Technology in the Classroom

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Abstract

Investigating the use of new technologies in the classroom. Beginning with general best practices for teaching eLearning, I review iTunes U, Second Life, YouTube, Facebook, and Twitter. The goal of this investigation is to evaluate the effectiveness of the various delivery methods for use in the Visual Communication department.
The Visual Communication Department has been delivering online curriculum since 2001. We are constantly investigating new opportunities to enhance our curriculum. In our department offering the latest cutting edge delivery is especially important because the medium is the message. Before investigating various delivery methods using new technologies it’s important to review best practices for online delivery. Ignatia Webs has a blog for *Elearning Techtales with Social Media in Low Resource and Mobile Settings.* From the eLearning Guild here is the list of the top tips for starting with eLearning.

Here is my top ten list of things you need to consider when you start with an eLearning project.

1. **Try it for yourself and learn:** if you have never developed an eLearning course: follow at least one full online course and if possible with a renowned institution or company. There is no substitute for real life experience if it comes to eLearning. While following an online course, keep track of your thoughts, ideas and learning processes. You can start your Personal Learning Environment if you feel up to it. Keeping track of your knowledge at all times will facilitate retrieving your knowledge later on. This will come in handy once you start developing your own courses.

2. **Clearly indicate your learning objectives:** learning objectives are at the core of the activities of your eLearning course. Any content can be stripped down to its learning objectives. Analyzing your learning objectives will also increase your understanding of what it is you want your learners to achieve. This in its turn will allow you to decide which type of eLearning activity should be developed (educational games for simulations, quizzes to check information assimilation, discussion forums for looking at in-depth understanding or group work…)

3. **Develop your own content:** try to limit the amount of content that is outsourced. Most of the time content needs to be updated regularly; you will pay too much if you need to ask outsiders to update it for you. If you develop your own course, you will be able to keep it updated. If you do outsource it, ask the outside developers to make the course generic so you can adjust it to your need and possibly reuse it in other courses.

4. **Interactivity is crucial:** do not limit your project to (multiple choice) quizzes, but see if you can fit in interactions between peers and peer-to-tutor: discussion forums, letting the learner build part of a course, providing knowledge not only information.

5. **Use social media:** use social media as a means to increase the peer-to-peer and peer-to-tutor interactivity. In this day and age you should implement social media in your new eLearning projects. If you are not accustomed with social
media (or web2.0) enroll in a couple of social media applications (Flickr, Friendfeed, blog, twitter…) to feel what it can add to a course. Social media will allow your learners to learn in an informal way, thus adding to their lifelong learning skills as well.

6. Address different learner skills: use text, pictures, video, and audio in your provided eLearning content. By diversifying the content you address different learner types which will increase your learner’s satisfaction.

7. Bite size content for easy updating: in this rapidly evolving era, it is essential that you can keep your content easily updated at all times. Especially if your content is specialized or provides just-in-time learning. Use software that makes it possible to quickly put in new information.

8. Bite size content to keep your learners focused: try to limit scrolling down webpages or multimedia courses that extend 20 minutes in total. Keep your content bits small, this will keep the learner motivated to go on and give them a sense of speed. It is much better to have ten chapters that each take up to 15 minutes to learn than to serve your learners one lengthy 150 minutes piece of content. You want to keep your learners focused, so give them time to breath.

9. Take low resource learners into account: not all learners have access to high speed broadband connectivity. If the technical reality of your learners is very diverse, it is good practice to provide your learners with a CDRom containing the eLearning content and basic plug-in’s needed to open your eLearning content.

10. Test everything in a pilot course: first you test your course on a small group of people you know, than you gather a pilot group of learners that are part of your learner target group. This pilot group of learners will allow you to learn, see if your learning objectives are indeed reached, adjust your material were needed, see whether the student investment time you had in the back of your mind is indeed realistic and … start the real course with the knowledge that it will be a rock solid eLearning course.

iTunes U

iTunes U may be the most useful new technology for our use. It is a free service hosted by Apple that allows instructors, administrators, and affiliates to manage, distribute, and control access to educational material.

With it audio and visual content can be distributed via various delivery methods such as iPhones and iPods. The iTunes website says:
iTunes U is a part of the iTunes Store featuring free lectures, language lessons, audiobooks, and more, that you can enjoy on your iPod, iPhone, Mac or PC. Explore over 100,000 educational audio and video files from top universities, museums and public media organizations from around the world. With iTunes U, there's no end to what or where you can learn.


