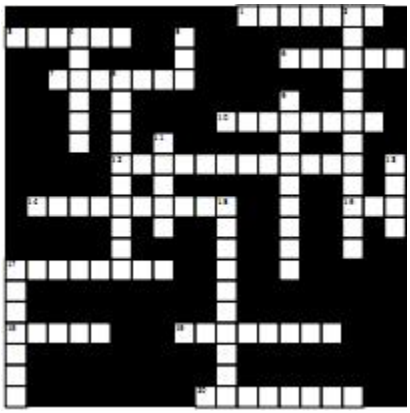
It takes some time to come up with 50 answers and enter them in a template, but the result (playing the game!) can be a lot of fun. It's easy to envision this being useful and fun in a classroom setting, for students old enough to be comfortable with the "answer and question" format (probably grades 4 – 12+).

Some considerations to keep in mind:

- Be a little creative about breaking out of the three-player structure, to let everyone enjoy the fun, or create small groups to create and play their own games.
- Plan how you will simulate the "buzzer" - that is, how you will decide which player gets to respond to each clue first *(we went with the first to put up their hand after the question was asked, but there was a fair amount of squabbling over who was first each time, and whether someone put up their hand before the question was finished, etc.).*
- Presenting this through a projector would be nice, or on an Interactive Whiteboard.
- Be sure to have a Final Jeopardy question prepared (there is no template for this).

Fun tool for the classroom – simple Crossword Puzzle maker

This is a fun little tool I came across.



This tool will allow you to create a simple crossword puzzle by plugging in a bunch of words and clues. The result isn't exactly NY Times worthy, but it works, and you might find this to be a fun tool to create a topic-specific crossword for your students, or to let them create one.

Create your own simple Crossword Puzzle at:
http://www.armoredpenguin.com/crossword/

Access these EmergingEdTech.com posts to explore Educational Games further:

12 Great Resources To Help Keep Student's Math Skills Sharp Over The Summer

Five Fun Free iPad Apps for Elementary School Teachers And Students

5 Fun Free iPad Math Game Apps

Chapter 5 – Educational Videos, Lectures, Podcasts, and more

A Dozen Great Free Online Video Lecture Sites

A collection of web sites with thousands of free video lectures and related course materials, including many offerings from major universities.

There are thousands of video-taped course lectures, and many other more complete course offerings, available for free on the Internet today. The quality and quantity of these offerings is growing and improving daily.

How educators and students choose to leverage these types of resources is also evolving. As stated on the Opencast Project web site, "openly accessible course videos help draw attention to a professor's work, they can keep alumni engaged and informed, and students often supplement their studies with the material." It should be interesting to see how members of the academic community choose to use this type of resource, in and out of the classroom, in coming years.

General Video Lecture Sites

All of the sites have directories and search tools to facilitate finding content you may desire. Of course, some overlap in these offerings (that is, the same videos on multiple sites) is inevitable.

Academic Earth: This site provides hundreds of free video lectures from professors at leading universities such as Yale, Stanford, Harvard, and more.

Apple's "iTunes U": Apple's vast resource contains over 250,000 lectures, videos, films, and more. Definitely worth being aware of.

The OpenCourseWare Consortium: According to Makeuseof.com, "Simply put, the OpenCourseWare Consortium is the best place to begin looking for free online video lectures".

Free Video Lectures: This site's vision: "Everybody from every nook and corner of the world should be able to access the best Knowledge Resources available."

Videolectures.net: Almost 7000 video lectures, with a high emphasis on Computer Science. This site makes good use of Web 2.0 tools, having a Facebook Group and Twitter account. This site also introduced me to the interesting "Opencast Project" open courseware initiative.

LearnersTV: "Video Lectures, Video Courses, Science Animations, Lecture Notes, Online Test, Lecture Presentations. Absolutely Free"

Lecture Fox (now onlinecourses.com): This site is a central link repository with a very simple interface (I like the simple way in which they indicate whether each lecture has video, audio, and/or notes available).

YouTube EDU: While not all of these videos are lectures, many of them are. A search for "lecture" in this special YouTube section yields "about 60,000″ results!

Video Lectures Sites from Specific Universities

These universities make lecture content available to the general public *(and yes, it is quite likely that many of these videos are featured in some of the more general sites above).*

MIT OpenCourseWare: Over 2000 Courses. MIT is leading the way with Open CourseWare. "Free lecture notes, exams, and videos from MIT. No registration required."

Open Yale Courses: Not a lot of courses here, but the materials provided are very thorough, with complete sets of lectures and supporting materials.

Stanford University's YouTube Channel: Now well over 1,400 videos, including many lectures (unfortunately, there doesn't seem to be any obvious way to search this content in an organized manner). The example video lecture below, "Einstein's Theory of Relativity", by Professor Leonard Susskind in Sept. 2008, is from this channel.

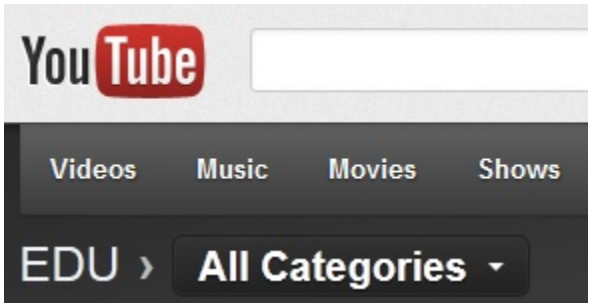
UCLA "BruinCast": Most of these are 'restricted' (to students in those courses, I assume), but there are still many that are not. Note that to view lectures with video available, you'll need to download Real Player.

There are many other educational video sources on the Internet *(for some examples, see the 'Related Posts' listing below)*, but I have chosen to concentrate on college level materials in this post (although a few of these sources do contain K-12 level offerings).

10 Recommended YouTube Edu-tainment Channels

Contributed by Katie Brunson, who has over 15 years of experience working in student services at various colleges in the Midwest. Her website, Associates Degrees, is a resource for students interested in earning an associate's degree.

YouTube can be a great technological resource for teachers to use in the classroom. But with so many videos and channels, how can educators find quality content without watching hours of video? Here are ten great channels that are certain to provide educational content worthy to spark student's minds.



By the way, if you are concerned about having students come across inappropriate content on YouTube, you can choose to embed selected videos or a playlist in a web page, so they don't have to go to YouTube to watch them. This page provides resources that show you to tackle this.

1. Smithsonian Videos – From the national museum complex in the nation's capital comes this channel, with resources on everything from art and history to science and technology. The playlists on this channel are well organized so that it's easy to find what you're looking for.

2. TED Talks – These lectures from experts in all areas are best for high school and college students. This is another well-organized channel that organizes videos by topics such as the ocean, the workings of our brains, and life lessons. Some talks have featured famous speakers such as Bill Clinton, Jane Goodall, and Bill Gates.

3. PBS – This resource is great for showing children artistic performances, scientific documentaries, and more. It is also a great way to access programs such as NOVA and Masterpiece Theatre.

4. Biography Channel – This channel is great to use when your class is leaning about important historical figures. The lives of authors, scientists, presidents, thinkers, and more can apply to lessons in almost any subject.

5. National Geographic – Unlike other YouTube channels, this one offers full programs. There are over 3000 uploaded videos on all kinds of science topics. While there are ads on this channel, the quality of the content makes up for it.

6. The Real Bill Nye the Science Guy – Bill Nye is still one of the best video resources for teaching science to children. This channel offers clips from each one of his 100 shows on various science topics.

7. Discovery Channel – Here is another resource for educational clips in science and technology. This channel offers clips from their popular shows such as How Stuff Works and Mythbusters.

8. Reel NASA – This is the official NASA resource for students who are learning about space and space travel. There are videos featuring inside views of the International Space Station, interview with real astronauts, and much more.

9. American Museum of Natural History – If you teach science, biology, geography, or another natural history field, this is the channel for you. There are playlists on all kinds of interesting topics such as dinosaurs, space, and the human brain.

10. Khan Academy – The mission of Khan Academy is to provide a free education to anyone anywhere. It offers videos on practically every topic imaginable, so you're likely to find just what you need to show in class. It's also a great resource to offer to your students for extracurricular learning.

Web Site WatchKnow.org (1000′s of Free Educational Videos)

WatchKnow, launched in 2009, is a web site that hosts educational videos. These videos have been "deeply and usefully categorized according to subject, education level, and placed in the order in which topics are typically taught" *(quote from WatchKnow's About page).*

All the videos on WatchKnow are reviewed by a "Media Review Panel", and the site is overseen by an Advisory Council consisting predominantly of educators. This non-profit site offers a unique Age Filter, which can be coupled with a Search box and Topical Categories and Subcategories to help users search the growing database of videos for useful content.

WatchKnow is powerful addition to the growing list of educational video web sites on the Internet *(such as TeacherTube, SchoolTube, etc.)*, and they have attempted to provide a somewhat unique twist with their age level and categorization scheme.

Checking out Podcasting in Education

This article was written in early 2009. In the intervening years, video casting or 'vodcasting' has become increasingly popular, and it has been my impression that podcasting has gradually become less popular. With the increasing availability of mobile devices with good bandwidth, this is a somewhat natural revolution. That being said, Podcasting is certainly still relevant and worth knowing about. - KW

What is Podcasting?
It's nice to start with the basics first. The word "podcasting" sounds like, and in fact is, a portmanteau of "iPod" and "broadcasting", leading to the assumption that it is about broadcasting to iPods and similar devices. A quick check at Wikipedia proves this to be a pretty accurate assumption. Wikipedia defines a podcast as being, "like a radio program except people can download a podcast to a portable media player (such as an iPod or other mp3 player) and listen to it at their convenience". Anyone can create a podcast with a computer, internet connection, and recording device. Podcasting uses RSS feeds *(the same mechanism used to distribute blog postings)* for distribution/publication. Podcasts can also incorporate video *(podcasts incorporating video are also referred to as "vidcasts" or "vodcasts")*. So, a podcast is an audio or audio-video recording you can listen to live or on demand, and access via the Internet. This leads us to the next question – how are podcasts being used in education?

Potential uses for podcasting in education
I found a great article about podcasting in education from the Office of Information Technology at the University of Minnesota *(the link has since been removed – KW 1/26/12)*. The article explained that "one obvious use of podcasting in education is to create an archive of class lectures that students can listen to at their convenience. However, given the distinctive features of podcasting, its potential goes far beyond [that]." The article mentioned more uses for podcasting in educational settings, including: news/updates; guest lectures; student-produced podcasts; interviews; short language lessons or other lessons focused on developing listening and speaking skills, and supplementary material such as speeches or music. It also discussed how podcasting is a sort of time and space shifting technology – that is, with it's on demand and mobile nature, people can listen to podcasts anytime they want (once the podcast becomes available for streaming), and anywhere they want (assuming they upload them to a mobile device).

How extensive is the use of podcasting in education today?
A Google search for "who is using podcasting in education", or any similarly worded query, produces page after page of links to a wide variety of articles and other materials focused on this topic, so it would be logical to conclude that there are many educators interested in using this

technology. Unfortunately, a more thorough quantitative assessment of this was not easily arrived at. I did come across sites like Findpodcasts.com, which included rankings of podcasts by popularity, organized into groups like "Education and Learning", and providing "hit counts" *(for example, 1381 hits on a podcast about "SAT, ACT, GRE Test Prep Vocabulary")*, but it was not clear what time frame those hit counts applied to, and if they were in fact "hits" or subscriptions. Hopefully, as I learn more over the next week while looking into how to actually use the technology, I may come across some better quantitative information.

More information

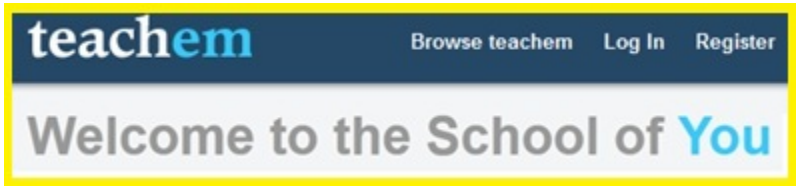
This Wiki site has a great 3 minute video overview of podcasting, and a lot of related resources: http://podcasting-in-education.wikispaces.com/.

Chapter 6 – (More) Flipped Classroom Resources

The prior chapter provides a wealth of existing content that can be useful in the flipped classroom context, but most teachers who are flipping course content wish to either create their own, or leverage existing content in a customized way. The two applications discussed in this section can facilitate this.

Teachem is a Great Free Tool for Delivering Flipped Classroom Video Content

Teachem is a free online web site that where you can easily turn YouTube videos into online classes that can be private or public. A variety of additional teaching and learning aids, such as Flash Cards and 'SmartNotes' round out the functionality to deliver a uniquely powerful tool for delivering flipped course content. Originally modeled off of their sister website focused on legal education, Lawline.com, the parent company started Teachem to provide this great, free functionality to teachers of all subjects.



Teachem started off with limited functionality to keep it simple and easy to adopt *(in contrast to ed.ted.com, for example, with some wonderful functionality available, but rather buggy performance in my experience).* They are gradually, thoughtfully, building in additional functionality (more on that below). For example, a section called "Create an Exam" is slated for release this month.

This brief video provides a quick introduction to the application: Teachem (55 Second) Video Preview.

Features & Functionality
Here are some of the things you can do with this simple yet powerful application:

- **Use your own videos or tap into the hundreds of thousands already available on YouTube:** Use videos that you've created and uploaded to YouTube, or use any of the endless variety of YouTube videos available, but deliver them in a controlled environment.
- **Keep them private or make them open:** Provide access only to students with your school's email address, or leave the course publicly accessible, "MOOC" style.

- **Organize:** Easily create a separate 'school' for each subject, course, instructor, etc. The possibilities are endless. Organize video content into categories for easy access.
- **Create Flashcards & 'Smartnotes'**: This video discusses how to create and email Flashcards and 'SmartNotes', linkable directly to the point that they appear in the class.
- **Cost to you: Free, Zip, Nada!**

A good way to get a feel for Teachem is to check out a few example 'schools' and courses created using Teachem:

History of the World Since 1500 – This course presents and critiques a narrative world history from the year 1500 forward using multiple videos.
Teachem FAQ Classes – Teachem uses its own tool set to create a 'school' that provides instruction on how to use their application.
Demo University – This is an example if a 'school' with a variety of different subjects and classes added. Teachers could easily add flashcards to any class and take SmartNotes that are time stamped to the video.
Philosophy Class 101 (locked) – This example serves to illustrate how a private course looks to someone who hasn't been invited.

New Features Recently Added or Coming
Teachem has been gradually adding functionality to their application. Here's a few features recently added or slated for delivery very soon:

- **Enrolled students**: A dashboard to see who is enrolled in your school(s).
- **Sharing links to flashcards:** Right now you can only share your class link. With this new feature you will be able to share a link to any flashcard within the class.
- **Unlisted classes**: Now that public classes automatically get added to our public catalog we will give you the option to create a public class but keep it unlisted.
- **Features in the works for delivery a little further out in the future** include the ability to add additional teacher roles to your school, a central location where you can access all your flashcards and SmartNotes, and Exams.

Ultimately, Teachem is as about learner, with functionality designed to deliver an engaging learning experience and content that can be rewound and replayed as needed. With content flipped like this, valuable class time is freed up to provide more constructive, hands-on, and personalized learning, which is the ultimate goal of the flipped classroom.

The TED-Ed YouTube Channel and Website Provide Powerful Capabilities For Teaching

Educators and technology advocates across the world were delighted by the launch of the new "TED-Ed" YouTube channel devoted exclusively to educational content. Within two short weeks

of the launch, the channel had 50,000+ subscribers and over a million views – a clear testament to the popularity of the TED brand.

By combining content on the video channel with functionality being delivered through the TED Ed website, the videos have been transformed into a unique educational resource. Each video is paired with a brief multiple choice quiz, a set of questions to be answered in text format, and some ideas about how to "Dig Deeper" into additional resources related to the video's topic.

'Flip' A Video To Create Your Own Customized Lesson!
Another great idea they've put into place on the TED Ed site is a "flip this video" function that lets you to turn any video into a customized lesson. You can add your own context, and select from pre-configured quizzes or add your own questions and follow-up suggestions. You can then share the custom lesson with students through e-mail, Facebook, or Twitter – it will have its own unique page on TED Ed, and you decide who gets to see it. You can see who viewed the lesson, review how many questions they attempted and the answers they provided, see the number of questions they got right and more (with their permission). Even cooler – you can 'flip' ANY YouTube video (including one you create)! Learn more about this outstanding innovative idea here.

Browse Videos on the TED Ed Website
On the TED Ed website, the channel's videos have been organized into a few categories for easier access and searching. In addition to a "Featured" video section, there is a subject grouping with videos grouped into 9 different academic subject areas. There is also a "Series" grouping that offers sets of videos grouped into series such as "Inventions that Shape History", "Questions No One (Yet) Knows the Answers To", and "Cyber-Influence & Power".

You Can Get Involved
TED-Ed encourages involvement from educators and other contributors in a number of different ways:

- **Nominate an Educator** (here) - A primary focus of TED-Ed is to provide high-quality lessons taught by exceptional educators. If you or someone you know is an engaging expert that you think should teach others, you can use this nomination form to suggest them to the TED-Ed team.
- **Recommend an Animator** (here) – TED-Ed is looking for visualization artists interested in doing work on a freelance basis. Submit potential artist's names using this form.
- **Suggest a Lesson** (here) – If you have an idea for a lesson that you think should be presented on TED-Ed, you can use this form to suggest it.

I should note that students in the Flipped Classroom workshop I ran over the summer of 2012 used the TED-Ed tool set, as did I, and found it to perform somewhat inconsistently. Many of us experienced challenges getting the various functions to work well. I sent notice of these challenges through the site's comment functions, but never heard back. Hopefully they'll work out the kinks and bring this site to its full potential! - KW

Chapter 7 – iPads in Education

The iPad has proven to be one of the quickest-to-catch-on technologies in education that I have ever come across. With the release of the iPad 2 at the start of 2011, it was undeniable that Apple had raised the 'tablet' niche of computing device from wannabe to contender – tablets had been discussed for years, but in 2011, the iPad become a game changer.

