Using Technology for Professional Development, Technical Assistance, and Strategic Communication

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Contents

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 professional development, technical assistance, and strategic communication so I can share it with others. larry.edelman@ucdenver.edu

For which of these purposes **MIGHT** technology assist us?

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 professional development events		
Provide TA, consultation, coaching, mentoring		
Disseminate news, updates, documents		
Host/facilitate meetings or conferences		
Facilitate collaborative processes		
Build and strengthen relationships		
Evaluate activities and programs		
Facilitate social learning		
Exchange information with others		
Enhance service delivery		
Conduct research		
Manage projects		
Manage data (including collection, analysis, reporting)		
Other		
Other		

Different Technologies
for Different Purposes of Communication

One-Way Asynchronous Communication	Two-Way Synchronous Communication	Asynchronous Synergistic Communication
Print-based document (e.g. Word, PDF, PPT, Keynote)	Text-based live chat	Online survey
Podcast	Telephone conferencing	Course/Content Management System
Video, vidcast	Video conferencing	Community of Practice
Media sharing sites	Web conferencing (meeting, webinar, webcast)	Virtual Learning Environment (MUVE)
Archived class, lecture, web event	Online meetings spaces	Bulletin board, news group
Rapid e-learning modules (e.g. PPT to Flash video)		Chat room, threaded discussion, list serv
Resource/information repositories		Blog
Searchable Knowledge Bases		Vlog
		Wiki
		Online consultation
		Social Networking
		Shared software systems (e.g. Google docs, Google Sites)
		Online survey

Avoid Seagull Events (fly in–drop something–fly out)

Use technology to help extend how you support learning and performance *over time* rather than focusing solely on solitary F2F events

**Training
Session**

How might you use technology…		
BEFORE a professional development 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.	**DURING** a professional development event to: Connect learners to new resources; create learning networks; encourage action planning; anticipate implementation back-on-the-job; evaluate the training; etc.	**AFTER** a professional development event to: Evaluate training; provide self-reflection; provide technical assistance and/or coaching; provide additional information; support performance back-on-the-job, etc.

Key Questions

To help determine the fit and feasibility of using new media for delivering professional development and technical assistance

What is the capacity of <u>YOUR ORGANIZATION</u> to produce and distribute the media?

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

❒ The <u>KNOWLEDGE</u> that you want your audience to attain?

❒ The <u>ATTITUDES</u> that you want your audience to have?

❒ The <u>SKILLS</u> that you want your audience to be able to perform?

❒ The actual <u>PERFORMANCE</u> that you desire back on the job?

In general, to what extent is the proposed new media <u>COMPATIBLE</u> 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 <u>HUMAN RESOURCES</u>?

❒ 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 <u>ACCESS</u> to (or have the ability to obtain) the required computer resources?

❒ Hardware

❒ Software

❒ Internet connection and bandwidth

	What is the capacity of __YOUR AUDIENCE __ to use the media?
	Required Hardware, Software, Bandwidth, and Access
	To what extent does your intended audience have adequate access to (or the ability to acquire) the required computer resources:
Hardware (Specify)	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Software (Specify)	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Internet connection and bandwidth (Specify)	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Access is allowed to web sites (e.g. no restrictions)	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
	Computer Literacy
	To what extent does your intended audience have the computer literacy required to:
Navigate the WWW	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Download software and files	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Use media players	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**
Troubleshoot or obtain help when encountering problems	❑All do ❑Most do ❑Some do, some don't ❑Most don't ❑All don't ❑ Not sure **Implications:**

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

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

Key Technologies You <u>NEED</u> to Know About

Please note that I update this document as frequently as possible. Although the links below were active as of **2/16/09**, they may become inactive by the time you get to them. Sorry.

Online Surveying and Marketing Resources

A Survey of Survey Tools: http://www.wac.ohio-state.edu/workshops/survey_of_surveys/

Survey Monkey: 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

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.