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**iTunes U application**

Again for the website:

Universities and Colleges must enter into an iTunes U Service Agreement before being eligible to use the iTunes U service. Apple reserves the right to determine eligibility.

**How it works**

There are examples of successful iTunes sites and a description of how it works also on the website:

Course pages are the basis of the site. They use tabs to organize and display material. A course page should equal a single idea. The tabs can divide and organize material by media type.
Stanford University is an excellent example of a successful iTunes U site

Internal iTunes U Site

If you want to allow access only to members of your campus, you can host your own password-protected iTunes U site. This enables you to create and manage the content available on the site, while controlling who can access and download resources from it.

Because administrative access is integrated with Apple ID, it’s easy to set up and manage your site, and you can add more Apple ID accounts to share site management responsibilities. Or you can integrate with your identity management systems to scale out management and access to hundreds or thousands of users. By default, iTunes U supports Shibboleth (the standards-based, open source authentication system), or you can create customized transfer scripts to integrate with popular authentication systems, including Kerberos, LDAP, Active Directory, and others.

Apple also provides templates you can customize with your own branding, and you can use tools such as RSS to easily add and remove content. To ensure compatibility, the media you provide should be in: AAC, MP3, MPEG-4, or PDF format.

External iTunes U Site

You also have the option of making your course material available to all iTunes visitors — alongside content created by Yale, Stanford, UC Berkeley, Oxford, Cambridge, MIT, PBS stations, and some of the most creative K-12 state projects in the country. External sites are also a great recruitment tool, offering an inexpensive way to explain the benefits your school has to offer. With an open
iTunes U presence, your school will gain recognition — and a competitive edge — as you reach out and share your knowledge with the world.

As with internal sites, administrative access is controlled via Apple ID, and you can add more accounts to share site management responsibilities. Apple templates let you incorporate your own branding, and you can request browse/search integration to make it easier for visitors to find your content on iTunes and to extend the reach of the content you post.

**A Mix of Both**

Many schools choose to create both an internal site with a greater amount of course materials available exclusively to enrolled students with a user account and password; and an external site that provides a publicly accessible subset of those resources.

Until ACC establishes an account with iTune U, the Visual Communication department will use it as a resource for accessing material from other universities.

**Second Life®**

For the most expedite way to understand the educational uses of Second Life, view the YouTube video at:

[http://www.youtube.com/watch?v=AU&hl=en-GB&v=qOFU9oUF2HA](http://www.youtube.com/watch?v=AU&hl=en-GB&v=qOFU9oUF2HA)
It is interesting to note the text comments below this video. They include: “It’s a waste of time for fat people.”

The following explanation of Second Life is from (http://www.dokimos.org/secondlife/education/)

SECOND LIFE EDUCATION:
Second Life as a Virtual Learning Environment
Presented by Theodore Wright, Programmer/Analyst
Revised September 17, 2008

Second Life® ( secondlife.com ) may be referred by some as a game, howbeit, of itself, Second Life actually is not a game. It is a virtual world without theme, a virtual canvas for creativity, not inherently based in mock war such as video games.

With this current advent of virtual world technology, there now exist enhanced and expanded learning opportunities with an environment to relate to.

Even up to present, much of distance learning has been made time convenient but impersonal. Avatar-based virtual world education is highly interactive, providing the same convenience of not having to travel while providing a richer, more effective and more enjoyable experience. For such, many students would most gladly make the scheduled time for the virtual classroom.

Whether used for distance or classroom learning, the benefits of this rapidly expanding and adaptable virtual technology become manifest. The most common disadvantages that have existed in online education are now overcome. Educators are not slow to step into and embrace this present, simple to use, interpersonal and further developing media.

Articles about education in Second Life such as http://del.icio.us/secondlife/education, have good recommendations for Second Life use such as:

For such virtual campuses it has been recommended for educational institutions to have private areas in Second Life, not open to the public in order facilitate a secure learning environment.
The necessity of a regulated area in Second Life for K-12 learning is also discussed by John Waters in A 'Second Life' For Educators

http://www.thejournal.com/articles/23777/

That early buzz among K-12 educators centered on Second Life's potential as a learning platform. And in the last few years, many colleges, universities, and libraries have established resources in what has become the preeminent multi-user virtual environment (MUVE). Today, more than 100 Second Life "regions" are used for educational purposes.