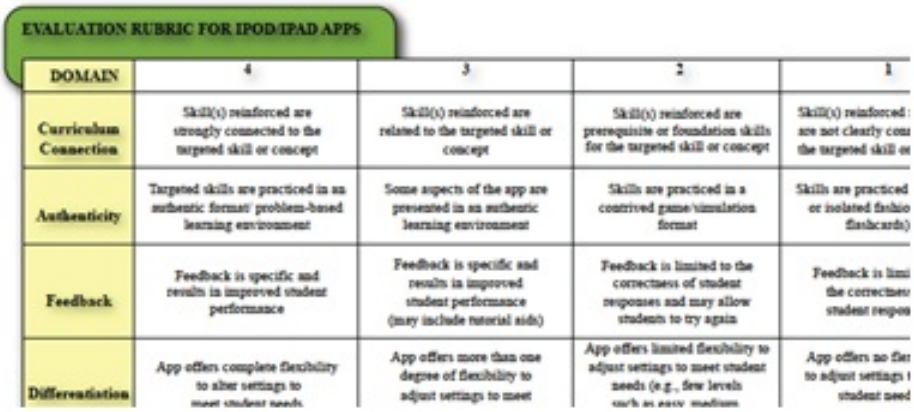
A growing number of schools have launched programs to provide iPads to students. There are many great applications available for free for the iPad. I have written many posts about these types of apps, and I work to focus on apps that provide truly useful functionality for free (as opposed to the many apps that use limited free functionality as 'bait' to encourage you to purchase a paid application).

In 2012 more information began to surface about the impact of the iPad and how to make the best use of it in the educational context, so we'll start off with a few of these pieces. These will be followed by several listings of free iPad apps useful for teaching, and then a list of additional free resources focused on using the iPad in education.

Selecting the Best Apps for Teaching and Learning – Use a Rubric!

In November of 2012, I had the privilege of providing a keynote address at a regional education technology conference in North Carolina focused on Teaching and Learning with the iPad. This two day gathering was coordinated by Franklin Academy Principal David Mahaley and Assistant Administrator and teacher Tim Hall. Over 120 educators came to learn, share, and discuss ways in which the iPad can be used effectively in the teaching and learning process. A student showcase was also offered, and it was very informative and enjoyable (those Franklin Academy students are an impressive bunch). Hopefully this event, now in its second year, will continue for years to come.

One of the most valuable sessions I attended covered methodologies for determining which elements of an app make it most useful in the classroom. This session, offered by David Mahaley, addressed the question, "How can instructors maximize the effectiveness of apps used in the learning environment?" We learned about how to evaluate, test, and assess apps for the iPad and their potential for the educational setting.



EVALUATION RUBRIC FOR IPOD/IPAD APPS

DOMAIN	4	3	2	1
Curriculum Connection	Skill(s) reinforced are strongly connected to the targeted skill or concept	Skill(s) reinforced are related to the targeted skill or concept	Skill(s) reinforced are prerequisite or foundation skills for the targeted skill or concept	Skill(s) reinforced are not clearly con the targeted skill o
Authenticity	Targeted skills are practiced in an authentic format/ problem-based learning environment	Some aspects of the app are presented in an authentic learning environment	Skills are practiced in a contrived game/simulation format	Skills are practiced or isolated fashio flashcards)
Feedback	Feedback is specific and results in improved student performance	Feedback is specific and results in improved student performance (may include tutorial aids)	Feedback is limited to the correctness of student responses and may allow students to try again	Feedback is limi the correctnes student respo
Differentiation	App offers complete flexibility to alter settings to meet student needs	App offers more than one degree of flexibility to adjust settings to meet	App offers limited flexibility to adjust settings to meet student needs (e.g., few levels such as easy, medium	App offers no fle to adjust settings student need

We've all experienced the initial excitement that can come with a new technology like the iPad. Its not too hard to find apps that we think might be useful in the classroom *(check out this recent post for more on that)*, but we often find in practical use that many of them are too single-purpose or have other limitations that make them less useful than we might have originally envisioned. How can we evaluate apps in a consistent, straightforward manner, so that we spend our time and money (for paid apps) wisely?

Use a Rubric!
One of the resources that David mentioned is Kathy Schrock's "iPads in the Classroom" web page, which contains links to a wealth of information related to teaching with the iPad, in various sections. If you scroll down the page a bit, you'll find a section titled "iPad App Evaluation Guides". Here you will find various rubrics that can be extremely useful in determining whether an app will be a good fit for your classroom.

Let's examine one of these in particular – the Evaluation Rubric for iPod/iPad Apps:

- Curriculum Connection
- Authenticity
- Feedback
- Differentiation
- User Friendliness
- Student Motivation
- Reporting

A quick read through the criteria for the highest weighted ranking for each of the domains helps to clarify what each one is addressing. For example, to score a 4 for Differentiation, the app must "offer complete flexibility to alter settings to meet student needs." To score a 4 for Feedback, the app must provide feedback that "is specific and results in improved student performance."

An Example
Let's assess the app Times Table Quiz (from Koalapps) using this rubric. We'll assume we are using this in an elementary grade level where the multiplication tables up to 12 x 12 must be learned. Times Tables Quiz is a simple free app that provides random multiplication questions

and four multiple choice answers to select from. Questions will keep coming until you get one wrong, and however many the student gets correct is their score. If you get an answer wrong, it shows you the right answer, and that run of the game is over.

My ranking for the Times Table Quiz app for each of this rubric's domains is as follows:

- Curriculum Connection: 4 *("Skills reinforced are strongly connected to targeted skill of concept")*
- Authenticity: 4 *("Targeted skills are practiced in an authentic format/ problem-based learning environment")*
- Feedback: 2 *("Feedback is limited to the correctness of student responses and may allow students to try again")*
- Differentiation: 1 *("App offers no flexibility to adjust settings to meet student needs (settings cannot be altered)")*
- User Friendliness: 4 *("Students can launch and navigate within the app independently")*
- Student Motivation: 3 *("Students use the app as directed by the teacher" – this is an imagined ranking, as I have not had multiple student actually use it and provide feedback)*
- Reporting: 1 *(the only feedback is the student's score, which only they see, so I thought this was the best match to the ranking criteria offered)*

Total Score for Times Tables Quiz: 19 (not bad for a free app). If we wish to improve on this app, we know how to focus our search – look for an app that is stronger in the lower ranked areas. If we could find an app that ranks well in all the other areas but improves on Feedback, Differentiation, and/or Reporting, it should be a better fit. Perhaps an app that lets us select specific times tables to drill, offers tips on how to work within different multiplication sets *(like 'the digits in multiples of 9 add up to 9', that sort of thing)*, or provides summarized performance feedback from the teacher.

Wrap Up

This is an excellent tool for examining different software applications for student use in general, not just for the iPad – but for any tablet or other computing device. This logical, methodical approach can enable a teacher or a group of teachers to bring an informed perspective to selecting apps for student use. By having a number of teachers use different apps and then use this rubric to assess their applicability and rank them, schools can bring efficiency and uniformity to app selection and teaching.

Kathy Schrock's "iPads in the Classroom" web page also contains links to many tutorials, lists of apps & related materials, a section "Especially for Special Education", and much more. It is definitely worth spending some time with this resource site if you are an educator using the iPad in the classroom.

Study Finds Benefits in Use of iPad as an Educational Tool

Simon Thomas of 9ine Consulting reached out to share this exciting report. 9ine Consulting worked with NAACE (a.k.a. "the ICT Association") to produce this study. The study looks at the use of iPads at the Longfield Academy, where a large scale 1 to 1 iPad program was implemented last year. A brief overview of this groundbreaking study follows.

Some Background
Longfield Academy in Kent, England is a recently built school covering years 7 through 13 (ages 11 to 18). At Longfield, they strive to provide a cutting edge learning experience incorporating a high level of technology integration in the curriculum. Over 800 students (the vast majority of students at the Academy) had or were issued iPads, across the full spectrum of grade levels (although not everyone had one, apparently a small percentage of students used other devices).

The implementation was driven by an iLearning Group led by the school's Principal and comprised of a group with "a range of responsibilities, experience and confidence [with the technology]". Professional development was provided at the start of the program and on an ongoing basis.

The full study report (in PDF format) can be found here. The report offers many details, some graphically illustrated, about the breakout of student and teacher uses of the tablets.

Findings & Facts
The report's Executive Summary concludes, "The outcomes at Longfield clearly demonstrate the value of the iPad as an educational tool". Among the key findings noted in the Executive Summary:

- The overwhelming majority of teachers regularly use the iPads in their teaching
- There is a high demand from the students for iPad use to be extended further
- Teachers have identified significant benefits for their workload and have also identified cost savings
- Students are more motivated when using iPads

- The quality and standard of pupil work and progress is rising
- Appropriate use of Apps aids learning

The summary also note that technical issues do arise, but are easily dealt with, and that effective project management was critical to the success of the effort.

Below are a couple of slides that shed light on how the iPads where being utilized in the academic setting. There are many more slides in the report, examining usage from various angles. English, Math, and Science were the subject areas in which students were most likely to use the devices; and online research, mind mapping, and creating presentations where the most common academic activities undertaken.

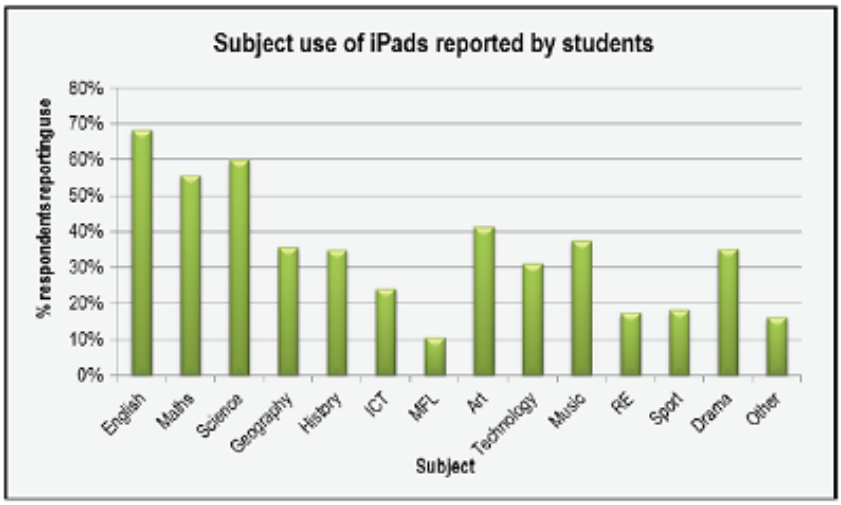


Figure 5. Subject use (students)

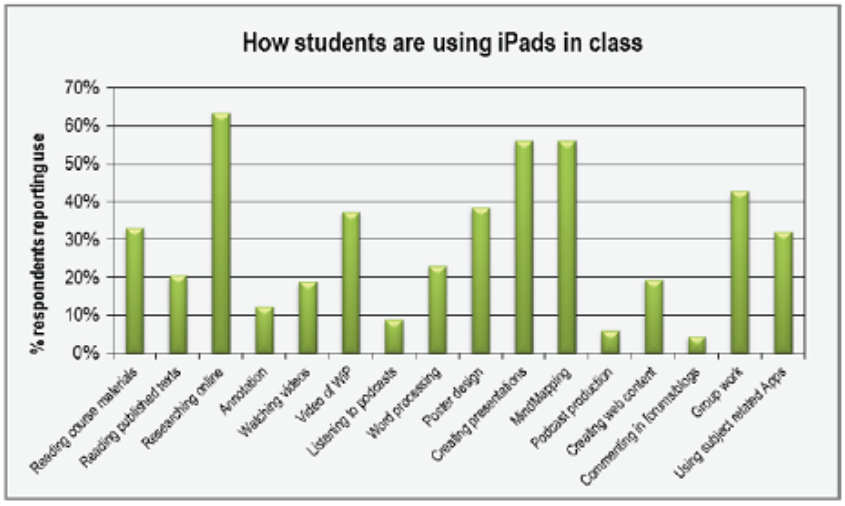


Figure 7. *Main uses of iPads (students)*

The study used surveys to assess the impact of iPad use on motivation, quality of work, achievement, collaboration, and other factors. Among the findings:

- 77% of faculty respondents felt that student achievement appeared to have risen since the introduction of the iPad
- 73% of students and 67% of staff felt that the iPad helped students improve the quality of their work
- 69% of students that completed the survey felt that using the iPad was motivating and that they worked better with it than without it
- 60% of faculty thought that students were more motivated by lessons that incorporate the iPad than those that did not

The following graph illustrates staff perceptions about the usefulness of teaching with iPad Apps:

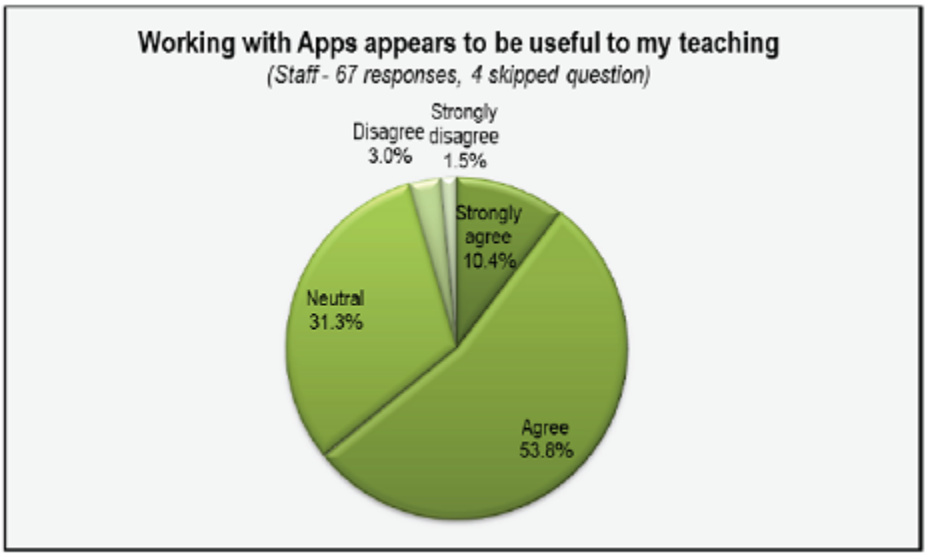


Figure 26. *The value of Apps in helping teaching (staff)*

Students Want More

Overwhelmingly, students wanted to make more use of their iPads and indicated a variety of activities that they felt should be further incorporated into their academic programs, including:

- Photography editing and animations
- Making videos/movies
- Word games to help teach spelling
- Use of the iPad in place of pen and paper
- More writing assignments on the iPad
- Taking tests on the tablet
- Replacing text books with ebooks
- Designing games
- More science Apps

Conclusions
The study report concluded that there was a "significant and very positive impact on learning and teaching which, in time, should be reflected in achievement and attainment, thanks to both pedagogical changes and new ways of learning engendered by the 'any time anywhere' access to information and learning tools."

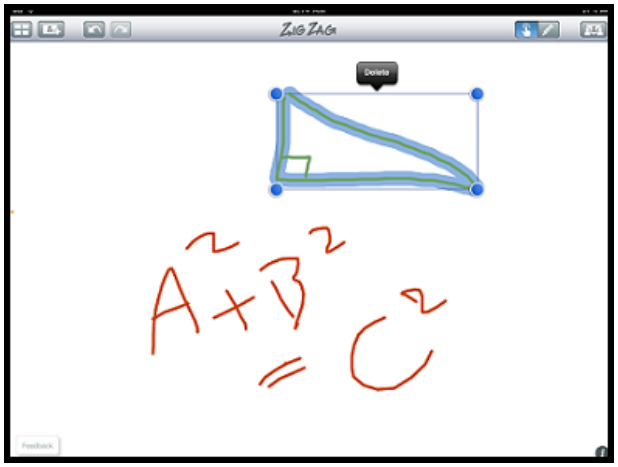
Using The iPad As A Digital Whiteboard (Plus 4 Cool Free Apps To Try It Out)

Four recommended free digitial white board apps:

ScreenChomp
This TechSmith app was rated (an average of) 4.5 by hundreds of users. ScreenChomp provides 9 colors but just one pen size. You can import pictures to use as your background. Mostly importantly, you can record your whiteboard session for play back, and the recording will include audio. Recordings can be saved to the ScreenChomps app, and can be shared via email, Facebook, Twitter, and accessed through a URL.

This app is a great example of combining a few simple features to make a tool that is very useful. Here's an example ScreenChomp video I created: **http://www.screenchomp.com/t/Z2xnmkfS.**

ZigZag Board
ZigZag Board had one unique offering among the free tools I looked at, which is the ability to select and resize things you draw (as well as move or delete them). It is similar to some of the other apps in that it has a small selection of pen colors and the ability to adjust the thickness of the pen (but no ability to pull a pic to draw on). ZigZag also allows users to have a "meeting" with the app. The meeting functionality was easy to use – I started a meeting from the iPad app and then joined on my laptop, but I was only able to view the whiteboard session there, I could not actually participate in it *(not sure if this works differently when you join from an iPad, we had a network issue and couldn't connect from another iPad).*



Unlike most of these other tools, Zig Zag requires the user to create an account. Once you sign up, there's a nice page-by-page tutorial on how to use the drawing tools and how multi-touch gestures work within the app.

SyncSpace
SyncSpace allows for a choice of 9 colors, 4 pen thicknesses, and 2 pen styles (solid or dashed), which was more than the other apps provided. Two unique features the app has are its ability to scale the screen to any size (it seems that you can shrink or expand your whiteboard indefinitely), and its synchronize capability, which allows for **true collaboration**. My son and I tried this and it was easy and worked well. You can also export files as PDFs, post them to Facebook, Twitter, or Campfire (a collaboration app), or email a link to other iPad users.

One down side of SyncSpace is that it did not work in landscape (horizontal) mode, making it a little less ideal for projecting.

Jot!Free
The Free version of Jot has a pretty nice set of functionality including: 4 colors and 4 pen sizes, the ability to move a drawing and to add a background, and to add text. You share your drawings via email or save them as a photo. There's a premium app available for $4.99 that provides more colors, more line widths, 5 fonts to select from, and live sharing.

The other four apps shown in the search results I eliminated for the following reasons:

- Show Me Interactive Whiteboard: Show Me seemed like ScreenChomp without the audio recording capability.
- Doceri Remote: Required the installation of an additional application in order to use it, and it appeared that I would probably have to pay that app at some point.
- Sign+: This should not have been in the list as it for creating a "digital sign", and does not have the interactive nature of a true digital whiteboard.
- SMART Bridgit Conferfence: This requires you to have a SMART board and applicable server in place.

Connecting the iPad to a projector or HD TV
This seems pretty straightforward if you have the right components. I can't wait to try this, and I'll be sure to share my results here.

- You will need the Apple Digital AV Adapter ($39) and an HDMI Cable (under $10).
- Your projector or TV will have to have an HDMI interface.
- This eHow article explains the basic process of connecting your iPad to your projector.

15 Favorite iPad Apps As Selected By Teachers

In early 2012, EmergingEdTech ran a survey asking teachers to tell us about two or three of their favorite iPad apps that they use in an education-related context. Here we share the apps that were listed most often, and include some feedback from teachers regarding why they like them so much.

