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# Using Technology for Training, Technical Assistance, and Strategic Communication

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This lively, provocative session will stimulate our thinking about how we might adopt and use technology to effectively conduct needs assessments, deliver training and follow-up, support performance, disseminate information, and provide technical assistance. The session will demonstrate a number of existing and emerging technologies and provide tools for determining the feasibility of adoption.

## Please note:

I update this handout often to try to keep it as up-to-date as possible with the evolving information. Please send me links to sources of relevant information about the use of technology for education and training so I can share it with others. [larry.edelman@ucdenver.edu](mailto:larry.edelman@ucdenver.edu)



## How Might You Use Technology?

Communication Functions	How do you do it now?	What technologies might you use to do this more effectively and/or efficiently?
Conduct needs assessment/front end analysis		
Present training events		
Provide technical assistance, consultation, coaching		
Disseminate news, updates, documents		
Host/facilitate meetings		
Host/facilitate conferences		
Host/facilitate planning processes		
Evaluate activities and programs		
Enhance service delivery		
Exchange information with families		
Research		
Other?		

<b>Delivery Strategy</b>	<b>Conceivable ways that you might use this communication strategy</b>
TTT: Trainer's Guide and Materials	
Podcasts	
Video	
PPT to Flash Modules	
Higher End Computer-Based Multimedia	
Online Meetings/eLearning/Web Collaboration/Webinars/WebCasts	
Online Meetings Spaces	
Telephone or Video Conferences	
Blogs	
Wikis	
Other	
Other	

**Avoid Seagull Events (fly in –drop something – fly out)**  
**Use technology to help extend how you support learning and performance *over time***



<b>How might you use technology...</b>		
<p><b>BEFORE</b> a training event to:            Get a better sense of the learners, their needs and concerns; help the learners prepare for the learning experience; help you understand and address potential barriers to the learners' implementation of new skills; etc.</p>	<p><b>DURING</b> a training event to:            Connect learners to new resources; create learning networks; encourage action planning; anticipate implementation back-on-the-job; evaluate the training; etc.</p>	<p><b>AFTER</b> a training event to:            Evaluate training; provide self-reflection; provide technical assistance and/or coaching; provide additional information; support performance back-on-the-job, etc.</p>

## Key Questions:

### Helping to Determine the Fit and Feasibility of Using New Media for Delivering Training and Technical Assistance

What is the capacity of YOUR ORGANIZATION to produce and distribute the media?

To what extent is the new media a sound choice for delivering your specific INSTRUCTIONAL CONTENT in terms of:

- The KNOWLEDGE that you want your audience to attain?
- The ATTITUDES that you want your audience to have?
- The SKILLS that you want your audience to be able to perform?
- The actual PERFORMANCE that you desire back on the job?

In general, to what extent is the proposed new media COMPATIBLE with your organization and the department in which you are located in terms of:

- Budget
- Organizational culture
- Logistical resources
- Technology
- IT Policy

To what extent does your organization have access to (or have the ability to recruit) the required HUMAN RESOURCES?

- Project manager who can oversee the design, development, dissemination, implementation, and evaluation of the media
- Training personnel who have the instructional design knowledge to “package” the content effectively in the new instructional format
- Technical personnel who have (or can attain) the know-how and skills to create the media
- Information Technology personnel to help design and support the posting, dissemination, and maintenance of the media
- Evaluators to help design and implement an evaluation system of the media and learner’s performance
- Technical assistance personnel to provide users with support
- Administrative support staff for logistical maintenance

To what extent does your organization have ACCESS to (or have the ability to obtain) the required computer resources?

- Hardware
- Software
- Internet connection and bandwidth

What is the capacity of <u>YOUR AUDIENCE</u> to use the media?	
<b>Required Hardware, Software, and Bandwidth</b>	
<b>To what extent does your intended audience have adequate access to (or the ability to acquire) the required computer resources:</b>	
Hardware (Specify)	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
Software (Specify)	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
Internet connection and bandwidth (Specify)	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
<b>Computer Literacy</b>	
<b>To what extent does your intended audience have the computer literacy required to:</b>	
Navigate the WWW	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
Download software and files	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
Use media players	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>
Troubleshoot or obtain help when encountering problems	<input type="checkbox"/> All do <input type="checkbox"/> Most do, <input type="checkbox"/> Some do, some don't <input type="checkbox"/> Most don't <input type="checkbox"/> All don't <input type="checkbox"/> Not sure <b>Implications:</b>

## Acceptability

**To what extent might your intended audience PERCEIVE the media to be acceptable in terms of:**

<p>How it compares with the ways that they have been receiving training in the past?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>
<p>It being an effective way to learn?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>
<p>Having adequate (paid) time to use it?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>
<p>It being complex or difficult to understand and/or use?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>
<p>Knowing that they will have access to support to solve problems?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>
<p>Having ways to evaluate the results of using it and giving feedback?</p>	<p>Acceptable:  <input type="checkbox"/>To all   <input type="checkbox"/>To most   <input type="checkbox"/>To some, not others   <input type="checkbox"/>Not to most   <input type="checkbox"/>Not to all   <input type="checkbox"/> Not sure</p> <p><b>Implications:</b></p>

# Key Technologies You NEED to Know About

Please note that this document is updated periodically as more current information is made available. Although the links referenced in this document were active as of 11/14/08, they may become inactive over time.