However, Second Life is a bifurcated environment, with an adults-only Main Grid and a Teen Grid for users ages 13 to 18. Because most of their students are over 18, colleges and universities can take full advantage of all the resources on the Main Grid--everything from a re-creation of the Sistine Chapel to a simulation of 1920s Paris; from a replica of the Alamo to a virtual coral reef. But those restrictions, which Second Life creator Linden Lab established to ensure the safety of younger children, have limited the environment's usefulness for K-12 learning.

Other useful sites include:

Second Life's page on education also provides info for joining the Second Life Educators (SLed) mailing list...
https://lists.secondlife.com/cgi-bin/mailman/listinfo/educators

101 Uses for Second Life in the College Classroom
by Dr. Megan S. Conklin (Elon University GLS)

Educational Uses of Second Life
http://au.youtube.com/watch?v=qOFU9oUF2HA
by Mary Ann Mengel (SL Marissa Moody)

Education in Second Life: Explore the Possibilities
http://au.youtube.com/watch?v=TMGR9q43dag
by Cheryl Carter (SL Cheryl Wiggins)

To investigate Second Life, I created an avatar, Pursilly Yearsley. During spring break I attempted to explore SL. I first went in search of educational sites. Being a newbie, I found myself in a Bulgarian site with many nude avatars. Garry
Gaber, professor of game design, says, “70% of Second Life is only about sex.” I certainly didn’t want to be in a ‘mature’ site, but obviously it’s very easy to get lost.

I learned how to transport and went to other sites. I watched videos, which did not have the clear quality of a YouTube video. I wonder if it’s worth all the effort to build an avatar and learn to navigate to watch training that can be displayed better elsewhere?

After visiting several schools, being bitten by a vampire, and having a spell cast on me so poor Pursilly Yearsley danced without stop, I concluded the best use of SL might be in building, teaching to build, 3D models. It is a 3D world.

I discussed this idea with Sara Farr, professor of 3D modeling, rendering, and animation. Sara had discussed with idea with Vernon Reed, adjunct professor of game art. Vernon had used SL in a class he taught at another college. Sara’s conclusion is that the time required to build a site in Second Life cannot justify the learning experience. I include the time required, without financial support from the college, for faculty to build a robust Second Life educational experience, does not justify the result.

**YouTube**

“YouTube is a good resource for storing and distributing content,” says Gail Bayeta, Assistant Professor of Graphic Design. In a recent TCCTA Blog, posted March 31, 2009, the article, “YouTube EDU Launched” is as follows:

YouTube has launched a new section of its site that organizes video offerings from more than 100 colleges and universities. The schools represent a cross section of institutions, and the topics offer a great way to compare your pedagogical technique to others around the country. Also, the clips can provide timely updates from noted authorities, as well as useful supplemental material for your classes. Lectures, interviews, and graphic presentations are all available—and it's free.

For example, history instructors may wish to view a 30-minute lecture by Walter Isaacson, discussing his book on Benjamin Franklin at the University of
Pennsylvania. Or perhaps science teachers would like an entire course in Solid State Chemistry from MIT. Many of these items were available before, but the new platform is organized better.

The newly configured site is called YouTube Edu. The site lets viewers sort by school, and the content includes hundreds of complete courses in a wide variety of fields. Here’s the index of schools. Also, you can use the search feature to find specialized topics.

Some of the many possibility videos in YouTube

**Facebook**

Facebook is a social networking site and it’s usefulness in the classroom is not as obvious as YouTube.

There is a blog from PinkFlamingo’s Resources, 

[http://pinkflamingoresources.blogspot.com/2008/08/facebook-in-education.html](http://pinkflamingoresources.blogspot.com/2008/08/facebook-in-education.html), with several good links to educational uses for Facebook:
Facebook in Education
It's one of the more popular social networking sites among students, so here are a few articles about using it in education settings.

Teachers use Facebook to reach students: A brief article posted on TheRecord.com, a site operated by The Canadian Press, in which a high school teacher in Halifax explains how he uses Facebook in his teaching. http://news.therecord.com/printArticle/404479

It started with a "friend request" from a students -- the one who never checked her e-mail and kept missing assignments.

Then a light went on for Halifax high-school teacher Richard MacNeil.

Last year, MacNeil became part of the "if you can't beat 'em join 'em" trend of educational instructors embracing the social networking tool Facebook to enhance their classroom teachings.