As it turns out, free apps really outweighed paid apps in our survey responses. Here I list eleven free apps that rose to the top of the list when ranked by numbers of votes, followed by four paid apps that performed as well as the lower ranking free apps. Evernote and Dropbox easily rose to the no. 1 & 2 spots in the ranked list, with about 1 out of 3 respondents recommending at least one of these two popular applications.

First, we list the Favorite FREE iPads Apps that teachers indicated they use in their roles are educators*:*

1. **Evernote**
2. **Dropbox**
3. **Neu.Notes**
4. **Screen Chomp**
5. **TED Videos**
6. **EduCreations**
7. **iBooks**
8. **Skitch**
9. **Twitter**
10. **Zite**
11. **Science360**

Following is a little information about each of these apps, and some feedback on why teachers like them.

1. Evernote *(link to app in US iTunes store here)*
Evernote allows you to easily maintain sets of notes and access them from just about any device, along with additional functionality. Here are some of the teacher's comments about why they love this app:

- "It makes my life simpler! Who couldn't use an app that allows you to clip information from the web, connect to a drawing tool, (Skitch), take notes, has its own email AND syncs all your information seamlessly with your computer, phone and ipad!"

- "I don't even know where to start. I love this App. I know it was on last year's list but it is my top App. I use it to store job related info, … snapshots, urls, and mainly just keep me organized!"

- "I save all kinds of resources for myself and to share. I am able to organize them and file them."

2. Dropbox *(link to app in US iTunes store here)*
Another highly popular app, teacher's love this one too. Dropbox allows you to synch files between multiple devices so you can easily get to them regardless of which device you're on, and provides 2GB of storage for free.

- "It allows me to keep all my files in one secure place. When necessary I can share a specific folder with a class and allow for a quick and secure transfer of files."

- "I use it to transfer/access files between my computer and iPad. I love it because it is an easy way to access files – using email can clutter my inbox and make is difficult to organize."

3. Neu.Notes *(link to app in US iTunes store here)*
Take hand written notes and drawing on your iPad with great free app for sketching, note taking, mind mapping and more.

- "I use this to write all my notes in class every day. Love it–just like writing on a whiteboard."

4. Screen Chomp *(link to app in US iTunes store here)*
This teacher's comment explains Screen Chomp, and why he or she likes using it in their teaching role:

- "This is a whiteboard that allows you to record what you do, and narrate at the same time. It's great for anything you want to show students. The file is saved online and you can play it on their site or download the mp4."

5. TED Videos *(link to app in US iTunes store here)*
Access TED Talks here, "talks from some of the world's most fascinating people".

- "I use the videos from TED to spark discussions in my class, as well as to gather information on subjects I'm getting ready to teach. Awesome information here!!"

6. EduCreations *(link to app in US iTunes store here)*
Educreations turns your iPad into a recordable whiteboard.

- "The ultimate screencasting app for teachers AND for students–teachers can flip classrooms and students can build demonstrations of thinking/knowledge. GREAT app!"

- "I can draw and create lessons on my iPad and I can find other user's lessons."

7. iBooks *(link to app in US iTunes store here)*
Apple's electronic books app is included with iOS 5 (already installed on new iPads). I thought this teacher's comment showed an interesting approach to the use of this tool, and this can be done more easily for a PDF – you can open a PDF in iBooks once you have it open on the iPad and it will be saved there until you delete it *(when you have a PDF open on the iPad, click the 'send to' icon and you should have an 'Open In …' iBooks option if you have iBooks installed).*

- "This is a perfect app for a classroom teacher. If you want kids to share their writing with one another, all you need to do is take their Word document (or PDF), upload it to a site like 2epub.com, convert it, put it in your Dropbox and then open it in iBooks. Think of the power of all those books on the iBooks shelves… and they're all written by your students!

8. Skitch *(link to app in US iTunes store here)*
"Mark up photos, screenshots, maps, and webpages then share them with anyone you like" *(from iTunes store description).*

- "It is great for annotating pictures, maps, or screenshots. Simple to use and syncs with Evernote."

9. Twitter *(link to app in US iTunes store here)*
The insanely popular microblogging platform offers it's own free iPad app.

- "I use this app to stay up to date on new educational technology, trends in education, trends and ideas in gifted education, and am researching and brainstorming how to incorporate Twitter with my students next year."

10. Zite *(link to app in US iTunes store here)*
"Zite is a free personalized magazine for your iPad that automatically learns what you like and gets smarter every time you use it" *(from iTunes store description).*

- "Gathering web articles on many different topics for educational professional development."

- "Keeps me up to date on news and blogs–love the easy set up and format."

11. Science 360 *(link to app in US iTunes store here).*
"The National Science Foundation's (NSF) Science360 for iPad provides easy access to engaging science and engineering images and video from around the globe and a news feed featuring breaking news from NSF-funded institutions" *(from iTunes store description).*

- "I like to use these videos to reinforce ideas of what my students are learning. This helps me pull them up quickly and use apple TV to watch them."

- "The app has a good visual field when you open it so you have a good idea what the topic is and if you can tell if it's a video. I use it with my 3rd grade reading group mostly as a behavior modification."

So there you have the top free apps chosen. To round out survey results, there were also a handful of paid apps that ranked the same as the lower entries in the top listing above.

The Favorite PAID iPads Apps that teachers indicated they use in their roles are educators*:*

Ed Note: I realize these are not free and therefore are out of the context of this eBook, but most are very low cost and I thought they were still worth keeping here from the original article - KW

12. Alge-Bingo *(link to app in US iTunes store here)*
Students can develop their algebraic equation solving skills through playing a Bingo game. Created by a high school math teacher with over 25 years of experience in the classroom. ($ .99)

- "For Algebra students to learn and review their equation-solving skills. It is addicting and a fun way to get my kids to learn!"

13. SplashTop *(link to app in US iTunes store here)*
A very popular remote desktop app that let's you access your desktop PCs or macs and run the apps on them. ($2.99)

- "This app allows me to control my PC computer through my iPad. I am also able to use the iPad as a slate. This allows me to use my IWB remotely from across the classroom."

14. Explain Everything *(link to app in US iTunes store here)*
This iPad presentation tool is easy-to-use, letting you annotate, animate, and narrate explanations and presentations. ($2.99)

- "This is a great, low-cost app that enables you to draw and annotate on the screen, while narrating or recording explanations. You can import photos, PDF and slides on which you can draw and then you can export in multiple formats. Great app when you need to quickly explain something that requires a sketch or drawing and it's easy to share to your cloud storage or YouTube."

15. NoteTaker HD *(link to app in US iTunes store here)*
Capture and manage handwritten notes and diagrams. ($4.99)

- "This is the preferred note taking app for our students. It is very easy to use and has a great interface."

That rounds out our listing of those apps indicated multiple times by teachers who submitted them to our survey and told us about why they love using them in their roles as educators. So get clicking and go take one of them for a spin! Don't forget to let us know how you make out, or to comment and tell us about favorites of yours.

Dozens of iPad Apps for Young Students on the Spectrum, at Your Fingertips: Autism Apps

This tool provides easy access to what appears to be at least a hundred apps that are being used by and with people diagnosed with autism or other special needs. Apps are grouped into dozens of categories and a search tools is also provided, so users can easily search through their excellent database of apps. Each app listed may include screenshots *(for both the iPad and iPod if available)*, reviews, video reviews, and an "Email to a Friend" function. This is really a top notch resource and we highly recommend it.

Autism Apps is available here:
http://itunes.apple.com/app/autism-apps/id441600681?mt=8

Five Fun Free iPad Apps for Elementary School Teachers And Students

Preschool Memory Match
http://itunes.apple.com/us/app/preschool-memory-match/id368542467?mt=8
This is your standard memory match game (flip tiles two at a time, looking for matches), and it comes in 4 levels of complexity from Easy to "Super Duper Hard". The game uses mostly pictures of animals and provides and displays and pronounces their names, which provides additional learning opportunities.

Times Table Quiz
http://itunes.apple.com/au/app/times-tables-quiz!-multiplication/id441001315?mt=8
This is a rudimentary, but very useful app that tests students skills with math times tables. The app presents random multiplication questions from the spectrum of times tables from 2×2 to 12 x 12, providing 4 possible answers in multiple choice format, and you keep going to see how many you can get right in a row. When you guess an incorrect answer, it stops and tells you the correct answer and you start over. This is geared towards later grades, as it does not allow for setting the level of the times tables – it just mixes the full range.

Trainyard EX
http://itunes.apple.com/us/app/trainyard-express/id348724199?mt=8
This application is great for the younger grades, as it guides the student slowly through a smooth learning curve with an increasingly complex task of designing a path for one or more trains to get point A to point B. As you progress through successive successful completions of the game it gets more complicated, working it's way up to some pretty involved challenges!

BrainPop's Featured Movie
http://itunes.apple.com/us/app/brainpop-featured-movie/id364894352?mt=8
BrainPop is a powerful application, with a wide range of functionality in its relatively inexpensive paid versions, but they provide the Featured Movie feature on their iPad app for free, and elementary school teachers might find it worth using. Students can watch a different animated movie each day, then test their knowledge with an interactive quiz. The movies are well done short animated clips on a wide variety of subjects, providing a fun, engaging way to learn.

Amazing Shape Puzzle Lite Version
http://itunes.apple.com/app/amazing-shape-puzzle-lite/id469339346?mt=8
This app has three free puzzles that can be fun and educational for younger elementary school students. The app works in English, Spanish, French, and German and provides Word Learning opportunities in addition to developing concentration, memory, and cognitive skills.

5 Fun Free iPad Math Game Apps

My Math App Flashcards (link here): This is a great application, providing flash card style testing for multiplication, subtraction, multiplication, and division, with "Starter" and "Advanced" verisons for each function, making it useful across a wide range of grade levels.

Math Puppy (link here): This app has 2 games and a calculator. Math Bingo is a simple bingo style game (complete a row of correct answers and win) and Math Challenge prompts the user through consecutive sets of questions, up multiple levels, with difficulty increasing along the way.

Multiplying Acorns (link here): This is a cute, straightforward game in which you select two digits to multiply together, and then have to select the correct answer from several choices. The multiplication is represented pictorially in the form of acorns, to provide visual learning support. You can select a maximum high number for use in the game (up to 9), to make it more age/grade appropriate.

Motion Math: Hungry Fish (link here): This was fun – you drag bubbles onto each other to add up to a desired total and then the fish eats them! A simple straightforward game that young kids will enjoy. The more advanced version (which you have to pay for) provides subtraction, multiplication, and division.

Factor Samurai (link here): This is better geared towards higher grades than the apps above, as it requires awareness of prime factors, but it was so much fun to play I wanted to include it. There are three levels, and the lowest level is worth trying for students learning multiples of 2 or 3. As numbers fly on to the screen, you tap on those that are not prime, to break them into factors. If a number breaks into a factor that can be broken down further, click on it to break it down again. Give it a try *(older students or adults, try the "Apprentice" or "Master" levels!).*

8 Great Free Web Resources Focused on Using the iPad in Education

1. Apple's Education Resources for the iPad
It should come as no surprise that the iPad's maker has done a good job of putting together pages dedicated to education related applications and uses for it's popular tablet.

- http://www.apple.com/education/apps/: Here Apple has put together links to apps grouped by Academic Subject. For each subject section, they provide a few specific app examples, plus one or more links to applicable subsets of apps in the iTunes store (e.g. "See the Apps for Learning Astronomy and Earth Science Collection" or "See the Apps for Learning to Write Collection").
- http://www.apple.com/education/ipad/: A number of additional resources and more information about using the iPad in education.

2. The "Apps in Education" Blog (http://appsineducation.blogspot.com/**)**
Reg Swanson runs this popular blog *(with 750 members/subscribers and over 1.5 million page views)* where he has published hundreds of helpful and insightful articles about iPad apps for teaching and learning. Articles are organized by academic subject for easy access, with links to these groupings right up at the top of the home page. I highly recommend this blog.

3. iPadCurriculum.com (http://www.ipadcurriculum.com/)
This is a unique site, in that it has a great side bar for searching for content. This search tool provides drop-down selectors for "Bloom's Taxonomy", "Device", "Grade level", "News",

"Price", "Student reviewed apps", and "Subject", and these categories can be mixed to narrow right down to a targeted topic. For example, combine Price = 'Free', Grade level = 'Elementary', and Subject = 'Grammar' to find articles covering free grammar apps for elementary grades. Well done!

4. iPadinSchools.com (http://www.ipadinschools.com/)
This site is a blog and resource listing, and a set of resources worth being aware of are their collections of apps organized by grade level. Specifically, there are pages that list a good number of "Apps for Elementary School", "Apps for Middle School", and "Apps for High School". These links are found towards the top of the site's home page.

5. The "iPads in Education" Social Network (ipadeducators.ning.com)
This Ning-based social network, created by Sam Glicksman, is dedicated exclusively to this topic. There are a variety of resources here, organized into Blogs, Discussion Groups, Videos, and News & Views. One resource I found particularly interesting here is this Tips & Tricks discussion section.

6. The "iPads in Education" Scoop It Page (and a few similar pages)
(http://www.scoop.it/t/ipads-in-education)
This is one of a few such a pages on Scoop It. These types of pages provide listings of articles about the subject. This particular page, curated by John Evans, has hundreds of articles and is added to on a daily basis. Check http://www.scoop.it/t/ipads-in-schools by Bob Zwick or http://www.scoop.it/t/ipads-and-tablets-in-education *(from Sam Glicksman, referenced in No. 5 above)* for more articles.

7. iPadagogy YouTube Channel (http://www.youtube.com/user/iPadagogy/)
This is the only YouTube video channel we found that is dedicated specifically to "videos of useful apps for education". Of course, a quick YouTube search for "iPads in the classroom" or a similar phrase will return hundreds of videos, so it's pretty easy to find more video content focused on this topic.

8. "iPad for Education and Training" LinkedIn Group (www.linkedin.com/groups/IPAD-Education-Training-2713512)
When considering resources focused on a specific topic, a large group on a popular social network is a great way to locate one of the most valuable resource of all, a community of professionals interested in the topic. This group is just such a community when it comes to using the iPad in education, and at has over 700 members. Recent discussion topics include, "How do you use your iPad to teach music at the elementary age level classroom?" and, "iPads in the high school math class?".

Access these EmergingEdTech.com posts to explore iPads in Education further:

Announcing our new eBook – iPads in Education: Implementations, Apps, and Insights

Study shows 15% improvement in 5th grader's fractions test scores after playing iPad Motion Math game for a week

The year of the iPad in Education: they're being distributed in more schools every day.

SketchPad Explorer is a fun free (until Sep 1) iPad math app for grades 3 to 12

Seton Hill University's iPad rollout – more insights from a model implementation

iPads In Education – How's It Going So Far?

Book Review – Teaching and Learning With The iPad by David Mahaley

Book Review – THE RULE OF 6: HOW TO TEACH WITH AN IPAD eBook by Jim Norwood

Chapter 8 – Online Interactive White Boards

The original April 2010 article, "6 Free Online Interactive White Boards" and the more recent "Using The iPad As A Digital Whiteboard (Plus 4 Cool Free Apps To Try It Out)" have been consistent top 10 pages for viewership on EmergingEdTech since they were published. Unfortunately, several of the tools cited in the first post are no longer online, but there are some other great free digital IWBs that readers provided information about, so in November of 2012, I wrote an updated article.

I spent some time with each of the remaining functional tools from the April 2010 post. My two favorites from that review, Dabbleboard and ImaginationCubed, as well as Writeboard.com, have been taken off line. The good news is that I checked out the applications suggested by readers who commented on the original post and four of them have plenty to offer. These apps provide some powerful functionality for free, and each allows for collaborative editing of the white board.

Here is a brief review of these four newly listed free online IWBs, followed by some updated information on three applications from the original article that are still available online today:

Twiddla (http://www.twiddla.com): Inviting others to collaborate on Twiddla was quick and easy – just hit the green GO button to start a session and use the Invite option *(towards the upper right hand corner of the screen)*. This app provides a great set of tools. You can easily add an image, web page, or document as a background to markup. There is a color palette tool, pen width tool, a shapes tool, and text can be inserted. There is even a "browse" option so that links in your background image can be clicked on, which was pretty unique. Not only is there a chat option built in, but there's even free audio conferencing capability! Twiddla is very impressive and belongs at the top of the list of apps to consider if you need a tool like this.

Vyew.com (http://vyew.com): If you click on the TAKE A TEST DRIVE button, a whiteboard session will open where you can invite others, make notations, etc. I set my screen name and used the INVITE function *(in the upper left hand corner of the screen),* which allows you to set time limits on how long someone can collaborate with you, and choose between 4 roles for them – Viewer, Reviewer, Collaborator, or Moderator. You have to provide a name and email address of your own in order to be able to invite others to collaborate. It took a little while for the session to start on the computer where I opened the invite, but then it worked fine. You can create multiple boards within a session, and there is a great set of tools for varying colors, widths, and styles of 'pencil', adding shapes or text, editing what you've drawn, and more. This is a powerful tool and one worth considering if you're in need of an interactive, collaborative white board tool.

Megascopes' Whiteboard (http://whiteboard.megascopes.com): Megascopes.com is a unique site that is all about the exchange of ideas. There is much more to it than just this whiteboard application (but that's the focus of this post so that's what is discussed here). When you open the whiteboard application, click on the "Request a private session" link *(under where it says "Session: public [2]" in big letters).* This will open a private session, where you will now see a link *(where the "Request a private session" link had been)* that can be emailed to someone that you wish to collaborate with. I tested it and it was simple and fast. This is a simple whiteboard providing a pencil with different colors and widths and an eraser and not much more, but it is easy to use and does not require users to create an account. There is some additional functionality associated with the whiteboard *(the 'persist' and 'post' features for example)* that are worth investigating further if you are considering using the tool frequently.

Groupboard (http://www.groupboard.com): Groupboard offers a wide range of functionality, including free use by clicking here *(you need the right version of Java or html5/ajax installed, I apparently did not, and chose not to pursue this further).* Groupboard struck me as being geared more strongly towards paid use, with the free option more of a tempter than something you would want to use regularly. One significant feature of Groupboard is the ability to embed your board in other apps, including smart phones and tablets *(one part of the front page says it works with the iPad, iPhone, and Android with no plug-ins required, but then there are buttons to download the app from the Apple Store of Google Play, which seemed contradictory).* A scan of the other levels of application functionality on the front page make Groupboard appear worthy of further consideration if you want to get more advanced and scale up use of a tool like this over time.

These are three apps from the original review that are still available online:

Scribblar (http://scribblar.com): Scribblar is a nice tool for collaborating. You do need to sign up in order to use it. You can easily invite others to participate, and there are plenty of useful tools for drawing and editing. You can also chat or use voice to communicate with each other. You can save images (use the Snapshot icon, which will save images to the Assets pane, from which they can be downloaded). Scribblar is another good free collaborative IWB to check out.