## Online Surveying and Marketing Resources

A Survey of Survey Tools: [http://www.wac.ohio-state.edu/workshops/survey\\_of\\_surveys/](http://www.wac.ohio-state.edu/workshops/survey_of_surveys/)

Survey Monkey: [www.SurveyMonkey.com](http://www.SurveyMonkey.com)

Survey Gizmo: <http://www.surveygizmo.com/>

Note: above examples cited because of positive accessibility ratings

Constant Contact: <http://www.constantcontact.com/index.jsp>

## Audio

Simple Audio Archives of Conferences - Thursday's Child public policy forum

<http://www.about.chapinhall.org/conferences/urban/nov2007/presentations.html>

**Podcasts** The word "podcast" is a combination of the words iPod and broadcast. It refers to the delivery of content via the Apple iPod or related audio player. Podcasting is a way of publishing podcasts to the web, allowing people to subscribe to a podcast and receive new "episodes" automatically. Examples:

Recent Elliott Masie podcasts, visit:

[http://www.masieweb.com/component/option,com\\_alphacontent/Itemid,122/](http://www.masieweb.com/component/option,com_alphacontent/Itemid,122/)

"PodCasting for Learning," a 55 minute dialogue covering different models for PodCast design, and challenges and approaches to creating podcasts:

<http://www.masieweb.com/podcasts/research-and-surveys/podcasting-for-learning-call.html>

To read a case study of a company that is using Podcasts for audio learning, visit:

[http://www.gronstedtgroup.com/pdf/T\\_D\\_September\\_05.pdf](http://www.gronstedtgroup.com/pdf/T_D_September_05.pdf)

ASHA Podcast - Early Autism Detection and Intervention with Amy Wetherby:

[http://asha.httpsvc.vitalstreamcdn.com/asha\\_vitalstream\\_com/www/ASHAPodcast10.mp3](http://asha.httpsvc.vitalstreamcdn.com/asha_vitalstream_com/www/ASHAPodcast10.mp3)

Podcasts on children's health and interviews with children's health experts:

<http://www.podcastdirectory.com/podcasts/index.php?iid=7843>

Here's a cool resource on how to use podcasts: <http://www.podcastdirectory.com/help/>

Exploring the Tools of Internet Technology: A Series of Podcasts for Trainers & Educators:

<http://www.rfcnetwork.org/content/view/418/47/>

Podcast Shares Latest Research on Early Child Development: A monthly podcast series produced by FPG Child Development Institute (FPG) [www.fpg.unc.edu/news/podcasts.cfm](http://www.fpg.unc.edu/news/podcasts.cfm).

Early Hearing Detection and Intervention: <http://www2a.cdc.gov/podcasts/player.asp?f=5834>

**What is RSS?:**

[http://www.usa.gov/Topics/Reference\\_Shelf/Libraries/RSS\\_Library/What\\_Is\\_RSS.shtml](http://www.usa.gov/Topics/Reference_Shelf/Libraries/RSS_Library/What_Is_RSS.shtml)

**About RSS:** <http://dotsub.com/films/inplainenglish/index.php>

## Video

- Visit You Tube at: <http://www.youtube.com/>
- Teacher tube at: <http://www.teachertube.com/>
- Ustream: You can broadcast and chat online with a global audience. Completely free, all it takes is a camera and Internet connection (I haven't tried this yet): <http://www.ustream.tv/>
- See a demonstration of Videatives' integrated professional development solutions for in-service and pre-service teacher education at: <http://www.videatives.com>
- Read and Watch "Wondering With Children: The Importance Of Observation In Early Education By George Forman & Ellen Hall including text with hyperlinked video clips at: <http://ecrp.uiuc.edu/v7n2/forman.html>
- Peter Mangione and Stephen Moore discuss early childhood assessment: [www.4researchers.org/contributors/content/452](http://www.4researchers.org/contributors/content/452)
- Go to college at YouSeeBerkely. University of California, Berkeley this began making its course lectures and special events freely available on YouTube: <http://youtube.com/ucberkeley>
- Stanton Wortham, a leading researcher from the Wharton/University of Penn program on Learning Leadership: <http://www.learningwiki.com/theory>
- The Infinite Thinking Machine: Video podcasts for educators and students: <http://www.infinitethinking.org/shows.htm>
- FPG Abecedarian Project - Source: FPG Child Development Institute - May 6, 2008: [http://www.fpg.unc.edu/%7Eabc/fpg\\_abc-video.cfm](http://www.fpg.unc.edu/%7Eabc/fpg_abc-video.cfm)
- APA: <http://www.apa.org/about/president/welcome.html>
- dotSUB: dotSUB is a browser based tool enabling subtitling of videos on the web into and from any language. There is nothing to buy and nothing to download. Recognizing the potential of global communication powered by the Internet, the founders of dotSUB created a web-based tool that enables video to be accessed in an open, collaborative, "wiki" type environment. The dotSUB tool gives anyone the ability to translate video content into multiple languages via subtitles rendered over the bottom of the video. <http://dotsub.com/about/>
- How NOT to use PowerPoint - a short humorous vidcast: <http://www.davidairey.com/how-not-to-use-powerpoint/>
- Graspr, The Instructional Video Network: <http://www.graspr.com/>
- CDC-TV has just released a new video in its "Health Matters" series entitled "Baby Steps: Learn the Signs. Act Early." <http://www.cdc.gov/CDCtv/BabySteps/>

## Applications for Creating Quick elearning Modules

### **Examples:**

A growing number of software applications enable the quick creation of elearning modules. Many, but not all of these applications, use the conversion of PowerPoint files with added narration to flash video to create, quick, inexpensive online learning modules or tutorials. Many applications offer demos and a free trial period. Be cautious: avoid purchasing based on price – shop for functionality and compatibility with your current IT resources.

**Articulate:** Articulate (my favorite) offers a daily half-hour Webinar at 2 p.m. EST explaining their product. <http://www.articulate.com/>

Desired Results access Project Articulate sample module:  
[http://www.draccess.org/articulate\\_modules/navigating\\_the\\_DRDP\\_instrument/](http://www.draccess.org/articulate_modules/navigating_the_DRDP_instrument/)

### **Camtasis Studio 5:**

Example: Technical Assistance Center on Social Emotional Intervention with Young Children:  
[http://www.challengingbehavior.org/explore/camtasia/pyramid\\_overview/pyramid\\_overview\\_captions.html](http://www.challengingbehavior.org/explore/camtasia/pyramid_overview/pyramid_overview_captions.html)

### **PowerCONVERTER 5.2:**

<http://www.crystalgraphics.com/powerpoint/powerconverter.main.asp?p=empconvert52e2>

**Adobe Presenter:** <http://www.adobe.com/products/presenter/>

Example from PA Office of Developmental Programs:  
<http://www.odpconsulting.net/howtos/TRC/>

