

Emerging Technologies: Tools and Issues for Continuing Education
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A note to attendees: I have included below the outline content from my slides, along with additional website addresses. Since I did not have permission to distribute the graphics, they have been removed from this handout. Thanks for attending the Emerging Technologies session! -- Margaret

Who will address the issues?

No matter what technology the instructor plans to use, there are consistent issues that impact the success or failure of the project, course, or program.

- Pedagogical
- Legal
- Scaling
- Collaboration and support

Margaret's "TOP TEN" pedagogical questions for educators using technology

1. What's the content?

- What are the important points you want students/participants to remember?
- Where is the content coming from?
- How will students/participants contribute to the content?

2. Who's my audience?

- What kind of knowledge and skills do they have to start this class?
- How will they need to be prepared?
- What are the best motivation methods?
- How do I help them "learn how to learn"?

3. How will this course/program be delivered?

- Why have I chosen a specific delivery system?
- Am I using technologies for what they do best (i.e. video to show process or procedures, to socialize)?
- Will use of this technology integrate well with the delivery system?

4. How do we assess that students have learned the important points?

- Do the assessment methods coordinate with teaching/presentation methods?

- Do I teach what I am grading?
- Am I assessing the important points that I want students to remember?

5. What's the teaching style and interaction style?

- Is the teaching philosophy student-centered?
- Is the teaching style compatible with different teaching methods?
- Is the teaching style compatible with different learning styles?

6. What are the best teaching methods for variety and pacing of course content?

- Is there enough variety to maintain students' attention?
- Do I pace the content for maximum comprehension?

7. How can I best integrate this technology into the course and teaching methods?

- How does its use align with the instructional goals and objectives?
- How can we prepare students for its purpose and use?
- In what way have I integrated its use into my assessment plan?

8. Are my expectations for students and instructors realistic?

- Have I communicated in the syllabus all I expect from students and what they can expect from me?
- Have I communicated in assignment directions all I expect from students and provided a rubric for grading?
- Do I have contingency plans for times when the technology might not work as expected?

9. Have I planned/given enough time to preparation?

- Do I have a learning curve for a new technology?
- Did I create a storyboard or global plan?
- Did I get the assistance, equipment, and/or materials I needed for quality outcomes?
- Have I planned formative evaluation?
- Did I leave enough time to complete the project before needing it in class?

10. Have I planned/given enough time to practice?

- Have I practiced using the technology in the environment
 - Where students will experience it?
 - Where I will experience it?
- Is my presentation smooth enough to be reassuring to students?
- Have I also practiced my contingency plan?

Three Legal Issues for Educators -

- **Copyright and Intellectual Property**
 - Who has copyright?
 - Who owns this course/program?

- Does “Fair Use” apply to the Web?
- What materials can I use legally?
- Are there software digital rights management issues?
- Do students have copyright protection?
- Resources –
 - Podcasting Legal Guide: Rules for the Revolution by C. Vogeles, Esq., M. Garlick, The Berkman Center Clinical Program in Cyberlaw - http://wiki.creativecommons.org/Podcasting_Legal_Guide
 - Center for Intellectual Property and Copyright, University of Maryland University College - <http://www.umuc.edu/distance/odell/cip/>
 - Copyright Crash Course, University of Texas System - <http://www.utsystem.edu/OGC/IntellectualProperty/cprtindx.htm>
 - Copyright & Fair Use, Stanford University Libraries - <http://fairuse.stanford.edu/>
 - Copyright Quickguide – <http://www.copyright.iupui.edu/quickguide.htm>
 - Copyright Resources Online - <http://www.library.yale.edu/~okerson/copyproj.html>
 - Copyright Connection, The TEACH Act, University of Washington - http://depts.washington.edu/uwcopy/Copyright_Law/TEACH_Act/index.php
- **FERPA**
 - What information can be released and to whom?
 - What can students request to be concealed?
 - Resources –
 - ET@MO has developed an extensive handout on making both WebCT and Blackboard compliant. This is available at: FERPA Concerns - <http://etatmo.missouri.edu/toolbox/doonline/ferpaconcerns.htm>
 - Information on FERPA as implemented at MU is available at: http://www.missouri.edu/~regwww/Policies_Rules_and_Regulations/ferpa.htm
 - Family Educational Rights and Privacy Act (FERPA) - <http://www.ed.gov/offices/OII/fpco/ferpa/>
- **American Disabilities Act (ADA)**
 - What disabilities are covered?
 - What is the student’s responsibility?
 - Does this apply to Web materials?
 - Resources –
 - Teaching College Students with Disabilities: A Selection of Online Resources for Faculty and Staff, University of Delaware Center for Teaching Effectiveness <http://www.udel.edu/cte/disabilities.htm>
 - WebAIM: Expanding the Web’s Potential for People with Disabilities – <http://www.webaim.org/> (Particularly helpful is the Section 508 Web Accessibility
 - Pass/Fail Checklist for HTML, <http://www.webaim.org/standards/508/checklist> that is available in PDF and non-table versions. Their Screen Reader simulation also provides a good idea of how this type of software works.)
 - WAI Resource home page - <http://www.w3.org/WAI/Resources/>. You can find just about everything you need to implement accessibility in your Web pages. However, the

WAI guidelines are more stringent in many respects than are the legal requirements under Section 508.