Skrbl (http://www.skrbl.com)**:** Skrbl is surprisingly still in beta (its been about two and half years since the first review). The free version does not allow for collaboration, but they do now

have a team version available for $10/month. One has to wonder though, why bother when the tools above provide this sort of functionality for free?

ScribLink (http://www.scriblink.com): When I went to run Scriblink, it gave a notice that Java 1.5 was required, and that a corporate firewall might be blocking it. I assume it is still functional and that I could probably get it to wor, but with good options like those above available, I wasn't compelled to put much more effort into it. I did have various issues with it when I tried it in 2010, and came away feeling uncomfortable recommending it *(if anyone uses this app and can advise otherwise, please comment.)*

Conclusions
I strongly recommend Twiddla and Vyew, and suggest considering Megascope's Whiteboard, Groupboard, or Scribblar if neither Twiddla or Vyew meet your requirements.

If you a are interested in free white board apps for the iPad, be sure to check out, "Using The iPad As A Digital Whiteboard (Plus 4 Cool Free Apps To Try It Out)".

Access these EmergingEdTech.com posts to explore Interactive White Boards further:

9 insightful videos about using SMART Boards in the Classroom

PolyVision ēno whiteboards: A great alternative to the SMART Board

The Eno Interactive Whiteboard – A Teacher's First Glimpse

Taking Mimio's low-cost, portable Interactive White Board device for a test run

Chapter 9 – MOOCs (Massive Open Online Courses)

Only the proverbial ostrich *(you know, the one with its head in the sand)* could look at the growing popularity of MOOCs and not acknowledge that technology has the potential to radically transform how education is delivered and the way that we learn. While change is not always a good thing, courses that are convenient and accessible across the world, and are often free, surely have a lot of good things going for them.

Following are a few sections of material published on EmergingEdTech in 2012 about this rapidly evolving education technology.

How will MOOCs impact the future of college education?

"MOOC" stands for Massive Open Online Course, and the number of institutions offering MOOCs is growing quickly. Thanks to increasing media attention and expanding offerings, interest in MOOCs has taken a significant leap forward in the last year (further attested to in this Google Search Insights graph).

Wikipedia's entry for MOOCs explains that, "MOOCs are founded on the theory of connectivism and an open pedagogy based on networked learning. Typically, participation in a MOOC is free; however, some MOOCs may charge a fee in the form of tuition if the participant seeks some form of accreditation."

According to Educause's "7 Things You Should Know About MOOCs", the first MOOC is widely thought to be a course titled "Connectivism and Connective Knowledge," which was co-taught by George Siemens and Stephen Downes at the University of Manitoba, delivered to 25 tuition-paying students but offered at the same time to around 2,300 students from the general public who took the online class at no cost.

A sampling of the current state of the MOOC
Today's MOOC offerings are expanding rapidly in terms of academic subjects covered, numbers of institutions offering them, and students partaking in them. To provide a sense of the widely varied approaches that are being taken with the creation and delivery of MOOCs, here's a sampling of start-ups, major players, and a few popular individual courses:

- **Udemy**: Making no bones about it, the 'About' blurb on the home page of the Udemy site states, "Our goal is to disrupt and democratize education by enabling anyone to learn from the world's experts." They have hundreds of thousands of students taking courses from their selection of hundred of classes courses covering a vast array of subjects. They have both paid and free courses, and these include courses from many different universities.

- **Coursera**: This growing powerhouse in the world of MOOCs, Coursera currently hosts courses from Princeton University, Stanford University, University of California, Berkeley, University of Michigan-Ann Arbor, and University of Pennsylvania. They offer dozens of courses, covering subjects from "A History of the World" to "Vaccines". These courses are non-credit, but many colleges are starting to consider the possibility of offering credit for satisfactory completion of MOOC courses.
- **Udacity**: As of the writing of this article, recent start-up Udacity is offering only a handful of course, all in the computer sciences field. Founded by three roboticists who believed that much of the educational value of their university classes could be offered online, over 160,000 students enrolled in their first offering, "Introduction to Artificial Intelligence." Pretty impressive.
- **Creativity & Multicultural Communication** from SUNY Empire State College: This course was offered as both a MOOC and a for-credit course at the same time. The course was a 'connectivist' course that mixed a variety of activities to facilitate learning and encouraged the use of selections from a wide variety of web-based tools for making a record of learning activities as students consume, remix and repurpose content *(learn more on this 'how it works' page).*
- **Change.mooc.ca**: This course is just wrapping up, and has leveraged a mix of over 30 innovative thinkers, researchers, and scholars from the field of instructional technology, from 11 different countries. Each week, one of these professors or researchers introduces his or her central contribution to the field.

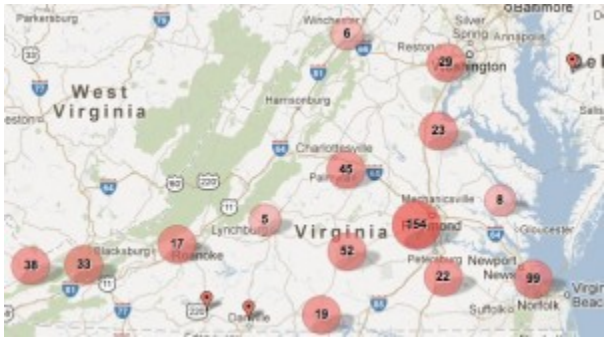
What does the future hold?
It's going to be interesting to see how the MOOC movement, along with open course initiatives like MIT's OpenCourseWare, evolve in the coming years, and how these developments relate to traditional higher education. If even a small number of universities and colleges start offering or accepting credits for these types of courses, it could easily grow into a larger trend, and lower the overall cost of completing a degree. Could this reshape how students earn college credit? Is this ultimately a harbinger of free higher education, or will it evolve into something else entirely?

Longwood University Combines Gaming and MOOC Technology to Offer Free Career Readiness Education to High School Students Everywhere

Can it get much more innovative and community-focused than this? Longwood University in Virginia has worked with one-of-a-kind learning platform creator BadgeStack to offer a MOOC designed to help High School students learn about career readiness. The non-credit course, "5 Skills You Need to Succeed: What Employers Want You To Know", is a free online offering that teaches interpersonal communications skills, presentation techniques, critical thinking and more of the skills needed to land a job and succeed in the workplace.

About The Course
Over 2800 students registered for the first run of this 10 week offering, and about 1200 of them started it. There has been very little drop off so far and they're about 7 weeks through the course. While the largest percentage of participants are regionally located, the course has students

dispersed across the globe, from 12 different countries. Check out these maps of participant locations:



The course consists of 5 modules, each two weeks in length, as follows:

- *Weeks 1 & 2:* Projecting the Best You – Communication and Presentation Skills
- *Weeks 3 & 4:* Playing Well With Others (the Interpersonal)
- *Weeks 5 & 6:* Internalizing the Habits of Successful People (the Intrapersonal)
- *Weeks 7 & 8:* Training Your Brain to Make Great Choices (Critical Thinking)
- *Weeks 9 & 10:* Navigating the Path to put Your Best Professional Foot Forward

Dr. Nicholas Langlie is Director of Planning, Innovation, and Implementation for the College of Graduate and Professional Studies at Longwood. He explained how Longwood is "establishing a new paradigm for learning in education … we have created an interactive online course that incorporates gaming elements to increase engagement and foster retention."

The course is structured with clear deliverables to help ensure a robust learning experience that provides exposure to skills that will give any career seeker a leg up. For example, in Week 9 students have to record an "elevator pitch" to sell themselves to a prospective employer. This hands-on exercise helps students understand the importance of focusing on the key points they want to convey to interviewers, and gain experience in valuable interviewing skills.

About BadgeStack

BadgeStack played a vital role in the development and delivery of this course. BadgeStack is,

"an innovative system with a game-like approach that assesses skills, recognizes learner achievement, sparks community, and excites learners of all ages." Jonathan Finkelstein, director of the BadgeStack project stated that, "this MOOC is an example of why we created BadgeStack. Dr. Langlie created a visionary program that will have a real impact on students working to improve their life and work-readiness skills. We are eager to see the progress of Dr. Langlie's important program."

Virgina DOE Gets Onboard

The Virginia Department of Education has embraced this project, promoting it on the front page of their web site for a while and putting together enthusiastic promotional materials like these:

To Quote the VA DOE:
"There is a BIG correlation between this course and the Workplace Readiness Skills that are required in each Career and Technical Education course. . . . this sounds exciting--especially in light of a recent General Assembly action that requires an online 'experience' before graduation for ninth graders entering in 2013-2014.

This may be bigger than you think!"

EmergingEdTech congratulates Longwood University and BadgeStack on partnering on this innovative project and encourages educators everywhere to check out this course and be inspired by the efforts of forward thinking administrators like Dr. Langlie and the entrepreneurs at BadgeStack. Learn more about the course at http://determinedfuture.com.

Four Infographics About 2012's Top Trending Education Technology Topic – MOOCs

MOOCs have been a very hot topic throughout 2012, and the momentum keeps building. A key development in the latter half of the year has been increased effort by many colleges to determine how to offer credit for completed Massive Online Open Courses. All the attention that MOOCs have been getting has also led to the creation of a few infographics that focus on this popular education technology. Below are four of these visual aids *(click on the abbreviated images to access to the full infographic).*

"The Widening World of Massive Open Course"
(http://www.onlinecolleges.net/2012/07/11/the-world-of-massive-open-online-courses/)

This infographic provides insights into why MOOCs are becoming so popular, some benefits and some issues, major providers, and more.

"The Evolution of Distance Learning"
(http://www.evolution-of-distance-learning.com/)

This is not a traditional infographic, but rather an interactive one. Scroll down through it to reveal the nuggets of information associated with each year in the image, starting with 1892 (when the University of Chicago created the first college-level distance learning program) all the way through to 2035 (where it is predicted that individuals minds will, "converge and communicate through bioengineered technologies …").

"Tomorrow's College Will Be Free (or Else)"
(http://www.onlineclasses.org/2012/10/22/mooc/)

Unfortunately, this infographic makes the case for MOOCs with a rather negative spin on college in general. While its certainly valid to question the cost of some degrees in comparison to potential earnings they can bring, painting a picture of college as generally not worth the

investment in misleading. That being said, there is no doubt that MOOCs are going to put some pressure on higher education to lower costs.

"What's A MOOC?"
(http://www.onlinecolleges.net/wp-content/uploads/2012/12/)

This shortened version of an infographic offers quick insights into what a MOOC is and how it works.

Chapter 10 - Picture And Image Editing Applications

A closer look at 5 free picture and image editing tools

I read the Campus Technology article, "The Super-Secret, Never-Before-Revealed Guide to Web 2.0 in the Classroom", when it was published on October 2010, and there is a section in it entitled "4 Itty-Bitty Content Tools", which in turn has a subsection titled "Become An Image Editor". They mentioned five photo editing tools in that section, but didn't go into a lot of detail about them. I sat down and took most of them for a trial run. Here's what I learned.

Pixenate
This tool has features like "red eye reduction", "normalize" (improve color balance), "fill light" (lighten entire pic), "whiten teeth" (although I found the result a little overdone in the example I tested), and "colors tool" (lets you change brightness, saturation, and hue). But the real fun here is the "fun effects", such as Lomo (add a soft, dark halo around photo), speech bubbles, snowflakes, a filtering tool, and more. You can order prints and products like t-shirts, mugs, etc., that incorporate your masterpiece.

Wet Floor Maker
This tool "turns your photos into cool reflecting images" - you can choose which axis to reflect on, the degree of reflection, and other options. This is a neat idea, but the end result is a small low-res image, and I don't see any option to let you get a larger end product.

Mypictr
This applet lets you upload a picture, select a section of it using a presized frame, then save it or email it. The idea is to give you a very easy way to create a profile picture for social networks, but you can do this very easily using Paint on a PC (and I believe Mac Picture Editor is the equivalent on the Mac).

Roundpic
Roundpic automatically rounds the edges of a picture, but it's limited to 1 MB pictures. It

also doesn't appear to offer any control over the way the rounding effect is applied. Pixenate does the same thing but provides some control over the degree of rounding, and also let's you fill the corners with color. You can actually create a multi-layered corner look by applying the technique a couple times.

Picasa
Google's photo editing and management tool offers functionality well beyond those cited above, and it is free, but it has to be downloaded and installed. In addition to photo enhancement features, Picasa also let's you share photos online, create online photo albums, and more. Of course, there are also options to order products that incorporate your photos. If you work with photos a lot, Picassa is probably worth downloading and setting up. To learn more about it, click here.

More fun, free online photo and image editing tools

Building on (the above) review of free image editing applications with a look at 5 more of these types of tools.

In the above article we looked at 5 free online picture and image editing tools that I had seen mentioned in this Campus Technology article. When I originally published that articled, a few readers responded to the post and mentioned some other tools they liked. I took a look at those tools, and share my experiences and observations about them below. I also did a little searching to find other popular free, web based tools that I hadn't come across already, tried a couple of them out too.

Photofunia
An aptly named tool, Photofunia really is fun! This application uses face recognition technology to merge a picture of a face into any of over a hundred different preformatted scenarios, like the amusing example I've included below. There is also a "Lab" area where you can do things like create an animated GIF using up to 5 pictures, and much more. While the utility of this application is very specific, it is a really pretty neat and worth checking out.

FotoFlexer
FotoFlexer claims to be "The world's most advanced online editing tool" (it's right there in their home page!). Like many of the other tools we looked at there are simple image editing and correction tools, but the array of effects and other image enhancing and manipulating tools does in fact seem to be more extensive than any of the other tools I've looked at so far. These are grouped into Tabbed sections such as "Beautify", "Decorate", "Animations", "Effects", "Distort", and more. Below is an image I applied the "Color Sketch" effect to.

FotoFlexer really does look like a pretty serious application for image editing and enhancement, and is quite impressive for a free tool!

Photoscape
Photoscape.org was mentioned by a reader on the EmergingEdTech Facebook Fan Page, so I took a peek at it. The app is free, but it had to be downloaded and installed, and I just don't see a real good reason to do that since I don't see any features that look notably different from those available in fully online apps (*why burden my computer with more software, registry updates, etc., if there's no real benefit?*). The one feature that did jump out as being something that I haven't seen mentioned in other tools is a 'Batch editor', which could allow you to perform edits (presumably the same types of edit) on a group of pictures, which might be useful, and worth checking out if you do a lot of photo editing.

Picnik
Picnik has some standard picture correcting and enhancing tools, in a nicely organized format. Picnik offers some really cool looking overlays and effects, but you have to pay to use them (plans start at about $2/mo.). Given the functionality I've already seen in other free tools, I just don't see the need to consider Picnik further at this time.

Conclusions & Recommendations
I could have spent weeks looking at these types of tools – there are so many of these. I think that several of the tools that I looked at this week and last are very worth knowing about and putting to use depending on your needs. These were my favorites:

- **FotoFlexer**: While I don't really have the expertise to weigh in on whether or not this app truly is "the world's most advanced online editing tool", I can certainly say that it has an impressive range of utility, and may be one tool that meets most image editing needs.
- **Picasa**: While this app does need to be downloaded and installed, it may be worth it if you do a lot with photos. In addition to photo correction, image editing and more, it can help you organize and share photos, and purchase prints and products containing your images.
- **Pixenate**: Some of the effects here *(things like Lomo, or the Speech Bubble)* I didn't see in some of these other tools, so this is a good app to keep in mind if you're looking for that sort of thing.
- **Photofunia**: This was a very unique app with the specific function of inserting pictures of faces into pre-configured templates. There are over a hundred of these templates and the results can be pretty funny, and pretty impressive.

If you wish to learn more about other free image editing applications, I found this Squidoo page to be a good source of insight into popular tools. It has a nice clickable Tag Cloud with links to a lot of popular tools.

Access these EmergingEdTech.com posts to explore Picture & Image Editing further:

Picasa – Google's free picture and image editing and management tool

Tutorial – 5 Fun Free Photo And Image Editing Applications For The Classroom

Chapter 11 - Presentations & Screencasting

There are plenty of free presentation and screencasting tools available on the Internet, and here we check out a variety of them. We start with a look at tools to help jazz up PowerPoint slides. Then we get into presentation applications Prezi and Slideshare. After that we have check out free screencasting app 'Jing', followed by a brief review of different free screencasting tools. We wrap up with a look at the 5 free presentation tools and suggestions from teachers about ways to consider for using them in the classroom or other professional situations.

Breathe New Life Into Your PowerPoint Slides With Dozens Of Exciting Free Tools & Resources

A wealth of free resources that can help you jazz up those tired old (or new) lesson slides and presentations.

Thanks to a preponderance of boring content, PowerPoint has earned an undeserved bad name. It has become an all-too-easy target for bashing in today's web media. At a recent education conference, someone used the phrase "Power Corrupts, but PowerPoint Corrupts Absolutely" and they got a lot of laughs.

At the same time, we've all seen PowerPoint presentations that made us stop and think, "wow – that's pretty cool, how'd they do that?" Or even better, we got so caught up in the presentation that we completely forgot about the medium of the slide deck.

Following are a number of ideas and free resources that can help you add fun and pizzazz to your PowerPoint slide presentations by incorporating engaging visual and audio elements. The extent to which you evolve your slides is limited only by the time you wish to devote to it, and how imaginative you are. Of course, it's also important not get carried away (which is easy to do with some of these tools), so remember that the addition of a couple simple visual or audio elements is usually more than enough to add new life to an old slide deck, or make a new one fun for both you and your students.

Add Animations
PowerPoint includes easy tools that make it a snap to add exciting visual elements to your slides using automated animations.

- **Slide Transitions:** This tutorial from Online Tech Tips explains how to create slide transition automations using easy pre-configured tools in PowerPoint.

- **Custom Animations:** You can really kick it up a notch by creating your own custom animations, which is easier than you might think. This tutorial from About.com discusses the use of Animations in PowerPoint 2010.

Add cool free picture and text effects and backgrounds using dozens of templates for PowerPoint from Microsoft
There are so many of these cool free templates available on the Internet today. Click here to access a preconfigured search of Microsoft's Office Site, set up to return dozens of articles with hundreds of free templates for PowerPoint. To use the templates, you just download them and the follow the instructions provided in the articles.

These template sets range from simple, ready-to-use slides, to much more sophisticated templates that require significant effort to update with your own images, but can produce spectacular results. Below are two examples of the kinds of template sets available here, a simple one and a more advanced set:

- This is a set of a dozen backgrounds that can be used as is by just inserting text boxes, etc., or if you wish, you can follow the included instructions to learn how to create similarly themed backgrounds using your own images.

- This advanced set of templates contains two dozen striking animations and step-by-step instructions on how to recreate each of them with your own pictures and text (it will take some time and effort to work through the process).