Example of Software:

You can record a podcast by phone at Gcast: http://www.gcast.com/

Examples of Podcasts:

Recent Elliott Masie podcasts, visit:
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

Simple Audio Archives of Conferences - Thursday's Child public policy forum
http://www.about.chapinhall.org/conferences/urban/nov2007/presentations.html

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

Exploring the Tools of Internet Technology: A Series of Podcasts for Trainers & Educators:
http://www.rrfcnetwork.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.

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

Other resources on podcasts:

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

Case study of a company that is using Podcasts for audio learning, visit:

http://www.gronstedtgroup.com/pdf/T_D_September_05.pdf

What is RSS?:

http://www.usa.gov/Topics/Reference_Shelf/Libraries/RSS_Library/What_Is_RSS.shtml

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

Video

Examples of Video:

- 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

- 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

- APA: http://www.apa.org/about/president/welcome.html

- dotSUB: a browser based tool enabling subtitling of videos on the web into and from any language. 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/

- 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/

Media Sharing Sites

Examples of Providers:

- YouTube: http://www.youtube.com/
- Screencast.com: http://www.techsmith.com/screencast.asp
- TeacherTube: http://www.teachertube.com/
- SchoolTube: *http://www.schooltube.com/*
- Ustream:: http://www.ustream.tv/
- Vimeo: http://www.vimeo.com/
- Viddler: http://www.viddler.com/
- Open Source Movies: http://www.archive.org/details/opensource_movies
- MetaCafe: http://www.metacafe.com/
- Buzdeo: http://www.buzdeo.com/

Class/Lecture Capture

Examples of Software:

- Tegrity: http://www.tegrity.com/showcase.php
- Echo 360: http://www.echo360.tv/ (Sample: http://rewind.echo360.com/samples/Temple.htm)
- CourseCast from Panopto (free to qualifying academic institutions): http://www.panopto.com/
- ProfCast: http://www.profcast.com/public/index.php

Applications for Creating Quick elearning Modules

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/

Camtasis Studio 5:
Example: Technical Assistance Center on Social Emotional Intervemtion with Young Children:

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 Captivate: http://www.adobe.com/products/captivate/

Example of Captivate from CADRE: http://www.directionservice.org/cadre/listening.cfm#

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=CI2uytOX5pUCFRxNagodHn5Iew

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

WildPresenter Pro: http://www.wildform.com/

Examples of Custom-Built 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 slow to a complex interactive simulation.

Evaluating Online Learning from the U.SD. 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

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

- SpecialQuest Multimedia Training Library:
  http://76.249.171.46/specialquest/trainingmaterials/index.lasso

- Teachnology: http://www.teachnology.com/

Video Conferencing, Messaging, VoIP

- Skype: http://www.skype.com/

- 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

- SightSpeed (Logitech): http://www.sightspeed.com/

- Oovoo: http://www.oovoo.com/

Other resources on Video Conferencing, Messaging, VoIP:

- Bringing Composers into Classrooms through Skype: http://www.thejournal.com/articles/23197

Online Meeting Spaces

Many companies offer integrated online meeting facilities that can be used for online collaboration and the presentation and/or demonstration of information. 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.

Webcast: To use the Internet to broadcast live or delayed audio and/or video transmissions, much like traditional television and radio broadcasts (AKA netcast)

Webinar: Short for Web-based seminar, a presentation, lecture, workshop or seminar that is transmitted over the Web. A key feature of a Webinar is its interactive elements -the ability to give, receive and discuss information. Contrast with Webcast, in which the data transmission is one way and does not allow interaction between the presenter and the audience. (http://www.webopedia.com/)

Examples of Systems/Companies:

- DimDim: http://www.dimdim.com/ (FREE!)
- Citrix Online (including GoToMeeting and GoTo Webinar: http://www.citrixonline.com/
- WebEx: http://www.webex.com/
- Adobe Presenter: http://www.adobe.com/products/presenter/
- Adobe® Acrobat® Connect™ Professional: http://www.adobe.com/products/acrobatconnectpro/
- Elluminate: http://www.elluminate.com/index.jsp
- Sonic Foundry's Mediasite (also can do class capture): http://www.sonicfoundry.com/
- Microsoft Office Live Meeting: http://office.microsoft.com
- CineMeetings (uses a network of more than a thousand theaters nationwide to host broadcasts): http://www.nationalcinemedia.com/Cinemeetings/
- Bridgit conferencing software: http://www2.smarttech.com/st/en-US/Products/Bridgit/

Examples:

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

Examples from PA Office of Developmental Programs:

- http://www.odpconsulting.net/howtos/TRC/
- http://www.odpconsulting.net/index.php?option=com_content&task=view&id=163&Itemid=223

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

Alliance for Health Reform's Children's Health Coverage (February 02, 2009)
http://allhealth.org/briefing_detail.asp?bi=144

Webcasts from the National Symposium on Early Childhood Science and Policy:

- http://www.developingchild.harvard.edu/content/national_symposium.html

Broadreach Conference Center (live and pre-recorder *webinars, tele-classes, and online discussions with* Norman Kunc and Emma Van der Klift:

- http://www.normemma.com/conferencecenter/index.htm

National Consortium on Deaf-Blindness:

- Early Usher: http://connectpro67153335.na3.acrobat.com/p69199564/

- Mark Schalock, used his computer to demonstrate the power of pivot tables: http://connectpro67153335.na3.acrobat.com/p21492356/

Course Management System (CMS), Learning Management System (LMS), Virtual Learning Environment (VLE)

Examples of Systems/Companies:

- 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 an open source course management system: http://moodle.org/

- Joomla: http://www.joomla.org/

- Sharepoint: http://www.microsoft.com/Sharepoint/default.mspx

- Read more about VLEs at: http://en.wikipedia.org/wiki/Virtual_learning_environment

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Communities of Practice

CoP refers to the process of social learning that occurs and shared socio-cultural practices that emerge and evolve when people who have common goals interact as they strive towards those goals. http://en.wikipedia.org/wiki/Communities_of_Practice

- Communities of Practice (CoPs) that are supported by the Technical Assistance and Dissemination (TA&D) Network and the Office of Special Education Programs (OSEP): http://www.tacommunities.org/

Multiuser Virtual Learning Environment (MUVE)

Examples of Systems/Companies:

- Second Life: http://secondlife.com/

- Project wonderland: https://lg3d-wonderland.dev.java.net/

Example:

- ihum_2006 shows projects by Stanford University students in Second Life for Introduction to the Humanities 57: The Human & the Machine. http://www.archive.org/details/ihum_2006

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 of Blogs:

eLearning Technology: http://elearningtech.blogspot.com/

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

ReadWriteWeb is a blog that provides Web Technology news, reviews and analysis: http://www.readwriteweb.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://macworldedubloggers.blogspot.com/2008/01/question-for-my-personal-learning.html

TheWeblogProject open-source movie documentary about blogs and bloggers. http://www.theweblogproject.com/

Vlogs

Short for video blog, it is the term used to describe a blog that includes or consists of video clips. Typically updated daily (or with regular frequency) vlogs often reflect the personality or cause of the author AKA vog) http://www.webopedia.com/

- Welcome to vlogs: http://www.archive.org/details/vlogs

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:

- The Wikimedia Foundation, Inc. is the non-profit parent organization of various free-content projects, most notably Wikipedia, the award-winning online encyclopedia. Here, you will find

videos of conferences, talks and presentations related to the Wikimedia projects: http://www.archive.org/details/wikimedia

- Wikipedia: 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
- Brush Public Schools Curriculum Wiki: http://wiki.brushschools.org/index.php/Main_Page

Knowledge Sharing

- Knol: http://knol.google.com/k/
- Graspr: http://www.graspr.com/

Online Consultation

- My Teaching Partner Consultancy: http://www.myteachingpartner.net/about/about_consultancy.php