**Captivate:** <http://www.adobe.com/products/captivate/>

**KnowledgePresenter:** <http://www.knowledgepresenter.com/assets/home.htm>

**PointeCast:** <http://www.pointecast.com>

**ISpring:** <http://www.ispringsolutions.com/>

**Impatica:** <http://www.impatica.com/offers/google1/?gclid=CI2uytOX5pUCFRxNagodHn5lew>

**IncrediTools PPT to Flash Studio:** <http://www.increditools.com/>

**WildPresenter Pro:** <http://www.wildform.com/>

## Class/Lecture Capture

- **Tegrity:** <http://www.tegrity.com/showcase.php>
- **Echo 360:** <http://www.echo360.tv/>  
Sample: <http://rewind.echo360.com/samples/Temple.htm>
- **Panopto:** <http://www.panopto.com/>
- **ProfCast:** <http://www.profcast.com/public/index.php>

## Examples of Online Learning Systems

Computer-based multimedia blends text, images, sound, and color to create easily accessible, interactive information delivery systems. Multimedia can be anything from a simple PowerPoint slide show to a complex interactive simulation.

Evaluation Online Learning from the U.S.D. Department of Education:

<http://www.ed.gov/admins/lead/academic/evalonline/evalonline.pdf>

### **Examples:**

- Enspire (<http://www.enspire.com>) is a company that develops elearning systems. Watch the projects that they created for Texas (Part C) Early Childhood Intervention (ECI). The web-based on-line training modules can be accessed anytime from anywhere at: <http://www.dars.state.tx.us/ecis/providers/trainingmodules.shtml>
- Check out Maryland's Early Childhood Tutorial, an online educational tool developed through a partnership between the Maryland State Department of Education, Division of Special Education/Early Intervention Services and Johns Hopkins University, Center for Technology in Education: <http://olms.cte.jhu.edu/olms/output/page.php?id=1214>
- Children of the Code: <http://www.childrenofthecode.org/Tour/index.htm>
- Minnesota Council on Developmental Disabilities' Five Partners in Policymaking online courses: <http://www.mnddc.org/news/newsitems/bow-award07.htm>

## Academic Virtual Learning Environments (VLE)

- **Blackboard** – one of the most well-known providers. Note: WEBCT merged with Blackboard and retains its identity, but resides under the Blackboard brand: <http://www.blackboard.com/us/index.Bb>
- **Moodle** is a course management system (CMS) - a free, open source software package designed to help educators create effective online learning communities. Check out their demos: <http://moodle.org/>
- **Read more about VLEs at:** [http://en.wikipedia.org/wiki/Virtual\\_learning\\_environment](http://en.wikipedia.org/wiki/Virtual_learning_environment)

## Free Screen Recorders

Record video of what you do or see on your computer screen or snap a picture of anything on your desktop.

- **Jing:** <http://www.jingproject.com>
- **oRipa Screen Recorder:** <http://www.ejoystudio.com/oripa-screen-recorder/index.htm>

## Online Meetings/eLearning/Web Collaboration/Webinars/WebCasts

I'm sure that you are familiar with the many companies that offer integrated online meeting facilities that can be used for online collaboration and the presentation and/or, demonstration of information. Although different companies offer different features, one can usually expect: visuals, one and two way calls, real-time question and answer capabilities, participant registration, downloads, surveying/polling, technical assistance, facilitation services, and live chat.

### **Examples:**

- GoToMeeting: <https://www.gotomeeting.com/>
- WebEx: <http://www.webex.com/>
- Adobe® Acrobat® Connect™ Professional: <http://www.adobe.com/products/acrobatconnectpro/>
- Elluminate: <http://www.illuminate.com/index.jsp>
- Sonic Foundry's Mediasite (also can do class capture): <http://www.sonicfoundry.com/>
- Microsoft Office Live Meeting: <http://office.microsoft.com>

Archived UCDenver Webcasts using Adobe Acrobat Connect Professional:

- Childhood vaccinations: <http://connect.ucdenver.edu/p45274019/>
- ABCD Part 1: <http://connect.ucdenver.edu/p60935585/> -
- *Developing Culturally Responsive Campaigns*: <http://connect.ucdenver.edu/p76982457/>
- Answering Clinical Questions with Evidence: <http://connect.ucdenver.edu/evidence>

Archived presentation from NECTAC:

<http://www.nectac.org/~calls/2007/challengingbehavior/challenge.asp>

Moving Right Along...Planning Transitions to Prevent Challenging Behavior with Mary Louise Hemmeter, Michaelene M. Ostrosky, Kathleen M. Artman, and Kiersten A. Kinder:

<http://journal.naeyc.org/btj/200805/hemmeter.asp>

**Webcasts from the National Symposium on Early Childhood Science and Policy** from the National Symposium on Early Childhood Science and Policy, which was hosted by the Center on the Developing Child at Harvard University on June 26 - 27, 2008 are now available for viewing and listening to online at

[http://www.developingchild.harvard.edu/content/national\\_symposium.html](http://www.developingchild.harvard.edu/content/national_symposium.html)

## Media Sharing Sites

Record video of what you do or see on your computer screen or snap a picture of anything on your desktop.

- **Screencast.com:** <http://www.techsmith.com/screencast.asp>

## Social Utilities and Networking

- **MySpace:** <http://www.myspace.com/>
- **FaceBook:** <http://www.facebook.com/>
- **Seesmic** Video Social networking, still in Alpha stage of development: <http://www.seesmic.com/>
- **Twitter:** <http://twitter.com/>
- **Linked In:** <http://www.linkedin.com/>
- **Doodle** (free scheduling and polling): <http://www.doodle.ch/main.html>
- **Example of how educationweek is using Twitter:** <http://twitter.com/educationweek>

Social bookmarking sites

<http://www.furl.net/>

<https://secure.del.icio.us/>

<http://www.blinklist.com/>

<http://ma.gnolia.com>

<http://www.facebook.com>

<http://slashdot.org>

<http://digg.com>

<http://www.stumbleupon.com>

<http://www.technorati.com>

<https://www.newsvine.com>

<http://www.reddit.com>

<http://tailrank.com>

<http://www.fark.com>

<https://login.yahoo.com>

<https://www.google.com/accounts/ServiceLogin>

<https://www.netscape.com/signin/>

## Blogs

Short for "Web logs," online journals, personal commentaries posted by the author, which usually are updated on a regular basis. It has been estimated that 6 million people posted their blogs on the Internet in 2004.