Add audio to your presentations
Adding audio elements to your presentation is a wonderful way to modernize them and make them more appealing to viewers. Here's a couple resources that offer two different approaches to doing this.

- **Add Audio or Music to Your PowerPoint Presentations**
  This article from the online magazine Presentation Magazine *(more on that below)* explains how to add audio files to your presentations so they can play in the background. *Ed Note – In 2012 EmergingEdTech posted and article and video showing how to add video to your PowerPoint presentations in 5 easy steps – this is now included as the next section in this chapter. - KW*

- **Slideshare Presentations Plus Audio**
  SlideShare is a popular free tool that lets you upload your PowerPoint decks and run them across the web. This SlideShare presentation explains how you can add audio to a SlideShare deck using the free application Audacity.

Check out Presentation Magazine for tons of tips, tricks, and templates:
http://www.presentationmagazine.com/

This online magazine has lots of great resources focused on improving your PowerPoint presentations, such as:

- A whole section of articles devoted to enhancing your PowerPoint presentations
- Tips to give your PowerPoint presentation the 'wow factor'
- Plenty of articles focused specifically on PowerPoint 2010
- Hundreds of free PowerPoint templates

"Bonus Option" – Consider synchronizing video to your slides with Zentation.com:
www.zentation.com
Zentation comes in various pricing levels, and the free option claims to allow users to upload a video to YouTube and then "create a new presentation in Zentation to synchronize your YouTube video with your PowerPoint slides". We have not tried this yet here at EmergingEdTech, but it sounded so interesting, we figured we'd throw it out there for your consideration!

Advanced PowerPoint Tutorials
If you wish to learn more on your own, there are plenty of resources available to you on the web. Here are a couple listings to get you started.

- The Advanced PowerPoint Tutorial Series from About.com
- Advanced Power Point Tutorial Video search results from Bing

Add Voice Over to PowerPoint Presentations in 5 Easy Steps

Article collaboratively written with Allison Foster.

The presentation tool in Microsoft Office is one of the most widely used slide presentation applications available today. While PowerPoint has plenty of detractors and is often the butt of jokes *("PowerPoint has no power and no point …", you've probably heard a few like this)*, there is no denying that slides produced with this application are central to countless educational lectures across the world every school day.

PowerPoint is a piece of software that is pretty easy to use, but at the same time has many features that can elevate your presentations. One such function is the easy ability to supplement a presentation with voice-over (or other audio). Adding your voice to PowerPoint slides is a simple process to accomplish, and doing so can turn a presentation from a plain set of slides into a self-contained instructional asset that stands alone and can be used by students to self-teach. This can be a great way to test the waters with flipped content delivery.

Here is a step-by-step guide to adding voice over to PowerPoint slides *(these steps and the video are based on PowerPoint 2007)*:

1. Equipment - When setting up for your voice-over in PowerPoint, make sure you have the right equipment and it's set up. You'll need a microphone to record your voice and a working sound-card or integrated audio (which you should always have anyway).

2. New Folder and Presentation File - Create a new folder on your computer and name it something you'll recognize. Create your PowerPoint presentation (or open an existing one) and save it to this folder. As you record narration, sound files will get created as part of the presentation, and having them all in one folder will help you manage them. If you are spending considerable time on the presentation, you would be well advised to make an occasional copy of this folder for back up in case you run into any problems.

3. 'Record Narration' tool - Open PowerPoint and find the "Slideshow" command in the top bar. Once you click on "Slideshow", a menu will appear – select "Record Narration".

4. Set Sound Levels and Properties - In the "Record Narration" dialog box that appeared after clicking the previous command, click the "Select Microphone Level" button and use the slider to adjust the microphone's level to ensure your microphone is recording at optimal sound levels. You want the level to stay in the green range most of the time, and hitting the yellow range in the indicator at louder points is fine, you just don't want it to peak in the red range on the indicator, as that's too loud. Once the recording levels are good, click the "OK" button to go back to the "Record Narration" box.

You may want to click on the "Change Quality" button (the default settings are pretty low resolution/quality). Select the drop-down window next to the "Attributes" and choose "44.100kHz, 16 bit, Mono". This is one of the most used and efficient audio levels for microphone recording. In Clicking "OK" from this window will close it and you should be looking at the "Record Narration" box again.

5. Recording – To record, simply click "Record Narration" on the Slide Show menu. In the bottom left corner of the "Record Narration" window is a check box for "Link Narrations In" – click this box to check it on (you will need to do this each time you start recording a section of voice-over). You can build out your voice-over gradually from the beginning (in other words, you don't need to do it all in one take). As you record new sections, you will be prompted each time as to whether you wish start on the first slide or on the current slide. Note that if want to record over a section you are not happy with, just record over it and your new content will replace your old content (as long as you save it). Once you are done recording a part, hit the "Escape" key and PowerPoint will ask you if you want to save the timings on the slides. Always choose yes. As you complete each section of narration, save your PowerPoint presentation. Once you have completed part or all of your narration, play your presentation to watch and hear it. Pretty cool, right?!

Voice-over audio can be a very effective part in your presentation process. Voice-over also allows you to turn your existing presentations into self-contained flipped content. There are endless possibilities to using voice-over in PowerPoint and you're only limited by your own imagination!

Prezi & Slideshare - 2 Great Online Presentation Tools for E-Learning

These two widely used presentation applications are accessible from any web browser.

*This article was originally published on EmergingEdTech as a guest post by **Mark Davies.***

If you want to present a lecture without too many words, then your best bet is to prepare a presentation and let your slides talk for themselves. This makes presentations a convenient tool for teaching online courses. There are quite a few Web 2.0 presentation creation tools available, but the best free options to consider are Prezi and SlideShare, both of which are briefly reviewed below.

Prezi

- It's an unconventional presentation design application because you don't have to create individual slides
- You have a workspace where you can create non-linear presentations which you can navigate with the help of pointers – a map shows you how to move around the presentation.
- The user interface is intuitive and easier to understand the more you use it.
- It's great for creating unconventional, interesting and visually appealing presentations.
- It's designed in Flash, which explains the visual brilliance.
- It comes in both free and paid versions – if you don't want to shell out money, the free package comes with 100 MB of storage space and a player that allows you to view your presentations offline. However, you cannot create presentations offline, and all your presentations are stamped with the Prezi logo and published publicly in the showcase. There are other plans that have more features and which you have to buy, so if you're a serious user, you can try the Enjoy plan or the Pro package.
- It's initially a little difficult to use, but there are many video demos that help you find your way, and once you get the hang of it, Prezi is a great tool for designing presentations online.

SlideShare

- It's more of a presentation sharing tool than one that helps in creating them.
- It allows you to upload and host your presentations in common formats like Microsoft PowerPoint or OpenOffice on an online community.
- The user interface is simply designed and easy to use.
- It converts all presentations to the Flash format. However, this is a time consuming process, so with a slow connection, you could end up spending quite a few hours waiting for your presentations to upload.
- A big advantage of SlideShare is that you don't need to have PowerPoint or any other software installed to view the presentations online (because they're converted into the Flash format).
- The Flash format also allows you to embed these presentations in your blog or on your website.
- You can restrict viewing privileges and control who sees your online presentations.
- SlideShare allows you to view your presentations in the full-screen mode.
- It's completely free to use.

As you can see from the above points, Prezi is good for professional users while SlideShare works well for those who're just experimenting with online presentation design tools and looking for ways to share them online.

Screencasting with JING

Jing lets you capture screen shots or capture screen motion (a.k.a. "screencasting"), and record audio at the same time. Captured images can be annotated with text, arrows, and highlights. This makes it pretty easy to make a brief presentation to demonstrate how to do something on the computer.

Jing in action
I used Jing to create this tutorial video, which discusses e-mail storage constraints and some suggestions on how to work with them: http://www.youtube.com/user/EmergingEdTech#p/u/10/-fDfxW0ygDU.

I used the inexpensive paid version of Jing, since I wanted to create a file to load on YouTube where it would be readily accessible. Jing also enables easy sharing of presentations through Screencast.com. *See "**Free vs. Paid options"** below for more on the differences between the free and paid versions.*

To make the video, I created a PowerPoint Presentation, which I played slide by slide and spoke over. I interspersed this with captures of screen activity in Outlook, where I demonstrated a few ideas as I discussed them.

While the result is only 5 minutes long *(Jing videos are limited to 5 minutes)*, it shouldn't come as a big surprise that it took a much longer time to put together. I had to script out what I wanted to discuss, create the PowerPoint slide deck, practice the presentation, and record it a couple times to try and get a good take *(I still made a couple minor errors)*. The good part is that it was simple to do from a technical perspective and the result can be viewed over and over again.

For an overview of how to use Jing to create presentations, check out this video from the Jing web site.

Free vs. Paid options
The free version of Jing has a great deal of functionality, and will probably be more than adequate for most users. If you find you really like the product, but require some of the advanced features, the good news is that the paid version is very inexpensive at only $14.95 per year.

One main difference between the Paid and Free options for Jing appears to be the ability to save files in MP4 format using the paid option, which makes it easy to upload high quality copies of your Jing presentations to YouTube and similar hosting sites. Another advantage of the paid version is better quality motion capture for screencasting, although this is probably only important if you are capturing from a video source. You can also capture directly from a Webcam using the paid version.

Improving learning outcomes with tools like Jing
So, how can tutorial presentations like this help to enhance learning outcomes? By using both visual and audio content, they engage the visual and auditory learner, which is a good thing *(but of course nothing is quite as engaging as an enthusiastic instructor!)*. Being able to easily rewind and replay this a presentation on demand is another benefit of this format.

I believe that one very good way in which a presentation tool like this can be used constructively is to have students view it outside of the classroom (as homework, for example), or perhaps at the start of a class session. Valuable, face-to-face classroom time can then be focused on reviewing and discussing the tutorial's content, and reinforcing and practicing it's lessons.

Comparing Free Screencasting Tools

Combing through the basic functions and features of a list of tools I've become aware of, to select some for further testing.

When I wrote this article, I had a goal of trying to identify a free tool or set of tools to use to create stand alone tutorials by combining screen images and screen motion with audio. I also wanted some editing capabilities, so I could combine multiple captures and rearrange the order of these pieces if needed, and to be able to re-record audio annotation if possible, as well as screen annotation capabilities, at least for the screen captures.

I did some web searching and learned a little about a lot of different tools, which I summarized in table format *(my apologies if any of these have become unavailable since the original publication of this article).*

Feature/Function Summary Table

Application	File Format(s)	Sharing Files	Editing Capabilities
Jing.com	SWF (Shockwave Flash)	Files are created on the local PC (the app runs locally, not on the Internet). SWF files are stand alone and can be shared like any other file (and viewed with any SWF compatible viewer), or via Screencast.com.	Screen images can be edited
***Other Jing Notes**: Presentations are limited to 5 min. in length. Inexpensive Pro version ($14.95/yr.) provides add'l capabilities (such as MP4 file format).*			
Screenpresso.com	PNG, JPG, GIF, BMP	Captured image files can be easily be shared.	Many editing tools for manipulating and annotating the captured images.
***Other Screenpresso Notes:** Screenpresso is just for image capture, not for screen motion capture (it really doesn't belong in this list!).*			

Screenr.com	Unknown	Presentations (stored on the site) can easily be shared via email links, and can also be embedded on websites. *[I have since learned that files can also be downloaded as .mp4 files. KW 1/24/10]*	None
Notes: *Screenr's main focus is sharing screencasts via Twitter.*			
Screencast-O-matic.com	.MOV	Files can be exported, and therefore easily shared or uploaded to sites like YouTube. Presentations can also be stored on the Screencast-O-matic site and accessed by URL or embed code.	None (in free version)
Other Screencast-O-matic Notes: *Videos can be up to 15 minutes long. There is a Pro version that allows files up to 1 hr. on length and provides more functionality.*			
Application	**File Format(s)**	**Sharing Files**	**Editing Capabilities**
Screencastle.com	Unknown	Presentations (stored on the site) can be shared via email links, and can also be embedded on websites.	None
Other Screencastle Notes: *Screencastle does not use log ins, so all casts are instantly available to everyone, and are not linked to individual accounts. One interesting feature of the site is the availability of widgets for automated screencasting from within WordPress and some other tools.*			
Webinaria.com	AVI, FLV	Files are stored on the site, and can easily be shared via email links, and can also be embedded on websites. Files can also be downloaded in .FLV format, for viewing with any Flash compatible viewer.	None

CamStudio.org	AVI, SWF	Files are created on the local PC (the app runs locally, not on the Internet), and can therefore easily be distributed. These formats can be uploaded to YouTube and other video sharing sites for web based sharing.	None
Faculte.com	Unknown	Presentations (stored on the site) can be shared via email links, and can also be embedded on websites.	There are a number of editing capabilities, including the ability to add captions to video.
Other Faculte Notes: *Faculte is really intended to be a paid tool. The free option limits presentation creators to just 200 views of their presentation.*			

Application	File Format(s)	Sharing Files	Editing Capabilities
Debut from NCHsoftware*	AVI, WMV, FLV, ASF, MPG, 3GP, MP4, MOV, and more	Files are created on the local PC (the app runs locally, not on the Internet), and can therefore easily be distributed. These formats can be uploaded to YouTube and other video sharing sites for web based sharing.	There are a number of editing capabilities, including the ability to add captions to video.
Other Debut Notes: *There is a paid "Plus" version of Debut available, with various add-on applets available as well to provide additional functionality.*			

*The URL for Debut is http://www.nchsoftware.com/capture.

[Ed Note - After writing this article, I learned that Screenr.com allows files to be downloaded, and after trying this tool, I really liked it - KW 1/31/10]

Teacher's recommendations for academic uses of 5 fun free presentation tools

Course participants offered their ideas about ways to use these fun free tools in instructional situations and other academic applications.

One of the most meaningful and informative types of communication that happens through education technology blogs like this one is when teachers share their experiences and ideas about how to use technology in the educational setting.

In the summer of 20122, EmergingEdTech ran an online workshop in which participants learned about a variety of free digital presentation tools. With each tool, we got hands-on and created brief presentations, and then discussed our experiences and shared ideas on how we might use these tools in our professional roles. The participants shared a lot good ideas, and I've been meaning to share some of them here.

Following are some of the tools we used, and some of the ideas offered for how to put them to use in education. For brevity, I limited the comments to a few per app, but some of the comments offered had quite a few different ideas packed into them. Hopefully some of these suggestions spark some creative thinking for our readers, and inspire them to try some of these fun presentation appls themselves!

Glogster
Glogster is a tool for creating unique, interactive digital "posters", to share ideas, pictures, videos, and more. Learn more about Glogster here *(on their "What Is Glogster?" page).*

"I have been eager to create a wiki-based Glogster gallery that would showcase student work on a project, i.e., assemble thumbnails of student Glogs for an assignment on Battles of World War II, for example, so that everyone in the class — and beyond — can review and learn from the work."

"We are starting a new early college high school program. The consensus was it was a great way to publicize our new endeavor. I think this is a great way to publicize new programs. It was easy to use."

"… classroom ideas for Glogster use:

* advertise a word or concept
* illustrate an oral presentation
* create a Glogster for an historic or current day pivotal/key person related to a time period, movement, development, etc.
* back to school 'introduce yourself' project"

Vuvox
Vuvox allows users to mix text, pictures, sound, and video, to create a couple of different presentation formats – a scrolling 'collage' presentation, or their 'express' format. Learn more about Vuvox here *(on their 'About' page).*

"This could be used for digital storytelling, much like a storyboard. Any activity with a sequence or timeline could be built for history lessons (i.e. battles of the civil war, or science – phases of moon, rock cycle, water cycle). Really anything goes! It can almost work as a graphic organizer, it is so visually rich."

"I can recommend Vuvox to the classroom teachers with whom I partner on instruction for a variety of projects, including portfolios of students work, timelines, country brochures, properties of chemical elements, biographies, and reader response to literature. In the library, Vuvox could be a fun way to provide book recommendations by featuring books related to a theme (similar to what I've done with my summer reading collage) or new additions to the collection."

OneTrueMedia
"Make amazing videos by mixing your photos and video with our effects, text and music" with OneTrueMedia. Learn more here *(on their 'FAQ' page).*

"With the 'old time' video effects, students could use this tool to create 'You Are There' style news reports about historical topics, using primary source images that they research and scripts that they write, record, and upload. Although the 30-second limit may seem like a drawback, it could actually force students to synthesize and condense information, thereby enhancing learning."

"This tool can be used to convert short writing assignments or projects into videos. For example, a science project on the layers of soil could include images of the three layers and a paragraph about each layer."

"I would like to use a program like this for an online yearbook. It may be a more affordable way to offer pictures from the year. Acceptable use would be an issue, but definitely something to think about. I might also use the program to have the students share information about themselves to help me get to know them better at the beginning of each new class."

Voki
With Voki, you can create a speaking animated avatar! Learn more here *(on their 'About' page.)*

"I use Voki to personalize some of the web sites I create. For example, I have a Voki on my blog to send a greeting to students, and I have one on my resume/portfolio wiki to explain the site to potential employers/ collaborators. I have also used Voki as part of a sub plan; if I'm going to be out for the day, I use my avatar to send a message to students with goals for the day's class. [Could also] be used for reading instruction (record students reading aloud) and world language pronunciation exercises."

Prezi
Prezi is an app where you can create those cool visuals with images and text that zoom in to specific content elements and then back out again to see the bigger picture, and then zoom in again, etc. These have become popular in television commercials lately. Learn more here *(by watching the video on their home page).*

"… four other faculty members and myself were to present information to the faculty that we learned at a workshop. Everyone e-mailed me the outline of what they were talking about and I was able to create one seamless Prezi for us all to refer to. This was much better, in my opinion, than five different people hooking up to the projector and using different tools for visuals."

"Prezi could be used as a getting to know you tool. Students could write their first name and tell us about themselves and their family. There are numerous charts (timelines, flow charts, etc.) that could be utilized in the content areas as well."

Access these EmergingEdTech.com posts to explore Presentation and Screencasting further:

Making the Rudolph Music Video (a Web 2.0 story)

5 Reasons Why I Think Camtasia Rocks

8 Great Free Digital Presentation Tools For Teachers To Try …

Free screencasting – easy; free video editing – not so much

Screencasting with Debut's Lite Version

Vuvox Rocks (what a great tool for creating student reports and teacher presentations)

Chapter 12 –
Popular Social Networking Applications and Social Learning

Social Networking applications have played a growing role in education since their inception, and this has only expanded as they have evolved to become some of the most popular destinations on the Internet. Facebook, Twitter, and applications that extend on their functionality are more popular in education than many might guess. I experienced this firsthand in 2010 when my posts about Twitter became my first 'anchor' content – consistent sources of high traffic. I was similarly surprised when posts about Facebook drew far more readership then I expected, particularly given it's seeming "taboo" nature – I never expected that teachers would actually be open to using Facebook in an instructional context, but they are!