Social Utilities and Networking

Examples of social utilities and networks:

- MySpace: http://www.myspace.com/
- FaceBook: http://www.facebook.com/
- Ning: http://www.ning.com/
- Seesmic Video Social networking (in Alpha stage): http://www.seesmic.com/
- Twitter: http://twitter.com/
- Example of Twitter: educationweek's updates at http://twitter.com/educationweek
- LinkedIn: 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

Examples of social bookmarking sites:

http://www.furl.net/

https://secure.del.icio.us/l

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/

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/

Do You Need a New Computer?

Here is a basic checklist for a powerful computer that is ready and able to create, manipulate, share, and use new media:

❑ <u>Platform</u>: Both PCs and Macs have their strengths and limitations and their advocates and detractors. Use what works for you. Whichever you use, choose the most recent DEPENDABLE version of operating system and configure the computer with enough power for the applications that you intend to use, and then some extra.

❑ Maximize the available processing speed

❑ Maximize the internal storage capacity (hard drive)

❑ Maximize the available memory

❑ CD-ROM/DVD drive for playing and burning

❑ High quality video and audio cards

❑ Enabled for wireless connection to internet

❑ Most recent version of connectivity (e.g. USB, Firewire) ports

Basic Applications:

Eventually, you will use specialized applications to create new media. To begin with, be sure to load your computer with basic applications such as:

❑ Word processing (e.g. Word)

❑ Presentation (e.g. PowerPoint, Keynote for Macs)

❑ Desktop publishing, page layout (e.g. Illustrator)

❑ Image editing (e.g. PhotoShop)

❑ Spreadsheets (e.g. Excel)

❑ PDF creation and management (e.g. Adobe Acrobat)

❑ DVD player (There are both free and published versions)

Free

Applications Useful for Professional Development and Technical Assistance

Why might some companies and individuals offer free software?

- To encourage many people to use an application in development so they can identify and fix the bugs.

- To offer their software as a free, "lite" version in which functionality or quality is limited in the hopes that users will want to migrate to an enhanced version that they will need to pay for.

- To offer a trial version.

- To generate revenue through ads or other related plug-ins.

- To help change the world for the better by offering widespread and open access to useful digital resources.

Important notes to keep in mind about the free (or inexpensive) applications on the following pages

- ❑ Some free applications are very powerful and will allow you to do just about anything that you need to do. Other free applications produce inferior products or lack important functions compared to commercial software. You'll need to try them out and judge for yourself what is good enough for your purposes.

- ❑ Applications are updated continually and new software is published all the time; 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.

- ❑ There are thousands of incredibly useful, free applications that can (and should) be used to enhance professional development, technical assistance, and strategic communication activities. The applications on the following pages are only popular examples…there are many more choices. Try to do a search on your favorite browser for "free [key word] software."

For browsing:

For surfing the Net and streaming and downloading files, in addition to the common Internet Explorer:

- o Mozilla Firefox
- o Safari (great for downloading files from YouTube. See: How to download YouTube videos using Safari: http://www.youtube.com/watch?v=EZ3nnPmx1dY

❑ 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)

❑ JavaScript – Required for viewing many web sites; most computers have this software loaded; available at http://www.java.com/en/download/manual.jsp)

For reading PDF files:

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

For recording, editing, and sharing audio files:

❑ Audacity Cross-Platform Sound Editor: http://audacity.sourceforge.net/)

❑ Audacity manual: http://audacity.sourceforge.net/manual-1.2/index_splash.html

❑ 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)

❑ CallBurner (records Skype calls): http://www.callburner.com/

❑ For managing audio files iTunes works on both Macs and PCs. There are many other software options. I like iTunes: http://www.apple.com/

❑ Gcast (for recording a podcast by phone): http://www.gcast.com/

❑ Instructions for recording, editing, and sharing audio files from Skype, using Callburner and Audacity: http://www.kineo.com/free-tools/audacity-callburner-review-.html

For playing media files:

There are scores of free media players available. If you install the common ones below you will be able to play just about any kind of audio or video file that you will encounter.