### **Examples:**

CEC's RTI blog: <http://cecblog.typepad.com/rti/>

ReadWriteWeb is a blog that provides Web Technology news, reviews and analysis:

<http://www.readriteweb.com/>

*Teacher Magazine's* look at what's new and noteworthy in educator blogs.

<http://blogs.edweek.org/teachers/blogboard/>

Look at Miss CripChick's blog for an example of how blogs can be used for advocacy: <http://crip-power.com/>

Robin McWilliam's Early Intervention in Natural Environments Blog

<http://www.naturalenvironments.blogspot.com/>

Welcome to The 2007 Weblog Awards (for Education Blogs)

<http://2007.weblogawards.org/polls/best-education-blog-1.php>

Welcome to the Blogosphere

<http://www.infinitethinking.org/2006/12/itm-4-welcome-to-blogosphere.html>

How has blogging impacted your professional development?

<http://macworlddedubloggers.blogspot.com/2008/01/question-for-my-personal-learning.html>

## Wikis

A wiki is computer software that allows users to easily edit, create, and link web pages. Wikis are often used to create collaborative websites, power community websites, and are increasingly being installed by businesses to provide affordable and effective Intranets or for use in Knowledge Management.

### **Examples:**

- Wikipedia: [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page)
- 2007 edition of LearningWiki: <http://www.learningwiki.com>
- PB Wiki (Create your own wiki in 60 seconds: <http://pbwiki.com/>
- The National Professional Development Center on Inclusion (NPDCI) recently launched a "wiki" to collectively define key terms related to professional development.  
<http://community.fpg.unc.edu/discussions/wiki-pd-approaches>

## Internet Conferencing, Messaging, VoIP

- **Skype:** <http://www.skype.com/>
- **Bringing Composers into Classrooms through Skype:** <http://www.thejournal.com/articles/23197>
- **Google Video and Chat**  
<http://www.google.com/mail/help/videochat/learnmore.html>
- **iChat (mac):** <http://www.ichat.com/>
- **AIM:** <http://www.aim.com/>
- **Meebo:** <http://www.meebo.com/>
- **VoIP:** <http://www.fcc.gov/voip/> <http://en.wikipedia.org/wiki/VoIP>

## Interesting Education, Early Childhood Sites

- **Public Education** Some 33,000 children in British Columbia have enrolled in a nearly three-year-old online K-12 school with a curriculum that allows students to work at their own pace: <http://www.learnnowbc.gov.bc.ca/>
- **Our History:** <http://americanhistory.si.edu/ourstoryinhistory/tryonline/buildsodhouse.html>
- **iCue:** <http://www.icue.com/>
- **Open Source:** The Institute for the Study of Knowledge Management in Education has just released OER Commons, the first comprehensive open learning network that enables users to find freely available high-quality teaching and learning materials. Created with and for educators, students, and self-learners, this broad selection of open educational resources for K-12 and higher education can be browsed, searched, and enhanced using collaborative social networking features, such as tags, ratings, and reviews. The goal of OER Commons is to bring innovation to teachers and learners around the world. Within its first month, OER Commons has forged alliances with over 60 major content partners in order to provide a single point of access through which educators and learners can search across collections to access over 9,000 open educational resources, read and provide descriptive information about each resource, and retrieve the ones they need. There are a wide range of educational resources, from complete courses to learning modules to library documents, and from algebra to zoology, all in one place. Many of the resources use one of the popular Creative Commons licenses. <http://www.oercommons.org/>
- **The Baby Center:** <http://www.babycenter.com/>

## Interesting ECE Resource and Information Archives and Repositories

- IRIS Center: <http://iris.peabody.vanderbilt.edu/>
- The Professional Training Resource Library (PTRL):  
[http://depts.washington.edu/isei/ptrl/PTRL\\_Purpose.php](http://depts.washington.edu/isei/ptrl/PTRL_Purpose.php)
- SpecialQuest Multimedia Training Library:  
<http://76.249.171.46/specialquest/trainingmaterials/index.lasso>

## Online Consultation

My Teaching Partner Consultancy:  
[http://www.myteachingpartner.net/about/about\\_consultancy.php](http://www.myteachingpartner.net/about/about_consultancy.php)

## Resources on Understanding Technology for Learning

For those of us who are not well versed in newer technologies, it might be useful to review one or more of the glossaries of elearning terminology that are available. Three such glossaries are:

- American Society for Training and Development (ASTD) Glossary:  
<http://www.learningcircuits.org/glossary.html>
- Learnframe Glossary of e-Learning Terms:  
<http://www.learnframe.com/aboutelearning/glossary.asp>
- ELearning Guru:  
<http://www.e-learningguru.com/gloss.htm>
- For those of us who are a bit technophobic, or who would like to desensitize others who fear technology, it might be fun to read: 12 Learning Interventions That Combat Technophobia by Linda Puetz at: [http://www.learningcircuits.org/2000/mar2000/mar2000\\_elearn.html](http://www.learningcircuits.org/2000/mar2000/mar2000_elearn.html)

- **Performance Support Systems**

Performance support systems (PSS) are designed to help users do things during, rather than as a precursor, to the performance of a task. For instance, a very simple PSS might involve a job aide such as a sign in a restaurant reminding employees to wash their hands. Generally, electronic performance support systems (EPSS) do so using computers and related technology to give workers information or resources to help them accomplish a task or achieve performance requirements. EPSS represent a shift from acquiring knowledge to performing tasks.