We'll start with a look at some of the reasons and research that indicates that social networking can be a powerful educational aid that facilitates "social learning".

Can Social Media Play A Role in Improving Retention in Higher Education? Research Says it Can.

Studies clearly indicate that social engagement enhances retention.

The potential for social engagement to play a role in increasing student retention is frequently cited in many scholarly articles and books. A recent Whitepaper on "The Social Side of Student Retention" provides a variety of studies that have found "student-peer culture to be a key predictor in a range of education outcomes including persistence rates, and commitment to the institution". This article from ACT, a nonprofit organization whose mission is to help people achieve education and workplace success, encourages socially inclusive activities to aid in student retention, finding that these can, "… help build academic self-confidence and motivation."

In his article, "Research and Practice of Student Retention: What Next?", Vincent Tinto (who is frequently cited as a leading researcher in the field of student retention), notes that "… one fact has remained clear. Involvement, or what is increasingly being referred to as engagement, matters and it matters most during the critical first year of college."

Here are a number of studies and publications addressing the relationship of social engagement to limiting attrition, several of which contain references to additional publications that focus on the issue:

- Tinto, Vincent. "RESEARCH AND PRACTICE OF STUDENT RETENTION: WHAT NEXT?*" J. COLLEGE STUDENT RETENTION, Vol. 8 (1), 2006-2007.
- Demaris, Michalyn & Kritsonis. "The Classroom: Exploring its Effects on Student Persistence and Satisfaction", FOCUS ON COLLEGES, UNIVERSITIES, AND SCHOOLS, Vol. 2 (1), 2008.
- Lotkowski, Robbins, & Richard. "The Role of Academic and Non-Academic Factors in Improving College Retention", ACT POLICY REPORT , 2004. Web.
- Upcraft, Gardner, & Barefoot. "Challenging and Supporting the First-Year Student: A Handbook for Improving the First Year of College", Journal of College Student Development, Vol. 46 (5), September/October 2005.

Can social media/networking deliver the same enhancements in retention?
With all this research indicating that social engagement can play a significant role in retention, it seems pretty straightforward to conclude that the use of social media tools should also play a role in improving retention, since they provide a digital form of social engagement. Just as with the body of research supporting the potential of social involvement to limit attrition, there is a body of research making it quite clear the today's students and faculty are using social media tools, and academia is increasingly embracing them at a growing rate. If you work in higher education, you know this because you see it every day.

The next step is to seek studies or findings that indicate that social media and social networking tools extend the social engagement findings for retention. Research uncovered a number of publications that support that assertion.

- In 2011, Baldwin-Wallace College in conjunction with Learning Objects, Inc. won a 2011 IMS GLC Learning Impact Award based on their innovative use of a social media application at the college. According to this press release, "the results of this collaborative effort produced a 15% improvement in retention rates for College 101 students, and greater numbers of College 101 students earning a GPA of 3.0 or higher. Of students participating in the College 101 course, Baldwin-Wallace saw retention rates improve 15%, and over 100 additional students have been retained during the successful 5 year period. By encouraging students to collect thoughts, goals, questions, ideas, to-dos and outcomes related to academic and co-curricular achievements, the B-W Action Plans empower students to better manage their own learning."
- The study "Social Media and Retention: The Administrative Perspective at Hispanic-Serving Institutions of Higher Education" by Galindo, Meling, Mundy, & Kupczynski of Texas A&M University-Kingsville (Journal of Studies in Education, 2012, Vol. 2, No. 3), offers the following: "Social Networking Sites (SNS) used for academic purposes have shown positive results as students interact outside of the classroom and therefore these SNSs assist in the learning process and building community (Hung & Yuen, 2010). 'Blending the real and virtual worlds,' inside and outside of the classroom has shown to increase peer to peer and academic engagement, especially for first year students (McCarthy, 2010, p. 738)."
- The assertion that social media can enhance retention was further borne out, albeit on a small scale, at Warwickshire College, where students were required to join a Facebook

Group as part of a course in Games Development. Course leader Andrew Brazier reported, "The Facebook group has been such a success that [we have] recorded a retention rate of 100%. He says, 'The course has run since 2005 and although retention rates are generally very good, I often lose one or two students in the first couple of weeks of term as they find out that the course wasn't suitable for them. Since setting up the Facebook group in September 2008 (to date of publication of this case study [1/9/09]), there hasn't been any withdrawals. In fact, the retention rate is over 100% as an extra person has joined!'" See the full case study here.

- In the 2010 study, "The Effect of Online Social Networking on Facilitating Sense of Belonging among University Students Living Off Campus" by Dorum, Bartle, & Pennington (University of Leicester, UK), "results suggest the use of online networking can aid social integration among students who do not have the advantage of the face-to-face interaction that takes place in residential life on campus".

What are schools doing to leverage these findings?
There can be little doubt that students are using Facebook and many other social media tools. Faculty are also adopting these tools – this 2010 Chronicle of Higher Education article noted that, "More than four out of every five professors use social media", based on a (U.S.) national survey of nearly 1,000 faculty members. But what about adoption at a larger level as part of an overall effort to enhance retention?

The easiest places to find news of higher education institutions getting on board with embracing the use of social media as a tool in the retention effort are the web sites and press releases from vendors who produce and sell solutions built around this concept. In this October 2011 Campus Technology article, we learn of seven higher education institutions that are at some stage of implementation with a private social networking offering from Copley systems.

Similarly, applications purveyors Ingrinal and Starfish Retention Solutions gladly share news of customers adopting their solutions. Check the "Starfish in the News" page or Inigral's Success Stories page to learn more about schools who are, or have, adopted these social media based retention solutions. Some of these case studies bring the story full circle, with anecdotal or measured evidence of the power of social media and social networking tools to engage students and improve retention.

7 Reasons To Leverage Social Networking Tools in the Classroom

Instructional uses of social networking software can provide opportunities for learning, connecting, and engagement.

I've written frequently about popular social media tools, and education-specific social networking apps, and social enterprise solutions. I've also noticed increasing coverage of this topic in the media recently. Maybe it's just me paying more attention to it … or maybe it signals an increasing acceptance of these types of tools as legitimate and effective resources for the classroom.

Social networking tools aren't going away any time soon, they appear to be here for the long term. But do these kinds of applications really belong in the classroom? I think they do, and here are a few reasons why:

7 ways in which "social learning applications" can play an impactful role in education:

Engagement: Using social media and networking tools obviously has a *social* aspect to it, and it requires proactive effort on the part of the user. In other words, using these tools to communicate and interact requires a student's active engagement. Socialization also provides opportunities for emotional engagement (this article from The Chronicle discusses the importance of emotional engagement as part of the social learning process).

Social Learning: Bandura's Social Learning Theory posits that "people learn from one another, via observation, imitation, and modeling". Of course, the type of socialization that occurs via "social" computer tools is certainly different than face-to-face social interaction, but it still offers opportunities for social learning.

Use time outside of class better, so you can use class time better: Social learning tools also position instructors to deliver content outside of the classroom, and then "flip" the classroom – working on what would have been homework during class sometimes. *(And yes, this is the same idea I loved from Salman Khan's recent TED talk the other week).*

It provides opportunities for writing and writing assessment: While tools like Twitter lend themselves to abbreviated "texting" style uses of language, there is no need for this in most other forums. Teachers can choose to include grading of writing quality as part of the rubrics they develop for grading social media based assignments and class work.

Encourage dialogue, reach more students: It's social! "Let's talk"! Sometimes anything that can draw out reluctant teens and pre-teens is a good thing when the goal is to communicate. One clear advantage of socializing across the Internet is that it is seen as less intimidating that face to face contact, and can allow shy students to express themselves more comfortably.

Help students get ahead of the professional curve: One of the fundamental goals of education is to position young people for enjoyable, successful careers. Social media is becoming more important to business with each passing year. Many organizations have moved from

just discussing "social media awareness" and "social marketing" to including actually social media business planning as part of their strategic planning efforts. An increasing number of professional positions desire or require social media awareness, and it seems likely that more positions will call for this skill in the future.

Build connections: Using social networking tools to deliver social learning experiences in the classroom provides opportunities to meet other students and have access (depending on the tools being used) to other educators and professionals. Maintaining connections and communicating with these new colleagues has never been easier, thanks to these Internet based applications.

Of course, it's a pain that many of these tools are also blocked on school's networks *(hopefully this list can help you make the case for unblocking some of these sites at your school!).* I do also realize that these tools can be used in a distracting way, and expose kids to inappropriate content, so there must always be an appropriate level of guidance, selection of tools, and oversight.

Facebook as an Instructional Technology Tool.

Can the wildly popular social network be used constructively in the classroom? This student's story says it can.

In August of 2011, student Kristen Nicole Cardon submitted a comment in response to the post 5 Reasons Why Educators Need To Embrace Internet Technologies in which she explained how she used Facebook in a course she took. I really appreciated her well stated discussion of how Facebook was used in the course and how the approach succeeded *(slightly edited in the following excerpt).*

> "In my British Literary History course last winter semester, my professor created a class Facebook group which we all joined. We'd finish our reading for class and then get online and write a paragraph about what we'd read, focusing our comments on the specific course aims that my professor had created for the class. We would then go to class where my professor would note the ways in which we'd covered the material well and he'd teach anything we missed as well as anything else he wanted us to know.
>
> This way of conducting class was effective because:
>
> 1. We were socially motivated to complete the reading and contribute to the online discussion.
>
> 2. We didn't spend class time going over that which we already understood.
>
> 3. We were able to benefit from insights from peers who generally don't participate in class discussion.

> 4. We all learned to focus the vast amount of reading required for such a course to the specific course aims of our professor.
>
> 5. Through contributions from our classmates, we understood how each distinct text related to the others and to the class focus, and so on.
>
> We shouldn't discount Facebook when it has proven to be a worthwhile classroom tool. I should also note that a class Facebook group doesn't require the professor or students to "friend" each other to participate."

So Facebook was basically used to facilitate a discussion group, which can certainly be done with an LMS like Blackboard or Moodle or with various other tools, but the nice thing about Facebook is that many students are already familiar and comfortable with it – it's a "known entity" to them. Another positive thing, which addressed a concern of mine in this environment, was that there was a 'wall' between this academic use and the personal uses students have for the tool – by being in the group you didn't have to friend anyone or expose your personal information.

There are so many ways in which today's Internet based tools can play a creative, constructive role in the educational process … even those tools that we shy away from because they seem more like 'pop culture' throw-aways than academic tools.

Here are a few other examples of Facebook playing a productive role in the classroom:

- **University of South Florida teacher uses Facebook in class**: I recently came across this article about USF graduate student Alessandro Cesarano, who teaches a Beginning Spanish class, and uses Facebook for homework assignments and class discussions in lieu of Blackboard. Cesarano says, "I like the Facebook page better than Blackboard because students have more access to authentic cultural material, and I don't have to waste class time teaching them how to use a new program because many of them already use Facebook."

- **Texas Kindergarten Teacher communicating with Parents via Facebook:** Kindergarten teacher Matt Gomez wrote a couple posts on his blog, mattgomez.posterous.com, about his use of Facebook as a tool to communicate with parents. In this post, he explained that he had, "been toying with the idea of the page for several months. The main reason is Facebook has 500 million+ users. This is a tool that most parents know how to use and use on a consistent basis. Why struggle to make parents visit your website or blog when you can meet them in a place they already visit online?" In this post, he provides some observations about how it worked out.

- **Classroom 2.0 Discussion Forum**: This discussion thread has a number of comments from educators who have used Facebook in the educational setting, such as these comments from …

- Jason Graham: "I've been using Facebook with grade 1 …….yes grade 1. Most of the parents are on FB so its a convenient way to communicate with them, and they can send private messages as well. Most of the parents are busy on the go people who use their Blackberries and FB, Twitter etc to communicate. Its convenient for all. Plus it provides a digital record."

- Anne De Manser: "I use Facebook with my students in several ways. I find it is a great way to provide positive role modeling in an online environment by making positive comments on their Facebook walls and by providing them a window into the way my 'public ' face looks online. It's just another way of communicating and building relationships with our school community."

Setting Up a Facebook Group for Your Class
If you wish to learn more about how best to configure things in Facebook for use in a course based application, here are a few resources that provide guidance.

First, there is this document from Elon University, which offers details on how to set up profiles and course content, following this basic approach:

1. Create a teacher profile separate from your personal profile
2. Ask students to create a limited profile with controlled settings, and to friend your new teacher profile
3. Create Lists & Groups for your classes
4. The document then goes on to discuss how to use various Facebook tools as part of the instructional process

You may also want to watch these YouTube videos from "JayDsfsu", which illustrate "The Basics of a Facebook Page for Educators", "Privacy on Facebook for Educators", "Setting Up a Facebook Group for Your Class", and more.

Other ideas for using Facebook in the classroom
For those interested in giving Facebook a shot as part of their instructional process, here's a few more sources of ideas about thing you might want to try:

- 100 Ways You Should Be Using Facebook In Your Classroom
- 15 Facebook Apps Perfect For Online Education
- How To Use Facebook Questions In The Classroom

5 Fun Ways to Use Facebook in Your Lesson Plans and Teaching

Collaboratively written with guest author Heather Green, a mom, freelance writer, pet lover and the resident blogger for OnlineNursingDegrees.org.

The most popular site on the Internet can be leveraged in the classroom in engaging and useful ways. Facebook has become such a ubiquitous part of our lives that it has evolved to be much more than a way to find out what happened to that guy you had Bio with back in high school or to share pictures of your baby. Many people use Facebook to communicate and network with both friends and professional colleagues, and to learn about products, services, organizations and events.

Facebook is also a handy tool for teachers. Since so many students in High School and college are now Facebook natives, it makes sense to use the social network to connect with students and offer them a new way to learn and access learning content. If you are a teacher with a personal Facebook account, it is advised that you create a professional Facebook account *(you'll need a separate email address in order to do this),* to keep your teaching related uses of tool entirely separate from your personal account. Students should consider doing the same *(they could use their school email for the new account and associate their personal account with a personal email address).*

Here are a few ideas for incorporating Facebook into lesson plans and course work:

Create Fictitious Profiles or Fan Pages
Who among us did not have to do a biography report on a famous author or historical figure? Think about how much more fun that project would have been if you could have created a Facebook fan page or profile for that person instead.

Teachers of all subjects can use this idea to help their students learn more about significant figures in the field. Students can create complete pages for their figures, including biographical information, "Likes", photos, and even status updates to show they have a thorough understanding of the material. Check out the post, "Facebook Summit 2011, an Excellent Academic Use of the Popular Internet App" for a great example of this approach.

Conduct Surveys or Opinion Polls
Classes that study social studies, media, film, religion, politics, and more can make good use of the social connections on Facebook to conduct surveys and opinion polls for research. Want to study family traditions? Conduct a poll amongst friends. Want to discuss cultural beliefs? Host a survey on the network. The Facebook Questions feature allows you to do this.

Of course, some surveys or polls may be limited based on how many people students are able to reach through the network. However, the exercise will offer some insights, and it can also teach students about concepts such as the scientific method and statistics (based on instructions for conducting proper surveys).

Create a Group specific to your course/class
A Facebook group is a great way to leverage the power and popularity of this application to distribute learning content and create a central place for communication for a course or class. Check out this YouTube videos to learn more about how to do this: "Setting Up a Facebook Group for Your Class". You might also want to check out "The Basics of a Facebook Page for Educators".

Tap into information about specific topics
Chances are there are some groups and pages out there that are focused on issues relevant to your course. Type the name of your academic subject in Facebook's search window and you'll automatically get a list of related content. For example, type "Algebra" and you'll get Wikipedia's definition, but you'll also get a handful of pages with related focuses such as books, 'Interest', Groups, and more. Get creative and the possibilities are unlimited. Teaching Social Sciences? Try a search for "2012 presidential election".

Teach students to differentiate real news from hype and hysteria
In many ways, Facebook is like a giant game of telephone. People sometimes hear about news, events, and products on Facebook first. Of course, rumors have a way of going viral before misinformation is corrected, and there is a challenge here to be able to differentiate legitimate information from assumptions, gossip, hype, etc. There is opportunity here to leverage this in a critical thinking context. For example, students can search other sources to validate information they come across in Facebook. The way news spreads on Facebook also offers a unique opportunity for study by students of journalism or mass media.

Facebook offers many opportunities for use in the classroom. However, its applications may not always be obvious, and some creative thinking is required. Try a few of these strategies or adapt them for the unique needs of your classroom.

Using Instagram in an Educational Context

Contribution by Jason Phillips, an education blogger who writes for education blogs and websites, and technology and business related blogs.

If you are active on social websites, or have young tech users in your life, then you've probably come across Instagram. This application works in hand-in-hand with Facebook and has grown to be one of the most apps on the Internet.

What is Instagram?
Instagram is an online photo sharing and social networking service. It enables users to take

pictures and apply digital filters to them and then share them on social networking sites. Instagram was launched in October 2010 by Kevin Systrom and Mark Krieger. The service has been immensely popular with people active on social networking. At present, Instagram has over 90 million users worldwide. Instagram supports all Apple products like iPhone, iPad, iPod and all camera phones having the Android operating system.

How can Instagram deliver educational benefits?
As per Instagram's usage Terms & Conditions, children up to 13 years of age are not allowed to own an Instagram account. However, these students can still view the uploaded pictures. Instagram allows the followers of a user to view photographs and these can also be geotagged. By "geotag" we mean that the person uploading the pictures can also share the location where the picture was taken with his friends and followers. There also exists an option to keep such information private.

Here are some of the ways in which the use of a tool like Instagram can benefit the educational process:

- **Instagram & Spatial Intelligence**
  Spatial intelligence is a mental process through which the brain attempts to interpret certain types of incoming information. This information is basically anything visual – pictures, maps, plans etc. This intelligence is used very effectively in Instagram exercises. The mind judges the distance, size and other aspects of an object before clicking a picture or when viewing them, and also when editing pictures**.**

- **Instagram & Linguistic Intelligence**
  Linguistic intelligence is all about honing students' language skills. When a user uploads pictures, his friends and followers can view them. Likewise, teachers can upload pictures and share then with their students and ask them to make observations or provide specific types of feedback. This encourages students to use their language skills.

- **Instragram & Logical Mathematical Intelligence**
  Logical Mathematical Intelligence is basically detection of patterns, the ability to evaluate problems and think logically. This intelligence can be put to use when teachers share some pictures with the students and ask them to work on them - like cropping an image or improving its look using Photoshop. A very interesting exercise can be cropping a picture into various pieces and creating a puzzle out of it.