❑ 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/

❑ JW FLV Player: http://www.longtailvideo.com/players/jw-flv-player/

❑ Windows Media Player – For viewing certain kinds of audio and video files; available from http://www.microsoft.com/windows/windowsmedia/download/AllDownloads.aspx?displang=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. 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 to a major version of the free QuickTime software, you will also need to repurchase the $29 QuickTime Pro upgrade.

❑ For Macs only, Perian is a free, open source QuickTime component that adds native support for many popular video formats: http://www.perian.org

For screen capturing:

These applications enable you to record video of what you do or see on your computer screen or snap a picture of anything on your desktop.

❐ Directory of Screen Capture, Screencasting and Software Demo Tools: http://c4lpt.co.uk/Directory/Tools/capture.html

❐ Screencast-o-matic: http://www.screencast-o-matic.com/

❐ Jing: http://www.jingproject.com

❐ oRipa Screen Recorder: http://www.ejoystudio.com/oripa-screen-recorder/index.htm

For basic video editing and encoding

❑ 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/

❑ 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.mspx
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 enables basic editing functions and lots of other tricks as well.

For creating online surveys

❑ A Survey of Survey Tools: http://www.wac.ohio-state.edu/workshops/survey_of_surveys/

❑ Survey Monkey: www.SurveyMonkey.com

For creating collaborative documents, hosting web sites, wikis, blogs:

❑ Google docs: http://docs.google.com

❑ Google sites: http://sites.google.com

❑ Writeboard: http://www.writeboard.com/

❑ Scriblink: http://www.scriblink.com/

❑ Zoho: http://www.zoho.com/index.html

❑ VoiceThread: http://voicethread.com/

For scheduling meetings:

❐ MeetingWizard: www.meetingwizard.com

❐ Doodle: www.doodle.com/

For hosting webcasts and webinars:
- ❒ DimDim: http://www.dimdim.com/
- ❒ Vyew: http://vyew.com/site/

For posting media:
- ❒ YouTube: http://www.youtube.com/
- ❒ Screencast.com: http://www.techsmith.com/screencast.asp
- ❒ TeacherTube: http://www.teachertube.com/
- ❒ SchoolTube*: http://www.schooltube.com/*
- ❒ Ustream:: http://www.ustream.tv/
- ❒ Vimeo: http://www.vimeo.com/
- ❒ Viddler: http://www.viddler.com/
- ❒ Open Source Movies: http://www.archive.org/details/opensource_movies
- ❒ MetaCafe: http://www.metacafe.com/
- ❒ Buzdeo: http://www.buzdeo.com/
- ❒ Bubbleshare: http://www.bubbleshare.com/
- ❒ Flickr: http://www.flickr.com/
- ❒ Picasa: http://picasa.google.com/

For converting files:
- ❒ Zamzar: http://www.zamzar.com/

For creating blogs:
- ❒ Blogger: www.blogger.com
- ❒ Class Blogmeister: http://classblogmeister.com/index.php
- ❒ 21Classes: http://www.21classes.com/
- ❒ Gaggle: https://www.gaggle.net

For creating wikis:
- ❒ Wetpaint: http://www.wetpaint.com
- ❒ pbwiki: http://www.pbwiki.com/
- ❒ Wikispaces: http://www.wikispaces.com

For note taking:
- ❒ Evernote: http://www.evernote.com
- ❒ Google Notebook: http://www.google.com/notebook/
- ❒ GTD Tiddly Wiki: http://nathanbowers.com/gtdtw/

For sharing files:
- ❒ YouSendIt Lite (claims to be HIPAA compliant): http://www.yousendit.com/cms/liteaccount
- ❒ FileDropper: http://www.filedropper.com/

For making to-do lists and task management:

❒ Toodledo: http://www.toodledo.com/

For project and event management:

❒ Viewpath: http://www.viewpath.com/

To capture, share, and organize things you find on the web:

❒ SimplyBox: http://simplybox.com/

For recording speech or text-to-speech:

❒ ReadTheWords: http://www.readthewords.com/
❒ vozMe (converts text to mp3 files that you can download): http://vozme.com
❒ Voicaroo: http://vocaroo.com

To create your own music stream:

❒ Blip.fm: http://blip.fm/
❒ Imeem: http://www.imeem.com/
❒ Pandora: http://www.pandora.com/
❒ iTunes genius: http://www.apple.com/itunes/whatsnew/

For shortening URLs:

❒ Moourl: http://moourl.com

To Create word clouds:

❒ Wordle: http://www.wordle.net/

To send invitations:

❒ Evite: http://www.evite.com/

Guidance on effectively searching the Internet:

❒ Search Engines and Search Tutorials: A resource guide for: information literacy, web search tutorials, searching and evaluating information on the Internet, links to search engines, web directories, the invisible web and what's new on the internet: http://www.khake.com/page8.html/
❒ Search Tips from elearning technology: http://elearningtech.blogspot.com/2009/02/search.html

Resources to Help You Understand e-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

- Webopedia: Online dictionary and search engine for computer and Internet technology definitions: http://www.webopedia.com/

- 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

- Search on YouTube for key words such as web 2.0, elearning, technology. Try watching the great series created by Lee Lefever's commom craft, e.g. twitter in plain English

Resources to Help You Understand Performance Support

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
- **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 resources:

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

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

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

Resources to Help You Keep Up with Technology

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).

Pew Internet Project: http://www.pewinternet.org/
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/ **Wired Blog**: http://blog.wired.com/ **CES:** http://www.cesweb.org/default.asp **Macworld:** http://www.macworld.com/ **Engadget:** http://www.engadget.com/ **Lifehacker:** http://lifehacker.com/
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.

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

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Apple Learning Interchange: http://edcommunity.apple.com/ali/

Consortium for School Networking (CoSN): http://www.cosn.org/#

International Society for Technology in Education: http://www.iste.org/

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.

Center for Advanced Technology in Education: http://cateweb.uoregon.edu/

Digital Journey: Tools for the Classroom (Howie DiBlasi):
http://toolsfortheclassroom.com/index.html

TONS of very valuable links and resources!

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/mailingId:249284

Learn about animation: http://guest.portaportal.com/animator

Thinkofit: An independent guide to internet video conferencing products and services
http://thinkofit.com/webconf/video.htm#webcam

http://thinkofit.com/webconf/realtime.htm

http://thinkofit.com/webconf/video.htm#webcam

TestFreaks: http://www.testfreaks.com/

Resources to Help You Keep Up with Digital Video

Creative Cow: http://newsletters.creativecow.net/
Studio Monthly: http://www.omeda.com/stu/
Studiodaily.com e-newsletter: 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
Video Technology Magazine: http://www.videotechnology.com/
Learn about the Flash video (FLV) format. http://www.adobe.com/devnet/video/
Flash video learning guide: http://www.adobe.com/devnet/flash/articles/video_guide.html

EXTRA: Small Low-Cost Digital Camcorders!
Check out these examples of small, inexpensive digital video recorders that work well for providers and technical assistance and professional development specialists: o Xacti VPC-CG9 digital media camera http://us.sanyo.com/Digital-Camcorders/Digital-Media-Camera-MPEG4-H-264-9-12mp o The Flip Video family of camcorders: http://www.theflip.com/products.shtml o KODAK Zi6 Pocket Video Camera: http://www.kodak.com/eknec/PageQuerier.jhtml?pq-path=13063&pq-locale=en_US&_requestid=647
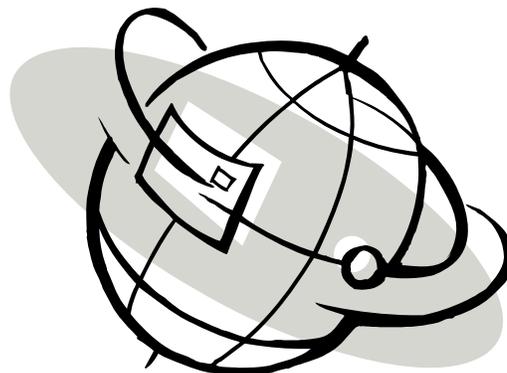
Resources about Section 508
of the Rehabilitation Act of 1973