“While there remains an important role for traditional education and training, the shift to user-centered, performance-based models is both inevitable and imminent (Hannafin, 1993, 1995). The delivery model has shifted from courses that teach decontextualized knowledge and skill to modules that support performance involving relevant knowledge and skill. This shift has affected all forms of education and training (IETI, 1995). EPSS design practices represent a convergence among several related fields and specialties, including human performance technology, computer-supported collaborative work, technical communications, electronic publishing, instructional design, and workplace training (McGraw, 1994; Sherry & Wilson, 1996; Witt & Wager, 1994).” (Hannafin, Hill, and McCarthy, see below)

**Resource:** Read *Designing Resource-Based Learning and Performance Support Systems* by Michael J. Hannafin, Janette R. Hill, and James E. McCarthy, Sonalysts, Inc. at:  
<http://reusability.org/read/chapters/hannafin.doc>

### **Integrated Learning:**

We're in the midst of an e-learning revolution, which includes rapid change, a myriad of emerging technologies, and great opportunities to redeploy training investments. Following are a few related concepts, on which we should keep a sharp eye.

- **Learning Object:** A reusable, media-independent collection of information used as a modular building block for e-learning content.
- **LCMS (learning content management system):** A software application (or set of applications) that manages the creation, storage, use, and reuse of learning content. LCMSs often store content in granular forms such as Learning Objects.
- **Learning Management System** A software system that provides the platform for the enterprise's online learning environment by enabling the management, delivery and tracking of blended learning (i.e., online and traditional classroom) for employees, stakeholders and customers: [http://www.clomedia.com/content/templates/clo\\_feature.asp?articleid=91](http://www.clomedia.com/content/templates/clo_feature.asp?articleid=91)
- **ILS (integrated learning system):** A complete software, hardware, and network system used for instruction. In addition to providing curriculum and lessons organized by level, an ILS usually includes a number of tools such as assessments, record keeping, report writing, and user information files that help to identify learning needs, monitor progress, and maintain student records.

**Resources:** Catch up on what's happening with learning content management systems and related concepts through the American Society for Training and Development's free "Learning Circuits." Among the great articles are:

<http://www.learningcircuits.org/2002/apr2002/robbins.html>

<http://www.learningcircuits.org/2001/aug2001/ttools.html>

<http://www.learningcircuits.org/2002/apr2002/mortimer.htm>



## Computer Hardware and Software Checklist for Presenters, Educators, and Trainers

This checklist outlines basic software that training specialists should have loaded on their computers. Please remember that applications and operating systems are updated continually and new software is published all the time.

**First a word about hardware:** Both PC and Mac work well. Each platform has its own advocates and detractors. Use what works for you. Whichever you use, here is some basic advice on optimal ways to equip your hardware:

- Maximize the available processing speed
- Maximize the internal storage capacity (hard drive)
- Maximize the available memory
- CD-ROM/DVD drive; the ability to burn discs can be useful
- Highest quality video and audio cards available
- Enabled for wireless connection to internet
- Most recent version of operating system
- Most recent version of USB ports
- Firewire port

### **Basic Purchased Software:**

- Microsoft Word
- Microsoft PowerPoint
- Adobe PhotoShop or other image editing software
- Adobe Acrobat
- DVD player (There are both free and published versions)

### **Important Notes to Keep in Mind about the Software on the Following Pages**

- Software is frequently improved; check often for updates.
- Downloading programs carries the risk of a computer virus; use virus protection software and update that software frequently.
- Some software programs may not be secure; when in doubt, consult with an IT specialist before downloading and installing.
- Some software may create a conflict with your operating system or other software applications; when in doubt, consult with an IT specialist before downloading and installing.

## Free Software

### Browsers and related software:

- For surfing the Net and streaming and downloading files:
  - On both Macs and PCs, I recommend Mozilla Firefox
  - Also, on PCs: Explorer and on Macs: Safari
- Adobe Flash Player – For viewing Flash video; most computers have this software loaded. If you don't, visit:  
[http://www.adobe.com/shockwave/download/index.cgi?P1\\_Prod\\_Version=ShockwaveFlash](http://www.adobe.com/shockwave/download/index.cgi?P1_Prod_Version=ShockwaveFlash))
- JavaScript – Required for viewing many web sites; most computers have this software loaded; available at <http://www.java.com/en/download/manual.jsp>)

### Print:

- Adobe Reader – Allows you to read PDFs. Available at:  
<http://www.adobe.com/products/acrobat/readstep2.html>)

### Audio:

- Audacity Cross-Platform Sound Editor – Free audio editing software; available at:  
<http://audacity.sourceforge.net/>)
- LAME MP3 Encoder – Allows you to export Audacity files as MP3 files; available at:  
<http://audacity.sourceforge.net/help/faq?s=install&i=lame-mp3>)
- For managing audio files iTunes works on both Macs and PCs. There are many other software options, but I like iTunes: <http://www.apple.com/>

### Media players:

- Windows Media Player – For viewing certain kinds of audio and video files; available from  
<http://www.microsoft.com/windows/windowsmedia/download/AllDownloads.aspx?display=en&qstechnology=>)
- QuickTime – For viewing certain kinds of audio and video files; available from  
<http://www.apple.com/>  
Optional: You might also want to purchase the \$29 QuickTime Pro update from  
[www.apple.com](http://www.apple.com) QuickTime Pro makes it easy for you to play video clips at full screen, do basic editing functions and lots of other tricks as well. Remember, though, that if you upgrade to Pro, every time that you upgrade the free QuickTime software, you will also need to repurchase the \$29 QuickTime Pro upgrade.
- VLC Media Player – Even though you most likely use Windows Media Player and/or QuickTime, my favorite player is the free cross-platform VLC media player, a highly portable multimedia player for both Macs and PCs that play a very large assortment of audio and video formats: <http://www.videolan.org/vlc/>
- For Macs only: Perian is a free, open source QuickTime component that adds native support for many popular video formats: <http://www.perian.org>

## Video Editing:

- ❑ MPEG Streamclip – is a powerful video converter, player, and editor for Mac and Windows. It can play, edit, convert, and encode many movie files and can also download videos from YouTube and Google by entering the page URL:  
<http://www.squared5.com/>
- ❑ Basic video editing software: Both PCs and Macs have free or very low cost basic video editing software.
  - For PCs Microsoft offers the free Windows Movie Maker (loaded on many computers along with the operating software) at:  
<http://www.microsoft.com/windowsxp/downloads/updates/moviemaker2.msp>  
Note that you will require additional software and/or hardware to import video from a camcorder.
  - For Macs, Apple offers iMovie which comes equipped on new Macs or can be purchased as a part of the iLife Suite of applications at <http://www.apple.com/>
  - For both PCs and Macs, the \$29 QuickTime Pro update from [www.apple.com](http://www.apple.com) enables basic editing functions and lots of other tricks as well.