Updating Facebook pages is fast becoming part of the back-to-school to-do list as teachers and students get ready to return to classes.

"It wasn't that it was any better than sending an e-mail or anything like that, it was that they seemed more willing to accept that media over the other ones," says MacNeil.

Canada is one of the fastest growing Facebook markets in the world with more than three million users, slightly trailing Britain.

As the popularity of Facebook continues to increase, educational tools are being added to the network, such as a blackboard application and study-group options.

MacNeil was already using his own website to post assignments, useful links and samples of work in his communications-technology class, so Facebook seemed a logical next step.

"What I tried to do was not to make it just something to study, but to make it something practical so I tried to incorporate as much communication technology in the course as possible," he explains.

"For me, Facebook's been win-win on an educational level," says Prof. Norm Vaughan at Mount Royal College's department of education and schooling in Calgary.

Looking through Vaughan's class Facebook page, there are several discussion topics being debated daily and students -- old and new -- posting messages by the hour.

Vaughan says it was his students' idea to use Facebook and he has introduced it for the past three semesters with growing success.

"The students wanted to use it because it's a tool they already use and they (student teachers) also wanted to see if it was a tool they could use with their students in the future."

Researchers are also picking up on this trend and the use of Facebook comes as no surprise because it casts such a wide net among users.

"The fact that high-school teachers and college professors are starting to use these tools makes sense," says Mary Madden, senior research analysts at Pew
Internet, an American think-tank dedicated to studying the social impacts of technology.
Teachers "are able to leverage a tool students already use instead of asking them to learn how to use a separate application," she says.

One way we can use Facebook to enhance our online classes at ACC is through Blackboard Sync. Also from “Facebook in Educations”:

Blackboard Sync is an application that delivers Blackboard course information and updates through the Facebook interface to keep students in touch and engaged with their academic studies. Blackboard Sync enables students to connect with their classmates through Facebook, thus creating social learning opportunities. Blackboard Sync offers several options for participation to give the institutions as much control as they need through Safe Sync.

Twitter

I was unsure of the benefits of using twitter, so I posted a tweet and received this reply from ACC’s Instructional Designer, Shea Scott:

Here are my thoughts on potential ways to use Twitter in the classroom.
A class can use something called a hashtag to group their tweets into a stream. Hashtags are commonly used at conventions or events so that people can follow and discuss a topic. For instance, at SXSW it's common for people to include the hashtag #sxsw in their posts. This enables other users to search http://search.twitter.com/ for the hashtag #sxsw.
Here is the results page for the hashtag #BostonMarathon http://search.twitter.com/search?q=%23BostonMarathonoff
Twitter hashtag for the Boston Marathon

You'll notice the "Feed for this query" link in the upper right. This lets people subscribe to this hashtag's RSS feed, so that new results are pulled into a feed reader as they are posted. Or you can just go back to this page and refresh the search.

An example of an educational use for this could be a class specific hashtag like #accgd1 or #accimm1 or #acc2da for Graphic Design, Interactive MM, and 2-D animation respectively. Students would include this hashtag in posts that relate to their class, so that these tweets would be grouped. Hashtags could be created for individual projects as well, but the amount of hashtags should be kept to a minimum to avoid students having to keep up with too many of them. It seems that one per class should be sufficient most of the time.

An instructor could also set up an individual Twitter account for the class that students could follow. They could post things that they think are relevant to the class. One advantage of this is that these posts will be archived. Future students can read through the posts, and instructors will know where to go to find supplemental materials they posted in the past.

Instructors could also ask questions from this account, and have the students reply to that particular Tweet. All the responses would then show up on that account.

Avoid relying on Twitter to distribute any important information. A lot of people just skim their Twitter feed, so individual tweets can be easy to miss.

It may be a good idea to make Twitter an optional component to a class. If the students or instructor aren't already engaged with Twitter, it could be detrimental to try to force participation.
A good starting point for learning about Twitter is “7 things you should know about…Twitter.” [http://net.educause.edu/ir/library/pdf/ELI7027.pdf](http://net.educause.edu/ir/library/pdf/ELI7027.pdf)

In conclusion my investigation shows that iTunesU and YouTube can currently be useful in classroom instruction. There are some limited benefits, such as updating deadlines, using Facebook. Hashtags in Twitter could be used as a good optional component. The learning curve and development effort in Second Life prevent it from being an effective technology for teaching.
References


(http://www.dokimos.org/secondlife/education/)
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