- **Instagram & Interpersonal Intelligence**
  The ability of a person to comprehend desires, motivation and the intentions of others is

referred to as Interpersonal intelligence. Teachers can engage the students in group Instagram activities like "all about my classmate" to exercise this form of intelligence.

- **Usage of Instagram and iPhoneography in Art & Photography Classes**
  The iPhoneography application helps the students understand the basic fundamentals of photography very easily. At this age understanding the camera settings is not all that easy. iPhoneography eliminates the process of doing camera settings and students are better able to focus on creating marvelous pictures.

- **Instagram & Intrapersonal Intelligence**
  The ability to understand oneself and appreciate one's fears, feelings and motivations is known as Interpersonal Intelligence. This intelligence is addressed through the act of allowing students to work independently and reflect on some of the pictures they capture and create.

I wish we had interesting tools like Instagram when I was in school. Education has become a lot more technology driven, and more fun. It is surprising how a simple thing like a photo sharing application can play a very effective role in education.

Three Ways Pinterest is Getting Used by Teachers

Contribution by Jason Kane, who writes about web and mobile applications, and the importance application performance testing from companies like SOASTA.

When most of us think of Pinterest, we probably think of young people sharing links to web pages, photos and videos with their friends – just another social network for people to show off things they like, what's going on in their lives, favorite video's, and so on. But how often do we consider Pinterest as a tool to aid in teaching and learning?

Here are a few ways in which Pinterest can play a role in the classroom.

Using Pinboards to encourage Group Collaboration
Group collaboration is essential for completing some school assignments. Pinterest is excellent for group projects because all students in a group can share a pinboard on which they will pin all photos, videos and resources that have to do with their projects. Being able to share content in this way takes a lot of hassle out of completing tasks as a team because the group does not have to work out a meeting schedule to share their resources.

Taking Advantage of Lesson plans and Printable Games Found on Pinterest
Pinterest has an overabundance of lesson plans *(try a search for "lesson plans")* and printable games that teachers can incorporate into their curriculums. This makes the process fun and easy for both the teachers and the students. All teachers have to do is choose the plans and games that are most appropriate for the ages of their students and the subject matter they are trying to teach, and then they pin them to their pinboards.

Using Pinterest to share Assignments
Teachers can create assignments on web pages for their students *(find some examples here)*. This is done so students will have the chance to easily refer to the instructions during the entire course of completing their work. This way, they do not have to worry about keeping track of worksheets or a syllabus. When a teacher invites all of his or her students to use Pinterest, he or she can share the links to these assignments with ease. Rather than having to spend time making sure every student copies down the URLs to their assignments correctly, the teacher can just share it with one click of the mouse and be done. All students will have the correct URLs.

As teachers discover the power of using Pinterest as a teaching tool, we are seeing an increase of this site being used in the classroom and for homework assignments. Students are happy that this tool is being used because it makes learning fun for them. Students are using a social networking site that they are already familiar with and love, and they find school enjoyable as a result.

How Teachers are Using Tumblr in the Classroom

Contribution by Sam Peters, who frequently guest posts on EmergingEdTech and many other blogs and writes about a wide variety of topics.

Tumblr is a web based social media platform that was designed to make it easier for people to share digital media with each other. Unlike Facebook and Twitter, where conversation is a common mode of communication, Tumblr is more about sharing content. It is a great resource and tool for people and professionals of every stripe. Teachers are finding it useful too. Here's some of the ways they're using it.

As a Course Web Site
Here's an example of a Creative Writing teacher who uses Tumblr as a course web site: writerblockparty.tumblr.com. She set up this Tumblr page for her course and has her students follow it. She made separate sections for the Syllabus, Assignments, and so on. Students can get to the content from any web browser and she can communicate and deliver materials by posting them in one place.

Sharing (and Locating) Resources
Tumblr doesn't just make it easier for teachers to educate their students, it can be used as a resource sharing tool. There are tumblr accounts dedicated toward the curating of resources for teachers to use in their own classrooms and courses, like classroomcollective.tumblr.com and englishteachingtoolbox.tumblr.com. One can also search Tumblr for tags (here's a search for "teaching resources": www.tumblr.com/tagged/teaching%20resources). One can just as easily share resources with students.

As a Lesson in Content Credibility
Tumblr can also be used as a lesson on using the Internet for research. Today's students do not know what it is like to grow up in a world without the Internet and some have the same "if it's on there it must be true" philosophy that the generations before them had about television and the radio. A teacher can pull up easily proved false reports, faked photos and videos, etc., to teach her students about the value of research and checking sources.

Make a Pitch for Classroom Supplies
Teachers are often responsible for funding some or all of their own classroom materials. Now a teacher can use Tumblr to share and maintain a list of classroom supplies that are in short supply. Students, parents, and others can choose to contribute as they can and help defray some of these costs and tkeep he classroom stocked with needed materials.

There are lots of reasons to use Tumblr as a teacher. These are just a few of them.

Over 100 Ways To Use Twitter In The Classroom

These resources actually provide over 110 ideas for, and examples of, using Twitter in the classroom.

I've come across a lot of articles containing examples and suggestions for using Twitter in instructional applications. I've combed through many of these and tried to boil down the redundancies to create a rich set of idea-laden resources. While there's still going to be some overlap in the concepts presented in these articles, they clearly meet the goal of providing a thorough set of ideas and examples for leveraging Twitter in the educational process. *(I follow this new listing with the original set of articles cited in my June '09 post).*

- Here we have 25 Ways to Teach with Twitter from Sonja Cole.
- Here's 10 great ideas on how to use Twitter in the classroom, from blogger Steve Wheeler.
- This extensive list provides 50 ways to use Twitter in the College Classroom.
- This Twitter for Academia post suggests 13 different ways to use Twitter in the classroom.
- In this post, teacher "Fernando" offers his Top 10 Uses of Twitter for Education.
- Lastly, this PDF file discusses the experience of teacher Ana Dominquez using Twitter in the Kindergarten classroom.

I also want to mention these 100 Serious Twitter Tips for Academics, which are worth reviewing to learn more and plan your approach to using Twitter in (and out of) the classroom.

Additionally, here 6 additional example that I published in a popular post in 2009:

- I'll start by providing links to two articles (here is one, and here is the another), about teacher Monica Rankin using Twitter in instructional application at the University of Texas at Dallas. These are a few of many stories about Professor Rankin's efforts *(this highly covered case is what really triggered my perception that there were a lot of articles about Twitter in the classroom in recent weeks).*
- Here is a video about Twitter (and other technologies) being used at Roosevelt HS in Minneapolis.
- This article from The Chronicle of Higher Education discusses instructor Cole Camplese's use of Twitter, streaming Tweets from students on screen during lectures, as part of the instructional process.
- In this Vlog, Christine Morris explains how she experimented with the technology with her higher ed students, tapping into Tweetdeck to get the most out Twitter.
- In this blog posting, David Silver explains how Twitter replaced three other technologies he was using in the classroom.
- Last, but certainly not least, here is one of countless articles about Professor David Parry's work with Twitter, from early 2008. This is the first Twitter in the classroom story that I came across and it has been discussed and posted about many times on the Internet.

Intro to Twitter
Just to round this posting out, for anyone who is new to Twitter, here's a nice introductory video on how to use Twitter *(a short ad may play before the video, but it's worth the wait – this is a nicely done 4 min. video from "Howcast"):* http://www.howcast.com/videos/149055-How-To-Use-Twitter

4 Great Twitter Applications for Teachers Using Twitter In The Classroom

Teachers are finding new ways to use Twitter to engage their students, build stronger academic and professional relationships, and to share information in a richer learning environment, and they are using tools like these to bring more fun and functionality to the process.

It's easy to get started with these applications. Users can sign up using their Twitter accounts *(although GroupTweet does get a little more involved)*. Each of these tools has the benefit of being web based – you don't have download anything to your computer to use them, and you can access them from anywhere via a web browser. Lastly, they all have free versions that provide robust functionality.

Twitpic (twitpic.com)
Twitpic allows users to upload photos or videos and share them directly to Twitter, creating an array of possibilities for sharing information. You can get started in seconds, signing in with your Twitter credentials.

Teachers and educators can use Twitpic to post visual content related to classes or coursework, keep classroom pen pals connected, develop class projects that call for students to assemble photos with specific subjects or themes, and so on.

(Of course, it's always important to keep privacy considerations in mind when posting pictures of video materials … sharing personal photos of other people without their consent is never recommended.)

Twtpoll (twtpoll.com)
Polling and survey tools provide teachers so many capabilities. Poll students about their thoughts on class materials and subjects, use a poll as a quiz, allow the poll itself to be an educational tool about voting and democracy, or reach out to colleagues and put new ideas through a peer-reviewed test phase before investing time and energy into implementing them in the classroom. The possibilities are endless.

The polls or surveys people create on Twtpoll can be shared with Twitter followers, Facebook friends or email contacts, giving the tool more dynamic reach than if it relied on Twitter responses alone. Twtpoll comes with four different pricing options – a free version with plenty of power, and three paid options that provide increasing functionality.

GroupTweet (grouptweet.com)
GroupTweet enables teachers to create a classroom Twitter group, where anyone who is authorized and has a Twitter account can contribute. This can be a great way to tie class related tweeting together and create a course-specific presence on Twitter.

Check out the GroupTweet Examples Page to get a sense of how the tool works and what it lets you do, or dig into the FAQs for further details. A GroupTweet classroom account can be focused specifically on students, or it could be used to help to keep the conversation and the lines of communication open between educators, students and parents. The tool is easy to set up and use, and can be kept private by allowing only members of the group to tweet and see tweets.

FollowerWonk (followerwonk.com)
FollowerWonk is the ultimate Twitter Follower data tool, allowing for analysis of Twitter users and follower trends. The free functionality in FollowWonk provides summary information for any Twitter user's followers *(except for yourself – you have to pay for that)*, and it lets you compare information about different Twitter users. There are a variety of paid plans that provide additional analytics capabilities.

Educators can collect all sorts of useful data from the Twitter analytics tool about what's trending among their peers in specific locations, across age or student groups, by topic or even by a "cloud" search of similar terms found in bios – like 'teacher' or 'education.'

This is a powerful tool that allows teachers to compare what is being learned and what is being taught within the entire Twitter community, which had 200 million registered accounts as of January 2011!

All of these Twitter tools can enhance teachers and students ability to communicate and share ideas. Used together, they create a new, dynamic set of learning and information sharing tools.

Access these EmergingEdTech.com posts to explore more about social networking applications in educational uses:

Facebook Summit 2011, an Excellent Academic Use of the Popular Internet App

10 Beneficial Facebook Pages For Educators To Check Out

Why I Love and Use Learnist (and Why You Should Too)

8 Great LinkedIn Groups for Educators

7 Twitter Users to Follow If You Are Interested in Education Technology

More than a third of Higher Education Faculty are on Twitter

Chapter 13 - Teaching with Cell Phones & Smartphones

In 2012, I interviewed college staff and faculty at The College of Westchester as part of our information gathering process while working through the development of a 3 Year Strategic Technology Plan. One instructor passionately shared his perspective regarding how vital it is that we understand and embrace the world the student lives in and how they communicate. We frequently discuss how we can do the best job of communicating with students, yet at the same higher education often ignores or avoids the use of texting, a communication technique that is a part of most American high school and college students' daily lives. Surely it's time for that to change. This inspired the next two articles.

Embracing the Cell Phone in the Classroom With Text Messaging Assignments

The importance and prevalence of text messaging is certainly undeniable. This 2008 study placed the monthly volume at over 75 billion. A 2010 Pew Research report indicates that teens use texting on cell phones to communicate more than they use the voice calls or face to face communication, with 54% using text messaging to contact friends versus 38% calling, and just 33% communicating face-to-face.

But where does this fit into academia? This Spring 2011 study, "Using Text-Messaging in the Secondary Classroom", conducted by two professors at Bellarmine University, found text-messaging to be beneficial for increasing course-related interaction. Students liked the versatility that mobile phones and text-messaging provide, enabling them to access course materials and communicate with peers and teachers while riding on the bus, waiting to be picked up, or during other 'down' time. Since interactivity in (and out of) the classroom can "promote an active learning environment, facilitate the building of a learning community, provide feedback and increase student motivation", surely the idea of embracing the cell phone and text messaging is an idea worth investigating further.

Using Text Messaging in Class Work and Assignments

There are plenty of articles on the Web discussing the use of cell phones and smart phones in an academic setting. I combed through many of these to find those containing useful suggestions and ideas specific to leveraging text messaging in assigned course work.

- The NY Times article, "Teaching to the Text Message", by teacher Andy Selsberg offers a variety of ideas for using text messaging in assignments.
- Here we have an eHow article, "Text Messaging Classroom Activities" that offers 4 different assignments based on text messaging.
- This article, "Text Messaging Brings Assignment to Life" discusses an assignment in which students wrote a new scene or rewrote an existing scene Shakespeare's *The Tragedy of Romeo and Juliet*.
- Here is a video by Dr. Phillip Anderson from The Centre for Teaching Support and Innovation at the University of Toronto, in which he discusses "Text Messaging for Classroom Q&A".
- The article "Promoting Literacy Through Text Messaging" encourages us to "get excited about text messaging as a form of communication, and encourage your students to write often through email, instant messages, text messages and blogging. Students will soon begin to understand that any type of writing is essential." There are a number of ways to use text messaging in assignments in the "Activities" section.
- Here's a simple text messaging assignment from "Read Write Web", focused on *The Lord of the Flies*, easily adaptable to other books.
- In this article from Hayo Reinders, "Twenty Ideas for Using Mobile Phones in the Language Classroom", ideas 6, 8, 9, and 10 leverage text messaging.
- While the article, "Text messaging & e-Learning in Schools and Colleges", is trying to sell a product, it offers some useful concepts for text messaging applications in classroom assignments.
- Another great way to leverage text messaging in the classroom is through the use of text message based polls. This page from PollEverywhere.com offers insights and into doing this with their tool, which has free functionality. In this article, Rutgers instructor Jessica Methot explains how she uses polling techniques to stop 'social loafing' during lectures and better engage students.

Another interesting finding I came upon while researching this article is this 2011 poll from Edutopia which asks, "Does text messaging harm students' writing skills?" With nearly 3000 responses, the results would certainly have some merit. 54% of respondents indicated that they do feel it harms writing skills, but 46% responded otherwise. I thought it was pretty interesting that almost half of the respondents did not say 'Yes'. I have participated in a number of conversations with friends and colleagues who seem to feel that texting is encouraging bad writing habits. A surprising number of people who took this poll seem to feel differently. I'm starting to think that this probably isn't the last time I'll be surprised by text messaging and its relationship to academics.

10 More Resources For Getting the Most Out of Cell Phones and Smart Phones in School

1. "10 Schools Encouraging Smartphones in the Classroom", this December 2011 article offers 10 examples of schools that are doing this and discusses their approaches.
2. "Smartphones in the Classroom" is a rich resource from "RoxannNys" PBWorks Wiki page.
3. To understand the seeming gibberish of text messaging abbreviations, check out Cliff Notes "Understanding Text Message Shortcuts".
4. Here's an insightful Mobile Learning "Free Info Kit" slide show from moblearn.blogspot.com.
5. This article offers a dozen of the "Most Useful iPhone, iPad and Smartphone Apps for College Students".
6. For Android-based phones, here's a great topic-specific article just published last week: "Best Android apps for teachers, tutors, and educators".
7. For more smart phone apps specific to different phone types, Apple has an education-specific app section for iPhones here on iTunes. There does not seem to be an Android.com page specific to education but 101BestAndroidApps has one here and Android4Schools.com looks worth checking out. Last, there's an education-specific Blackberry app page here.
8. For more iPhone apps for education, check out these "Top iPhone Apps for Teachers and Students" and "7 Brilliant iPhone Apps for Teachers & Bloggers" from Johannes Ahrenfelt.
9. I thought it was worth noting that Wiley publishes a book titled "Teaching Generation Text: Using Cell Phones To Enhance Learning" by Lisa Neilsen Willyn Webb *($13.94 on Amazon.com as of this writing).*
10. Finally, don't forget about the natural marriage of Twitter and mobile phones. This brief article shows you how to set up your Twitter account so you can tweet from your cell phone in 6 easy steps (or, if you have a Smart Phone, see No. 6 above to seek out a Twitter app for you phone). Then go check out "100 Ways to Teach with Twitter" for ideas!

Chapter 14 - Surveys & Polls

Below I provide brief insights into 2 different free survey and poll taking tools. Polls and surveys can be beneficial in the classroom … to gather instant feedback and get a sense of how material is getting across, or to select from choices like when to schedule an upcoming event, and so on.

Doodle – a quick, easy, and free resource for creating polls

Doodle.com allows you to send a link out to users where they can easily and quickly click and make a selection from a range of choices you lay out. I just used it to have users self-select from a range of training dates. It took about 10 minutes to set up, and produced a self managed process that required very little administrative effort. If I did this the way I used to – by sending out an email and then having people email me back first and second choices, and then setting these up in a worksheet and responding to users to let them know which dates worked and which didn't and so on, it could have taken hours to administer, versus very little time with Doodle. Very productive! A great way to take quick polls in the classroom. If this sounds useful, give it a shot – for the right application, it is spot-on.

SurveyMonkey

I am a big a fan of SurveyMonkey – I use it frequently to create top-notch web based surveys for free. I realized as I am writing this that I've never posted about this great tool! I've now added it to my list of future topics, but in the meanwhile, suffice it to day it's worth checking into.

This page provides their pricing plans – as you will see, their free basic plan provides for surveys with 10 questions and 100 responses per survey: http://www.surveymonkey.com/pricing.

Chapter 15 – Other Topics & Resources

This final chapter covers a wide variety of different free resources (they didn't really fit in any of the other chapters, and there wasn't enough material to warrant a full chapter for any one of these topics).

4 Sets of Introductory Computer and Internet Technology Interactives

A collection of web based interactive activities to introduce students to computers and the Internet.

Below are a few sets of interactive activities that cover a nice range of computer and Internet usage topics, over a wide range of grade levels. If this subject area is of interest to you, I imagine you'll find something useful in this content.

- First, we have two sets of interactives from the **Utah Education Network**. Each of these pages offers a dozen or so resources for the indicated grade level, covering topics like keyboarding, "beware of spyware", cyberbullying, computer parts, and so on:

  Computer & Internet Interactives for grades 3 to 6.
  Computer & Internet Interactives for grades 7 to 12.

- Next is this set of **Internet Safety Interactives** from GCF LearnFree.org. Internet users of all ages can learn from these. Click on the "Interactives" button to bring up a bunch of great interactive tutorials that cover subjects like Phishing Scams, Shopping Safely Online, Safety Tips for Wi-Fi Hitspots and much more.

- Last is **"Mrs Nasto's Computer, Keyboarding, & Internet" Activities** page. This a scattered but rich collection of links worth checking out if you're seeking out interactive computer and internet related activities for students.