## Small Low-Cost Digital Camcorders!

Check out these small, inexpensive video cameras that work well for early childhood providers and professional development specialists:

- Xacti VPC-CG6 digital media camera  
(<http://us.sanyo.com/entertainment/camcorder/index.cfm?productID=1458>)
- The Flip Video family of camcorders: <http://www.theflip.com/products.shtml>
- KODAK Zi6 Pocket Video Camera: [http://www.kodak.com/eknec/PageQuerier.jhtml?pg-path=13063&pg-locale=en\\_US&requestid=647](http://www.kodak.com/eknec/PageQuerier.jhtml?pg-path=13063&pg-locale=en_US&requestid=647)

## How to Keep Up on Technology in Training and Education

Technology for education and training is evolving so rapidly that it's very difficult to keep up. Below is a list of some of the free e-newsletters and magazines that I subscribe to. All of these publications have some degree of value in keeping up with what's out there and available. Please keep in mind that some of these publications are tied to commercial products (some of which I endorse and some of which I don't).

**Here are a few sites that just focus on technology in general:**

**Gizmodo:** <http://gizmodo.com/>

**Slashdot:** <http://slashdot.org/>

**TechCrunch:** <http://www.techcrunch.com/>

**Boing Boing:** <http://boingboing.net/>

**Top 100 Tools for Learning 2008:** <http://c4lpt.co.uk/recommended/top100.html>

**Learning TRENDS by Elliott Masie:** <http://www.masie.com/>

**The eLearning Guild:** a member-driven online information center and Community of Practice where anyone involved in the design, development, and management of web-based educational or instructional content (e-Learning) can identify and access resources needed to ensure that their organizations' projects are successful, engage in a professional peer network, and focus on expanding their own professional skills, knowledge, and expertise.

<http://www.elearningguild.com/>

**Inside Training:** <http://www.managesmarter.com/msg/newsletter/index.jsp>

**The Rapid E-Learning Blog:**

<http://www.articulate.com/rapid-elearning/>

**e-LearningGuru.com:** <http://www.e-learningguru.com/firsttime.htm>

This site is jam packed with articles, white papers, interviews, book summaries and links to valuable sites.

**Training Magazine Free E-Newsletters:**

<http://www.trainingmagevents.com/learninggroup/newsletter/subscribe.jsp>

- **Online Learning News and Reviews**  
Online Learning News and Reviews, a free bi-monthly newsletter, contains news about training, online learning, trends in technologies and dialogue about e-learning products.
- **TDF e-Net**  
Training Directors' Forum e-Net is a free discussion-driven e-newsletter that lets you grill your training-management peers about your professional challenges.
- **Presentations Industry Update**  
Presentations Industry Update is a free weekly e-newsletter from the editors of Presentations magazine that covers presentation industry company and product news.
- **Training Tech Talk:** formerly Online Learning News & Reviews, provides breaking stories and ideas from peers about the latest e-learning practices, processes and products.
- **Training Executive Exchange:** formerly Training Directors' Forum e-Net, is a discussion-

driven e-mail newsletter that allows you to seek input from your training management peers about the professional challenges you face.

### **rSmart**

Supports open source software in education: <http://www.rsmart.com/blogs>

### **Center for Implementing Technology in Education (CITEd):** <http://www.cited.org/>

CITEd's web site offers unbiased, reliable and timely resources and information for implementing technology in the classroom, school, and district.

### **Technology Horizons in K-12 Education (T.H.E.) Newsletters:**

<https://newsletters.1105pubs.com/nl/THE.do?NL=6231&PC=C20NLF>

- **News Update:** T.H.E. News Update is a weekly newsletter covering the latest in technology trends, tools, and usage for K-12 instruction and administration. Opinion pieces by leading technology experts and visionaries provide insight on a variety of critical issues. News, announcements, and “need-to-know” statistics give readers a quick look at timely news and events affecting the education community.
- **T.H.E. SmartClassroom:** T.H.E. SmartClassroom eNewsletter focuses on hardware, display devices, infrastructure, and people – everything it takes to use technology effectively in a school setting. Case studies with best practices, as well as the latest news, products, and services keep you up-to-date on K-12 technology advancements in the classroom.
- **T.H.E. Focus:** T.H.E. Focus is a custom newsletter written by our editors that focuses on a specific product, service, or topic in education technology, providing in-depth information and best practices for K-12 administrators and teachers.
- **Collaboration 2.0:** Collaboration 2.0 focuses on the effective use of Web 2.0 technologies in K-12 education and provides information on the latest technologies and advances in these technologies. It includes case studies of successful implementations, feature articles on trends in collaborative technologies, profiles of champions of Web 2.0 at the district and school levels, pedagogy and tips on the effective use of collaborative technologies by experts, and news on new products and implementations.
- **Classroom Tools & Tips:** Classroom Tools & Tips, an EduHound.com newsletter, provides valuable educational technology resources to incorporate into K-12 curriculum. Educational topics, preformatted templates, technology tutorials, and practical tips are featured.

### **Digital Directions:** <http://www.edweek.org/dd/>

The all-new Digital Directions e-newsletter was created to help you keep pace with changes in K-12 edTech. You'll find it a useful tool, to help you figure out the "how-to" of bringing your entire school system or just your classroom into the digital age. Explore everything from using data systems to improve test scores, to one-to-one computing initiatives that take learning beyond the classroom.