•U.S. Department of Justice Americans with Disabilities Act, ADA HOME PAGE - <http://www.usdoj.gov/crt/ada/adahom1.htm>

What are the “scaling” issues involved with this technology?

- Do we have adequate internal collaboration to support broad use of this technology?
- Is my institution willing to provide campus integration of the technology?
- What issues of intellectual preservation will face us in the future?
- Where is our internal safety net?

Are we open to available external collaboration?

- Are there open access materials and resources available? Do I want to make my materials open access?
- Will open source software benefit my goals?
- Is open content/courseware suitable for my goals?

It's Time for a A Whirlwind Tour of Technologies - Hardware and Software Technology Tools Available to Continuing Educators

Hardware: Student Response Systems (Clickers)

- Electronic devices for recording student feedback
- Used for face-to-face presentations
- May record the user or be anonymous

Hardware: Student Response Systems (Clickers) - Benefits

- Heighten interactivity in the classroom
- Give instructors immediate feedback
- Evaluate comprehension of concepts
- Draw attention to new topics
- Check attendance in large classes
- Allow anonymous polling

Resource - ET@MO CPSrf Student Response System Overview and Resources:

<http://etatmo.missouri.edu/toolbox/doonline/studentresponsesystemsresources.htm>.

Hardware: Wireless Technologies

- Key wireless technologies
 - Laptops
 - Cell phones
 - Hand held computers
 - Navigational devices (geographic positioning)
- Benefits vs. potential stumbling blocks
 - Expanded opportunities vs. distractions

- Communication vs. academic dishonesty
- Personal use vs. academic use
- Access vs. the digital divide

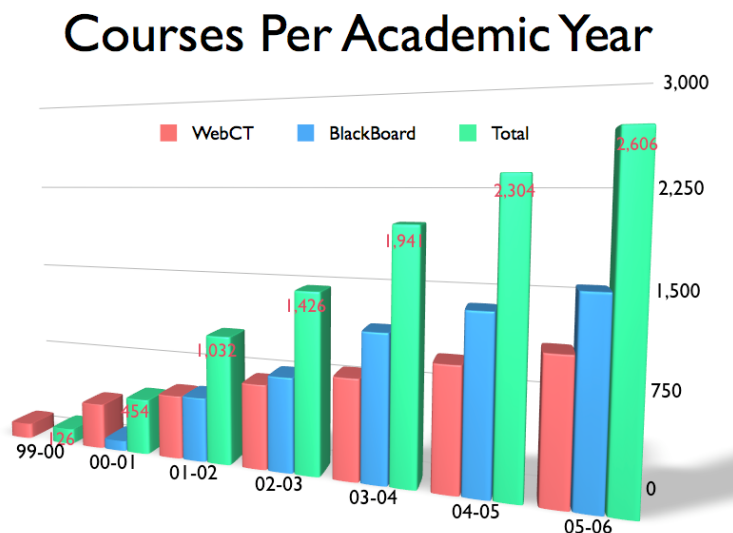
Hardware: MP3 Players, Recorders and iPods

- Benefits
 - Audio/video players
 - Portable size
 - Easy to use
 - File storage
- Barriers
 - Access
 - Cost
 - File exchange format limitations
- Resources
 - Presidential Awards, iPods in Education – <http://www.paemst.org/AwardeesIPod.cfm>
 - Apple lesson plans and examples of uses – <http://www.apple.com.au/education/ipod/lessons/>
 - Duke University’s grant to distribute iPods to first-year students. - <http://www.duke.edu/ipod/>
 - The iPod at GC&SU - <http://ipod.gcsu.edu/>
 - iPods for Second Language Acquisition by Alex Chapin – <http://segue.middlebury.edu/sites/achapinipod>
 - Education on Shuffle: Viva la iPod by Treavor Dodge – <http://home.comcast.net/~trevordodge/2005/03/education-on-shuffle-viva-la-ipod.html>

Software & Conceptual Tools: Course Management Systems

- Innovation is in the “eye of the beholder”
- Something is always “emerging”

MU Growth Rate in Use of Course Management Systems



Software & Conceptual Tools: Piloting Sakai

- Open source software
- Collaborative environment
- Course management system
- Base for an e-portfolio application
- Resource - <http://sakaiproject.org/>