As an added bonus, here's a link to a web site with sets of links to other sites containing interactives, grouped into a half a dozen high level academic subject areas, so you can expand your use of interactives into a wide array of subject materials.

How Cool is Google Image Search? You Can Even Use a Picture as a Search Parameter!

Google Image Search is a pretty fascinating tool with plenty of possibilities for teaching-related uses.

One day last year my son told me that he had learned who painted a picture we have hanging in our home *(it had no readily discernible signature)* by taking a picture of it and doing a search for it using Google Image Search. What?! You can search using an image as your search criteria? I wanted to learn more about Google Image Search. I finally got around to it this weekend.

This video illustrates what I learned about this intriguing search tool: http://youtu.be/DA48UqcClgQ.

Here's a few key takeaways from the video:

- You can upload an image and use it as your search criteria. If the image is a published one (a painting or other work of art for example), it may return an exact match. It will also return "visually similar images", which can open up a world of interesting possibilities. I have to imagine there would be a number of ways that teachers (and students) in the arts and even in the sciences could envision leveraging this functionality.
- Google Image search is a great tool for searching for images based on textual criteria, and the Advanced Search features can allow you to focus or narrow your search in a variety of useful ways, such as image size, aspect ratio, file type, region and more. One of the most useful features in Advanced Search is the ability to search based on usage rights, which will allow you to find content that is acceptable for reuse, or modification – something many instructors often seek when developing learning materials.
- The Google Safe Search function will give you some control over the appropriateness of returned content. By default, this is set to "medium", but you can set it to "strict" to get the highest level of protection (or you can turn it off entirely). This page and video from Google explains more about this.
- Another related tool I discovered, thanks to Richard Byrne's great FreeTech4Teachers site, is something that is labeled as Google's Unofficial Search by Drawing tool. The video above shows an example of this tool in action.

7 Online Resources For Finding Grants For Educators

Contribution from Carolyn Knight, a graduate of the University of Texas at Austin, and a guest blogger who writes about social media, education and RN schools.

A selection of excellent sites to check out if you're looking for education grants.

Searching for grants can sometimes feel like a wild goose chase. Grants are a great way to fund education projects and classroom needs, and reward teachers and institutions that are pushing the education process forward, but they can be hard to find (and often have rigorous application processes). The world of grant applications may be challenging to crack into — but there are a few good resources out there for educators looking to find one. Here's a selection of them.

Grant Wrangler
GrantWrangler.com is a resource that aggregates grants that are available for teachers. The site divides grants by category such as Arts and Humanities, Health & Phys. Ed, Libraries, etc. There are currently over 200 articles on the site, most of which are available grants with application information.

eSchoolNews' Grants & Funding Pages
This monthly online publication that provides users with information about a wide variety of education technology information, but also has a section devoted to grants.

U.S. Department of Ed Grant Listings
A listing of open discretionary grant competitions from the US DOE: http://www2.ed.gov/fund/grant/apply/grantapps/index.html.

Grant Select
GrantSelect is a powerful online database which lists over 13,000 grant programs from over 5,800 unique sponsors. Funding opportunities range from pure research grants to arts programs, community services programs, youth programs, K-12 funding, and more.

TeachersCount
"TeachersCount is a 501(c)(3) non-profit organization whose mission is to raise the status of the teaching profession and provide resources to the education community. Using a national ad campaign and related initiatives, TeachersCount is working to create a permanent culture of teacher appreciation in the United States." This page lists grant opportunities.

Donors Choose
DonorsChoose.org is a grant finding web site that allows anonymous donors to fund classrooms and educators all over the United States. In one 7 day period in January 2012, nearly 44,000 donors helped more than 166,000 students all over the country.

The Barbara Bush Foundation
The application process for the 2012 National Grant Competition is closed, but this foundation is another great resource, so it's worth being aware of, and checking back for the next round of funding in the future.

Making BYOD Work in Schools – Three School Districts That Have Figured it Out

BYOD (Bring Your Own Device) can Work Well When Approached Properly.

In an effort to bring 21st century technology into the classroom despite continuous budget cuts, some school administrators have adopted district-wide "Bring your Own Device" (BYOD) initiatives and programs. Like the name suggests, BYOD programs allow students to bring their own tablets, smartphones, and laptops from home into the classroom for educational use.

It seems like a lucrative idea, especially for schools that can't afford to supply each student with a shiny new tablet or e-reader, but that doesn't mean the concept hasn't met its fair share of criticism. Some experts have been quick to call out BYOD flaws and even speculate that BYOD programs aren't a long-term solution. Whether that's the case is yet to be determined, but there have been some successful BYOD implementations. Below are some school districts that have taken the time to prepare for the challenges that BYOD programs can bring and address them proactively.

Oak Hills Local School District
Similar to Allen Independent School District in Texas, Oak Hills Local School District in Ohio developed this robust "BYOD framework" and set up a strict acceptable use policy before it launched its BYOD initiative in 2010. The policy states very clearly that violators will get their device privileges revoked. In addition, the district has made sure to document the initiative's progress on its blog. To date, the BYOD initiative and its digital desktop system (which can be accessed by any device) has saved the district $1.27 million.

Oak Hill's BYOD Framework consists of 10 structured implementation and support steps that they have documented and shared on the web, for other schools to leverage:

1. Step 1: Community Engagement: For Oak Hills, this consisted of a series of meetings with all constituents: parents, teachers and administrative staff, students, community business leaders, and board members. Key points covered included the creation and nurturing of a culture, "where technology-embedded instruction is an integral part of the everyday learning in ALL classrooms", and exploring appropriate use of technology in and out of the classroom.
2. Step 2: Develop a Team: A core team of eLearning and technology staff meets and works with administrators, consultants, parents, "eKids", and others on a regular basis to explore new technologies, plan professional development, and address overall planning and troubleshooting. The "eKids" program is a wonderful opportunity for students and a

smart move on the part of the schools – "eKids are students in the district who participate an eLearning educational track. Their responsibilities include learning new technologies (often at a deep level), assisting staff with technology needs, and developing additional eLearning opportunities."

3. Step 3: Developing the Physical Infrastructure: A properly planned and designed wireless and security infrastructure is vital to a successful BYOD program.
4. Step 4: Developing the Tools (Software Infrastructure) (KEY!): This is one of the most important things to address because of the challenge of providing software tools that can be utilized **by all students on any device**. This required defining a standard set of private and public cloud apps that are device-agnostic.
5. Step 5: Developing a Portal: "Once the software tools are determine (both in the public and private clouds), it is important to create a central location that collects those resources. The idea is to have a "one stop shop" place for students, staff, and parents."
6. Step 6: Developing an Acceptable Use Policy: Another essential element in a successful BYOD initiative. Oak Hills' Policy, and some related tips for developing and delivering an Acceptable Use Policy, are shared on this web page.
7. Step 7: Building your Curriculum: Click through to the link to explore the use of a "Companion Site for all Courses" and other suggestions regarding this critical element of the program.
8. Step 8: Considering Devices: The goal is to support as many devices as possible, but basic technical requirements must be met. These and other considerations are discussed on this page.
9. Step 9: Monitoring Usage: Monitoring usage of network resources, course and content pages, apps, etc., can provide excellent feedback on the levels of resource usage, bottlenecks that may need to be addressed, and much more.
10. Q & A: A small set of Questions and Answers close out these resources. Some schools might like to evolve this into a fuller 'FAQ' listing.

This is a powerful framework offering a great overview and important insights into how to be prepared to make BYOD work in your school, and administrators everywhere can be thankful for the effort Oak Hills has taken to share their experiences and lessons learned!

Allen Independent School District

Last year Allen Independent School District in Texas began allowing its high school students and staff to bring their own devices to school. Although distractions and access to improper material was a huge concern, administrators decided to address the problem by requiring students to sign an Acceptable Use Policy for Technology waiver and requiring students to connect through the school's wireless network so that browsing can be monitored. In addition, students can only use their devices during approved times set by teachers and students are not allowed to use class time to troubleshoot tech problems. This thorough "BYOD Students, Teachers, and Parent Guide" explains many aspects of their policy and approach.

Katy Independent School District

In 2009, Texas' Katy Independent School District began experimenting with smartphones in the classroom. In this article, we learn how KISD passed out 125 HTC smartphones to fifth graders

at a single school that year, but not before making a few changes—calling and texting features were shut off and smartphones were officially referred to as "mobile learning devices." After seeing an increase in engagement, the district decided to expand its experiment and offer a BYOD program to all grade levels. Because the district understands that not all families can afford devices however, students are encouraged to work in teams so that devices can be shared.

These are just three of the many school districts across that US that have initiated BYOD programs and are figuring out how to iron out the kinks, and how to avoid many of them from the onset. While there are certainly some key issues that can arise, clearly informed planning and proactive measures can curtail the problems and set districts up for successful programs.

Using Second Life for Educational applications

The most popular Virtual World application is a free resource *(assuming you don't choose to trade some of your real money for the virtual "Linden Dollars" that serve as current in SL!).*

When I first checked SL a number of years, the computer I was using was a few years old, and was not maxed out with RAM, and the performance of the environment was just too slow to use. This led me to think that this may have been one of the significant factors behind what seemed to me to be a lagging use of the environment. After all, SL has been around for years, and certainly seems cool and interesting, but of the people I knew using an array of Internet technologies, none were working with SL. This time, I was able to easily move around the environment, and it seemed that functionality was more than adequate to allow me to play around and see what the environment had to offer. This page provides System Requirements specifications. It is certainly a widely used tool these days, as each time I logged on there were **over 50,000 other people logged on**!

Getting started
After creating an account and logging in, I proceeded to search for and 'teleport' to various worlds, which was easy to do. It was also pretty easy to move around and change my perspective. I even learned how to fly! By paying attention to the options available on the screen, and trying things out, the basic navigation issue was not terribly challenging. What struck me as more difficult was figuring out how to actually interact and do things. It took a couple hours of playing, and the help of this tutorial I found on YouTube (below) to get the hang of things. One of the difficulties I found with the environment was the lack of a consistent way to tell what a world has to offer. Some worlds (a.k.a. Islands) in SL provide a nice overview, usually on a billboard or sign of some sort, close to where you land when you 'transport' there, but not all do. It would seem very beneficial to me if there were some standard sort of mechanism, maybe linked to the map, that would make it real easy to know what's available in a given SL world, and make it easy to teleport there (the map tool provides some functionality like this, but it seems a bit short in terms of completeness of functionality and ease of use). *[If I'm just missing something here, please comment and point it out! – KW]*.

Touring a Virtual College Campus

As one example of my wanderings and attempts to work with SL, I traveled to Bryant & Stratton's virtual Campus *(which I found by searching for 'colleges' in the search box in the upper right hand corner of the SL screen).*

After transporting to the virtual campus, I saw a "Welcome To Our Virtual Campus" sign that pointed out 7 different facilities on the campus. I walked over to the Open House building, where I immediately saw a large board labeled "2009 Online Commencement", with a 'Start' button, but I could not get it to do anything *(even though I followed the instruction to select the 'Touch' option from the right-click menu).* This was kind of typical of some of the frustrating experiences I had as I came across objects in SL that looked like they were going to do something, but often didn't. It turned out that this object signified a live event that had already happened, and there were some arrows near the board that would allow you to scroll through listing of awarded degrees. The only reason I discovered that was because an avatar approached me and initiated a chat, and this was when SL finally felt like it was coming to life for me. Once I realized where and how to chat interactively, this gentleman *(Scott Traylor, Director of Admissions at B&S, who exists in SL as 'Traylorman Lane')* was very helpful and provided some insight into how Bryant & Stratton is using SL to engage prospects with online open houses and virtual tours, and to give existing students across their 15 campuses a chance to interact in a different way.

I spent a little more time strolling around the virtual campus and saw useful information services like kiosks *(these typically led to external web pages),* and places to apply online or request a brochure.

Other SL resources for Education

I was particularly interested in checking out museums and other types of online resources in SL that can be useful to educators. I poked around a little and visited some sites. Being able to see images of paintings or other purely visual media is a certainly a straightforward application of the toolset. Another interesting construct was this rich technology timeline mural *(image below),* found at the New Venture Hall at The Tech Virtual museum. There is a statement on this mural that says "This mural is an invitation to dialogue about the vision of Dr. Douglas C. Engelbart …", but it was not obvious to me how to participate in that dialogue (or even if it was possible to do so). The mural itself contained a great deal of information, and seemed to have been contributed to in some sort of interactive fashion.

Other observations

- I spent far more time working to learn about SL than I care to admit - 2 or 3 time more than it takes to learn most of the other Internet tools that I blog about. There is a pretty significant user ramp-up effort required to learn how to use the tool, and you need decent bandwidth and a PC with some power, to have a smooth experience. Simply put, SL isn't an environment where the casually interested can just stop by and try it out – it requires more of an investment in time than many other Internet tools.
- Second Life certainly has some useful and intriguing functionality to offer, such as getting an introduction to a place you haven't visited, learning more about what that real-world location has to offer, tapping into an array of resources about a topic in a fun and different manner, and attending live events and performances. It also serves as a virtual meeting place, with sophisticated and unique functionality *(but it does require a good deal more effort to use than other remote technologies, like conference calls, web meetings, forums and chat rooms, etc.).*
- The most advanced means of interaction, and the best way get the most out of SL, is to interact with other users by chatting, IM'ing, or talking directly. Of course, there are also imbedded mechanisms and online interactions, such as web links, video and audio casts, scheduled events, and the occasional more creative interactive object. If one gets into building and/or transacting business in SL, that's a bigger effort, and gets much more involved/interactive.
- One of the most impressive aspects of SL is the thoroughness of many of the built out worlds. There are many tours of existing places, such as the entire city of Amsterdam (although this isn't a particularly wholesome place for student-aged young people). You really can get some sense of what a place is actually like. One caveat of navigating a large area can be waiting for sections of the world you are in to render while you fly or walk around – this can make it difficult to see what's around you without going in a given direction to get it to build out.

10 Examples of Useful Second Life Resources for Educators

The following listing of Second Life islands is intended to provide some insight into resources within SL that have potential usefulness as an engaging part of an instructor's lecture, a student project, or a more extended classroom effort. The arts and sciences include many disciplines that can go hand in hand with SL's ability to display images and provide 'virtual tour' functionality, and these types of sites dominate the list. SL's ability to echo many real world interactions opens the door to emulate many kinds of constructs and processes, such as conducting business, or doing architectural design, but these types of activities require a much larger investment of time and effort than simply taking virtual tours. Below I have focused on experiences that require little more than a "walk around and check things out" level of activity engagement in order to be somewhat engaging.

For some of these sites, I have included a Second Life URL, for some I have included a link to an associated web site, and for others I have included a simple search phrase for locating the site in SL's Search window [note that accessing an SL URL requires that you have a SL account].

Art Galleries of SL (web site**):** This site lists over 600 SL based art galleries, and provides SL URLs for most of them, plus links to associated web sites when available. Many of the galleries are ranked (on a scale of 1 to 5 stars). I checked out a few of the 5 star sites, and there were many nice paintings and sculptures displayed *(there may also be erotic works in these sites, so keep that in mind before sending students there)*. Many of the pieces in museums are for sale (they can be bought with 'Linden Dollars' and hung up in your own SL property if you acquire some).

Star Trek Museum of Science: This was one of the easiest sites I came across to get easy 'response' from – that is, many of the wall hangings and objects have some sort of easily accessible functionality *(mostly 'notecards' with information)*, that just walking around and checking things out was rather enjoyable. Moreover, the site goes somewhat beyond Start Trek and "promotes the study of the scientific and engineering technologies found in Star Trek" to "encourage interest in the real-life physics, astronomy, information technology and other sciences that are the foundation of those technologies".

The Museum of Robots (web site): As per the note card that is offered to you as soon as you transport to this island, "The Museum of Robots is dedicated to the appreciation of robots. Its mission is to promote understanding of the place of robots in popular culture, art, and science. We realize this mission through permanent and special exhibits, entertainment, and events." Have a look around if robots interest you!

The Newggenheim Museum (*search for 'newggenheim' in SL*): A fully interactive re-working of the original Guggenheim Museum.

Mental Health (SL URL)**:** The virtual hallucinations project seeks to educate people about the mental illness schizophrenia. This clinic building site is based on the hallucinations of two specific people with schizophrenia, who were interviewed in detail

and gave feedback on early designs for the hallucinations. While the hallucinations are not glamorous, they fairly accurately reproduce these patients' experiences. You can get a sense of just how intrusive the voices of schizophrenia really are by visiting this site.

Genome Island (*search for 'genome' in SL*)**:** This is a pretty interesting interactive world focused on Genetics, featuring exhibits such as a slideshow that explains the inheritance of the X-linked Orange gene in cats, and cat avatars you can click on to see the colors of their offspring, as a demonstration of gene sharing outcome possibilities. This site gets heavy with scientific jargon, and familiarity with Genetics is required to fully appreciate this Island.

The Most Beautiful Campus in SL" - DePaul University College of CDM (Computing & Digital Media) (*search for 'depaul' in SL*)**:** While being rather different from the museums and art displays above, it just didn't seem like this listing would be complete without including at least one well done SL college or university Campus, and this one is a beauty. This Island is richly detailed and possible to appreciate for that quality alone. Stop by and have a look around!

Conclusions

Second Life has the potential to play a variety of interesting roles in the educational process and can provide a more interactive experience than the average web site or tool, but it requires more of an investment in time to learn and use than many other web based tools require. Educational institutions across the world are finding many interesting ways to leverage SL, and I could spend many more weeks learning about and reporting on Education related SL activities there. In fact, I have become interested enough in the tool to continue working with it on my own time, and I am looking forward to providing an update here in a few months, after I have given the environment more of a workout. I feel I have yet to fully grasp the various mechanics of using the environment, and that there is more of interest awaiting me as I take the time to explore further.

Longer term, it could be quite interesting seeing how this immersive toolset evolves over time and how Second Life and other Virtual World technologies are adopted by education in years to come. As the speed of processors, bandwidth, and other relevant resources continues to evolve, the potential utility of this type of complex tool could be very impressive. Better integration of video, more interactive objects, characters with artificial intelligence (and quicker rendering of the landscape) could turn what is already an intriguing environment into an Internet experience with little comparison.

EmergingEdTech's "Free Productivity Resources for Educators" Web Page

We conclude with a link to this listing, which is divided into two key groups – tools intended specifically for educators, and general applications intended for everyone. These productivity tools can be a big help with administrative and communications tasks, and some also have instructional applications. The listing is updated several times a year, so I figured it would be more useful to provide the link rather than repeating all of the content here. There's about a hundred tools listed here as of February 2013. Click on over and check it out!

http://www.emergingedtech.com/free-productivity-resources-for-teachers/