### **Empowering Teachers: A Professional and Collaborative Approach**

Research shows that professional development changes practice when it is consistent, relevant and sustainable. This paper examines approaches such as technology coaches, curriculum cadres, and collaborative school reform teams that have proven to effectively change teacher behavior and increasing student achievement.

<http://www.setda.org/web/guest/2020/professional-development>

### Campus Technology:

<http://www.campustechnology.com/mcv/newsletters/newsletters/>

- **Web 2.0:** is your single best up-to-the-minute resource for news, tactics, strategies, and case studies for teaching and learning in the new web world. You'll find the latest information on social software (wikis, blogs, and chat), virtual learning environments, Multi-User Virtual Environments (MUVEs) such as Second Life, web-enabled collaboration tools, social collaboration sites, gaming, immersive education technologies, and more. Published bi-monthly, 1st and 3rd Wednesdays in HTML and text formats.
- **Campus Technology:** Stay close to the breaking stories in higher ed with Campus Technology's weekly newsletter. Every Tuesday, you'll see coverage of the timeliest issues covered by the Campus Technology editorial team.
- **IT Trends:** This Campus Technology eNewsletter is strongly slanted to inform the IT professional on campus. Written in HTML and distributed weekly on Thursdays, IT Trends is loaded with news, an opinions, resources, and product announcements.
- **Smart Classroom:** News, product updates, resource information, opinion, and peer recommendations for implementing the next level of the smart classroom.

### Present with Confidence:

<http://app.e2ma.net/app/view:Join/signupId:8613/maillingId:249284>

## To keep up with video

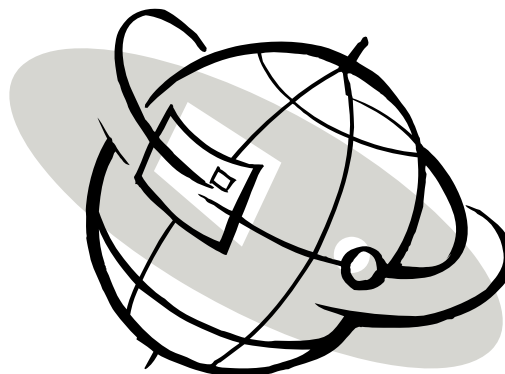
**Creative Cow:** <http://newsletters.creativecow.net/>

**Studio Monthly:** <http://www.omedea.com/stu/>

**Studiosdaily.com e-newsletter:** [http://www.studiodaily.com/main/eletter\\_subscribe.html](http://www.studiodaily.com/main/eletter_subscribe.html)

**HD Studio:** <http://www.studiodaily.com/hdstudio/signup.html>

**Videatives Views:** [https://www.videatives.com/content-new/videatives/videatives\\_views/index.php](https://www.videatives.com/content-new/videatives/videatives_views/index.php)



## Resources about Section 508 of the Rehabilitation Act of 1973

Section 508 requires that when Federal agencies develop, procure, maintain, or use electronic and information technology, Federal employees with disabilities have access to and use of information and data that is comparable to the access and use by Federal employees who are not individuals with disabilities, unless an undue burden would be imposed on the agency. Section 508 also requires that individuals with disabilities, who are members of the public seeking information or services from a Federal agency, have access to and use of information and data that is comparable to that provided to the public who are not individuals with disabilities, unless an undue burden would be imposed on the agency.

### Full text of Section 508 of the Rehabilitation Act of 1973:

<http://www.section508.gov/index.cfm?&FuseAction=Content&ID=12>

### The W3C (The World Wide Web Consortium) outline of web accessibility:

<http://www.w3.org/TR/WCAG/> and

<http://www.w3.org/TR/WCAG20/>

### WebAIM

In the "Articles" page there are many step by step guides on making different kinds of documents and rich media accessible, like PDF, PowerPoint, Word, flash and other media.

<http://www.webaim.org/>

You can view videos showing the difficulties that people with disabilities have on the web at:

<http://www.webaim.org/intro/index.php#video>

Read specifically about Flash accessibility:

<http://www.webaim.org/techniques/flash/> and <http://www.adobe.com/resources/accessibility/flash8/>

### Jim Thatcher.com Accessibility Consulting

Jim is sometimes referred to as the father of web accessibility. His accessibility career started in 1983 with a research project for IBM called PCSAID, an audio access system for people who are blind. When you have questions, try spending some time on his website:

<http://www.jimthatcher.com/index.htm>

You can find useful resources at:

[http://www.jimthatcher.com/site\\_resources.htm](http://www.jimthatcher.com/site_resources.htm)

### Mardiros Internet Marketing

Carmen Mardiros breaks down what makes a web site good for everyone:

<http://www.mardiros.net/accessible-web-design.html>

(Thanks to Rebecka Anderson for many valuable resources.)

## The Costs of Providing Training

Return on investment (ROI) refers to the ratio of the benefit received from a given investment to the cost of the investment. In training, ROI is often calculated by comparing the tangible results of training (for example, increased quality, productivity, compliance, or decrease in errors) to the cost of providing the training. In order to estimate ROI, we must be able to estimate the cost of providing training and measure the results of training (see the following section of this document).

The table below suggests some of the line items that need to be factored in when budgeting for training development and delivery. This table is not intended to be comprehensive, but rather to provide a starting place for calculating the cost of training. Please note that the table does not account for the enormous amount of time required for state lead agency staff and key stakeholders who are engaged in various stages of the development of training. Also note that it is not clear which budget items will be shouldered by state agencies and which will be the responsibility of local communities. Such decisions will vary from state to state and year to year. The table has columns to indicate both statewide and local responsibility for covering costs.