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/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/
http://www.adobe.com/resources/accessibility/flash8/

❒ **University of Illinois' Functional Accessibility Evaluator:** http://fae.cita.uiuc.edu/

❒ **Accessify:** http://www.accessify.com/

❒ **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

❒ **Mardiros Internet Marketing**

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

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

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 professional development activities. 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 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	
Print Materials			
Research and Write			
Produce graphics			
Review			
Print and bind			
Distribute			
Video Materials			
Research and Script			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.
Shoot			
Edit			
Review			
Duplicate (e.g. VHS, CD, DVD)			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.
Package			
Distribute			

Items	Costs		Notes
	State	Local	
Build and Host a Web Site			
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			
Develop Training			
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			
Deliver F2F Training			
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			

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

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

How E-Learning Can Increase ROI for Training By THINQ's Research Department: www.llmagazine.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

E-Learning Benefits and ROI Comparison of E-Learning vs. Traditional Training: http://knol.google.com/k/mary-kay-lofurno/e-learning-benefits-and-roi-comparison/nti9bs9a4lxe/16#

The Technological Tourist:

Miscellaneous Reads, Views, Tools, Toys, and Things to Put on Your Radar

Google SketchUp 7: Create 3D models: http://sketchup.google.com/product/gsu.html

Simulations help faculty ID at-risk students: http://www.eschoolnews.com/news/top-news/?i=56638

ListIt: manage the tons of little information bits you need to keep track of each day: http://groups.csail.mit.edu/haystack/listit/

Optoma PK-101 PICO Pocket Projector: smaller than many digital cameras and smart phones, enables users to share images and videos from their media devices at sizes up to 60-inches. (Does not connect to notebook computers, PC's, PDAs, cell phones or other devices unless the device has composite output): http://www.optomausa.com/product_detail.asp?productsubcat=26&productcategory=Projector&product_id=399&itemno=PICO

Eye-Fi: Wireless SD memory Card: wirelessly uploads photos from camera to computer or web site: www.eye-fi.com

Maho i-Land: Mobile phone novels are one of the means of self-expression forms for our users. We would like to continue to support their self-expression activities. http://ip.tosp.co.jp/

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

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

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

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

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

Training Games - More than 150 ready-to-use training games and activities: http://www.thiagi.com/games.html

Free team building games: 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/

Top 10 Web 2.0 Tools for Young Learners:
http://glovely09.wetpaint.com/page/TopTen+for+Young+Learners?t=anon

Typealyser: Type in a URL of a website or blog and it will give you a reading of the Myers-Briggs Type Indicator that the text seems to indicate: http://www.typealyzer.com/

Buzzword generator: http://www.outofservice.com/buzzword/

Yoostar is a diverse team of entertainment industry insiders, technologists and creative types who share a common vision: To turn every home in the world into a movie studio and literally change the face of entertainment as we know it today-to yours: http://www.yoostar.com/

Open Online Learning - A Paradigm Shift: Entrepreneurial Opportunities in Open Online Learning: http://knol.google.com/k/peter-baskerville/open-online-learning-a-paradigm-shift/14j3i4hyjvi88/14#

The Future of Education by Thomas Frey: http://www.davinciinstitute.com/page.php?ID=170

Lastly…Don't be discouraged that technology is changing so rapidly that you can't keep up, (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!!