Software & Conceptual Tools: E-Portfolios

A digital collection of authentic and diverse evidence

- Can contain written assignments, artwork, software, web pages, performances, video,...
- Serve as repositories of best academic work
- Aid in authentic assessment, deeper understanding of student learning
- Opportunity for reflections on in and out of class assignments
- Help students demonstrate their knowledge and skills to instructors and prospective employers

Software & Conceptual Tools: RSS and Blogs

- RSS - Really Simple Syndication
 - XML based web content syndication format
 - designed for sharing content between sites
 - distribution tool for content provider
 - filter tool for users - feeds or emails each time subscriptions have been updated
- Blog – “web log” – online journaling
 - Archiving capability
 - RSS immediacy for updating
 - Interactive and collaborative
 - Less structure (free-flow stream of consciousness)
 - Requires sponsor server
- Resources –
 - Introduction to RSS, WebReference.com - <http://www.webreference.com/authoring/languages/xml/rss/intro/>
 - <http://newsmonster.org> (NewsMonster is a free news, weblog, and RSS aggregator that runs in your web browser)
 - <http://ranchero.com/netnewswire/> (NetNewsWire is an RSS and Atom newsreader for Mac OS X – free version available lacking advanced features; 30-day free trial; charges to upgrade.)
 - Fostering Online Communication and Collaboration – http://dmc.umn.edu/kurtis/pod/blog_rubrics.doc (Excellent example of different styles of blog assignments and a rubric for grading)
 - Blogs for .Orgs, Shy and how non-profits should use blogs - <http://www.blogsfororgs.org/>
 - Blogs in Education, Instructional Technology Center at the University of Houston—Clear Lake: - <http://awd.cl.uh.edu/blog/> - really well organized links

Software & Conceptual Tools: Podcasting or Vodcasting

- Distributors – create audio, video, text content; obtain permissions for others' content; download; share files for MP3 players
- Users - automatically download from the web through a subscription to a website
- Resources –
 - Legal Guide - http://wiki.creativecommons.org/Podcasting_Legal_Guide
 - Podcasting, e-Learning Centre-Learning Information and Services - <http://www.elearningcentre.co.uk/eclipse/Resources/podcasting.htm>
 - Podcasting from Wikipedia - <http://en.wikipedia.org/wiki/Podcasting>
 - iPodder home page – <http://www.ipodder.org>
 - Podguides – <http://www.podguides.net>
 - Missouri School of Journalism Podcasts: <http://journalism.missouri.edu/podcast/>

Software & Conceptual Tools: Podcasting or Vodcasting

Example academic uses –

- distribution of audio files for music & foreign language classes
- reviewing lectures & related materials
- distributing academic & class calendars
- distributing short texts
- distribution of audio books
- recording lectures
- recording field interviews & notes
- walking tours of museums & other sites
- used as a portable hard drive to transport large files or groups of files

Software & Conceptual Tools: Podcasting or Vodcasting

Piloting iTunes U

Software & Conceptual Tools: Web 2.0 Representational Tools

- Google applications - <http://www.google.com/intl/en/options/>
 - Google Maps
 - Google Earth

Software & Conceptual Tools: Web 2.0 Collaborative Tools

- Example – Wikis (<http://www.wikipedia.org>)
 - Web pages viewed & modified by anyone
 - Support asynchronous communication and group collaboration, editing online
 - Versioning capability illustrates the evolution of thought processes

Software & Conceptual Tools: Web 2.0 Social Bookmarking Services

- Examples –
 - <http://del.icio.us>
 - <http://citeulike.org>

Software & Conceptual Tools: Database Tools

- Example – MU’s online mid-semester evaluation (<http://mocat.missouri.edu>)

Software & Conceptual Tools: Online Conferencing

- Examples
 - AOL instant messaging / iChat instant messaging
 - Macromedia’s Breeze

Software & Conceptual Tools: Digital Learning Objects

Examples –

- Art anatomy tool, medical sectional anatomy tool (<http://meta.missouri.edu/portfolio.html>)
- MERLOT learning objects (<http://www.merlot.org/merlot/index.htm>)

Software & Conceptual Tools: Digital/Virtual Environments

- Example – Second Life (<http://secondlife.com>)

Software & Conceptual Tools: Digital Simulations

Example – ICONS Project (<http://www.icons.umd.edu/>)

Software & Conceptual Tools: Digital Gaming

Example – UNC’s Economics Course (<http://econ100.uncg.edu/dcl/econ100/>)

Software & Conceptual Tools: Digital Tutoring & Open Content

Example – MIT’s Open Courseware Initiative (<http://ocw.mit.edu/index.html>)