Items	Costs		Notes
	State	Local	
<b>Print Materials</b>			
Research and Write			
Produce graphics			
Review			
Print and bind			
Distribute			
<b>Video Materials</b>			
Research and Script			<p>It is difficult to generalize the per-minute-cost of producing a video. The cost will depend on many factors such as the number of locations and shooting days, desired quality, video format, use of paid narrators, captioning, translating, etc.</p> <p>A budget might range from \$200 to \$5000 per finished minute depending on the specifications of the production and the producer (e.g. state agency media department versus a private vendor). The more one tries to satisfy complex needs, the more expensive the production. One might expect no less than ten hours of editing time for each minute of finished video. Video production is made less expensive by narrowing the parameters of the end product.</p>
Shoot			
Edit			
Review			
Duplicate (e.g. VHS, CD, DVD)			
Package			
Distribute			

Items	Costs		Notes
	State	Local	
<b>Build and Host a Web Site</b>			
Research, Design and Develop			Budgets are very difficult to generalize. Costs will depend on whether pages for a new topic are added to an existing site or if a new site is created, whether external consultants are required (for writing, graphics, research, programming), special functionality required of the site (e.g. training registration), who will host it, etc.
Produce			
Review			
Hosting			
Maintenance			
<b>Develop Training</b>			
Instructor-led F2F training development hours			Rough estimate: 40-100 hours per finished training hour depending on complexity of the training program
Computer-based training development hours			Rough estimate: 100-400 hours per finished training hour depending on complexity of the training program
Self-study course development hours			Rough estimate: 80-200 hours per finished training hour depending on complexity of the training program
Purchase of hardware			
Purchase of software			
<b>Deliver F2F Training</b>			
Trainer salary/benefits and/or consulting fees			
Trainer travel, lodging, per diem			
Hiring substitutes to cover classrooms while trainees attend TTT events			
Trainee travel, lodging, per diem			
Trainee stipend			Some providers may need to have someone buy out their time so they can attend training
Marketing the program			
Registration			Clerical and administrative support
Off-site training facility costs			

Items	Costs		Notes
	State	Local	
Meal and break costs			
Audio-visual equipment rental			
Duplicating or purchasing handouts and other print materials			
Shipping handouts and other print materials			
Administrative staff to coordinate events			
Extra staff time needed to participate in training if required training exceeds allotted staff development days			
CEUs/academic units			Could necessitate an extra person at training site for registration
Other			
Other			
Other			
Other			
Other			
Other			
Other			
Other			

### **Some Interesting Approaches on Understanding the Costs of e-learning**

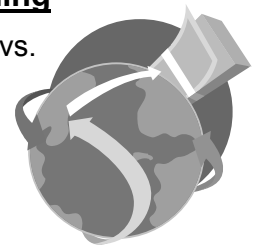
Online Training ROI calculator: Calculate the net cost and ROI of online training vs. traditional methods: [http://training.cuna.org/trainers/roi\\_calc.html](http://training.cuna.org/trainers/roi_calc.html)

Many Happy Returns: Calculating E-Learning ROI by John Setaro  
<http://www.learningcircuits.org/2001/jun2001/elearn.html>

Measuring the Total Cost of e-Learning by Kevin Kruse:  
[http://www.e-learningguru.com/articles/art5\\_2.htm](http://www.e-learningguru.com/articles/art5_2.htm)

How E-Learning Can Increase ROI for Training By THINQ's Research Department:  
[www.ilmagazine.com/e\\_learn/resources/pdfs/ROI\\_training.pdf](http://www.ilmagazine.com/e_learn/resources/pdfs/ROI_training.pdf)

Perspectives on cost & effectiveness in online training by Clive Shepherd:  
<http://www.fastrak-consulting.co.uk/tactix/features/perspectives/perspectives.htm>



## A Few Fun, Cool Things to Put on your Radar

Cisco On-Stage TelePresence Holographic Video Conferencing – World's first Live Holographic Video Feed from California, USA to Bangalore, India:

[http://www.musion.co.uk/Cisco\\_TelePresence.html](http://www.musion.co.uk/Cisco_TelePresence.html)

Netvibes: a free web service that brings together your favorite media sources and online services. Everything that matters to you — blogs, news, weather, videos, photos, social networks, email and much more — is automatically updated every time you visit your page:

<http://www.netvibes.com/#General>

Don Tapscott's interview on online democracy on NPR's Talk of the Nation:

<http://www.npr.org/templates/story/story.php?storyId=90638360>

North American Simulation and Gaming Association (NASAGA) - a growing network of professionals working on the design, implementation, and evaluation of games and simulations to improve learning results in all types of organizations: <http://www.nasaga.org/webx/>

Back to School: 10 Great Web Apps for College Students:

[http://www.readwriteweb.com/archives/top\\_10\\_web\\_apps\\_for\\_students.php](http://www.readwriteweb.com/archives/top_10_web_apps_for_students.php)

Resources for 21st-Century Learning: <http://campustechnology.com/mcv/cdwq/21stcentury/home/>

How to download YouTube videos using Safari: <http://www.youtube.com/watch?v=EZ3nnPmx1dY>

The JW Player: <http://www.jeroenwijering.com/>

Evite: <http://www.evite.com/>

Diaroogle Public Toilet Search Engine: <http://www.diaroogle.com/>

Training Games - More than 150 ready-to-use training games and activities. Most of them were published in the Thiagi GameLetter. <http://www.thiagi.com/games.html>

Free team building games - ideas and theory for employee motivation, training and development <http://www.businessballs.com/teambuilding.htm>

Hot Potatoes - The Hot Potatoes suite includes six applications, enabling you to create interactive multiple-choice, short-answer, jumbled-sentence, crossword, matching/ordering and gap-fill exercises for the World Wide Web. Hot Potatoes is not freeware, but it is free of charge for those working for publicly-funded non-profit-making educational institutions, who make their pages available on the web. <http://web.uvic.ca/hrd/halfbaked>

An Intro to Online Training Games, by James Kirk and Robert Belovics:

<http://www.learningcircuits.org/2004/apr2004/kirk.htm>

Professional Development in Technology, 2008: <http://www.thejournal.com/the/pd/home/>

**Lastly** . . . Don't be discouraged by too-rapidly changing technology, (perceived) lack of resources, challenges, roadblocks, mistakes, or setbacks!!

“History has demonstrated that the most notable winners usually encountered heartbreaking obstacles before they triumphed. They won because they refused to become discouraged by their defeats.” Bertie C. Forbes



**On to the future!!**