Blended Learning – Tools and Technologies

▶Blogs

A blog (from web log or weblog) is a web-based publication consisting primarily of periodic articles (normally in reverse chronological order). Blogs can be hosted by dedicated blog hosting services, or they can be run using blog software on regular web hosting services. Like other media, blogs often focus on a particular subject, such as food, politics, or local news. Some blogs function as online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic.

Tutorials:
Beginners Guides: Creating a Weblog
http://www.pcstats.com/articleview.cfm?articleID=1530

Building a Blog with Dreamweaver
http://www.adobe.com/devnet/dreamweaver/articles/php_blog1.html

Blogging For Beginners
http://www.blogbasics.com/blog-tutorial-1-1.php

Blogger
http://www.blogger.com/start

Recommended readings:
A Brief History of Weblogs
http://www.cjr.org/issues/2003/5/blog-jensen.asp?printerfriendly=yes

PolyBlogs
http://polyblogs.rpi.edu/

Creating a Blog from Scratch, Part 2: Advantages and Disadvantages of Popular Blog Software

http://www.dancohen.org/blog/posts/advantages_and_disadvantages_of_popular_blog_software

Using discussion webs to Develop an Academic Community of Learners
http://www.educause.edu/ir/library/pdf/ELI7005.pdf

Why Blog?
http://www.thejournal.com/articles/17616

Educational Blogging
http://www.educause.edu/ir/library/pdf/ERM0450.pdf

Time to check: Are you using the right blogging tool?
http://www.ojr.org/ojr/stories/050714gardner

Blog software comparison chart
http://www.ojr.org/ojr/images/blog_software_comparison.cfm

Beyond personal webpublishing: An exploratory study of conversational blogging practices
http://csdl2.computer.org/comp/proceedings/hicss/2005/2268/04/22680107a.pdf

The educated blogger: Using Weblogs to promote literacy in the classroom
http://www.firstmonday.org/issues/issue9_6/huffaker/index.html

▶ E-Porfolio

In the context of education and learning, an E-portfolio (electronic portfolio or a digital portfolio) is a portfolio based on electronic media and services. It consists of a personal digital record containing information such as a collection of artifacts or evidence demonstrating what one knows and can do.

Tutorials:
The Sakai Community
http://www.sakaiproject.org/index.php?option=com_frontpage&Itemid=1

eFolio Minnesota
http://www.efoliomn.com/

"At-a-Glance Guides"
http://electronicportfolios.com/ALI/index.html

Developing a Teaching Portfolio
http://depts.washington.edu/cidrweb/PortfolioTools.htm

Preparing A Teaching Portfolio
http://www.utexas.edu/academic/cte/teachfolio.html

What if...? Portfolio Trouble-Shooting
http://www.rmcdenver.com/useguide/assessme/portfoli.htm

Recommended readings:
Builiding an E-dentity for Each Student
http://www.educause.edu/ir/library/pdf/EQM0147.pdf

Digital Portfolios: A Confluence of Portfolio Assessment and Technology
http://www.csubak.edu/~dgeorgi/projects/digital.htm

Directions in Electronic Portfolio Development
http://it.coe.uga.edu/itforum/paper66/paper66.htm

How To Produce A Teaching Portfolio
http://www.city.londonmet.ac.uk/deliberations/portfolios/ICED_workshop/seldin_boo
k.html

The Electronic Portfolio Boom: What's it All About?
http://www.campus-technology.com/article.asp?id=6984

▶Podcasting

Podcasting is the method of distributing multimedia files, such as audio
programs or music videos, over the Internet for playback on mobile devices
and personal computers. The distribution format of a podcast uses either the
RSS or Atom syndication formats. The term podcast, like "radio", can mean both the
content and the method of delivery. Usually the podcast features one type of "show",
with new episodes either sporadically or at planned intervals, such as daily or weekly.
Podcasting's essence is about creating content (audio or video) for an audience that
wants to listen or watch when they want, where they want, and how they want.

Tutorials:
Podcasting Tools
http://www.podcasting-tools.com/

The new podcasting tools
http://reviews.cnet.com/4520-6450_7-6212319-1.html

Tools for Podcasting
http://www.feedforall.com/tools-for-podcasting.htm

Podcasting Explained
http://www.rss-specifications.com/podcasting-
explained.htm

Podcasting Tools and Downloads
http://www.deitel.com/Podcasting/PodcastingResourceCen
ter_Page4.html

How Podcasting Works
http://computer.howstuffworks.com/podcasting2.htm

Recommended readings:
Implementing Wireless PDA Technology in the IT Curriculum
http://www.educause.edu/ir/library/pdf/EQM0617.pdf

Smart Classroom: Enhancing Collaborative Learning Using Pervasive Computing
Technology
http://www.public.asu.edu/~bwang/publications/SmartClassroom-2003.pdf

Podcast Pinpointer: A Multimedia Semantic Web Application
http://sw.deri.org/~juan/weblog/podcast.pdf

Seriously, iPods Are Educational
http://chronicle.com/free/v51/i28/28a03001.htm

▶Tech News

The Tech News section of this page focuses on the latest emerging educational technologies. Educational technology, the use of technology in education to improve learning and teaching, is also known as instructional technology or learning technology. As these emerging technologies become more ubiquitous they will warrant a separate section on this page.

Whiteboards:
Interactive Whiteboards
http://www.nwnet.org.uk/pages/rev_imp/downloads/interactive_wboards.doc

The Interactive Whiteboard as a Force for Pedagogic Change
http://www.aace.org/dl/files/ITCE/ITCE200215.pdf

Enhancing Biology Instruction via Multimedia Presentations
http://edcompass.smarttech.com/NR/rdonlyres/B65DEF10-F8F0-40A3-B91A-A892BED75292/0/LeDuff_Jan04.pdf

Why Use an Interactive Whiteboard? A Baker's Dozen Reasons!
http://teachers.net/gazette/JAN02/mabell.html

Wireless and Mobile Technologies:
Wireless and mobile technologies to enhance teaching and learning
http://chan.lst.ncu.edu.tw/paper2/23.pdf

An Introduction to Current Trends and Benefits of Mobile Wireless Technology Use
in Higher Education
http://www.editlib.org/index.cfm/files/paper_6158.pdf?fuseaction=Reader.Download
FullText&paper_id=6158

Gaming Technology:

Operations and Strategy Learning in Edutainment Interfaces
http://www.it.rit.edu/~may/AACE_2004_Eye.pdf

Teaching Facts with Fun, Online Games
http://www.learningcircuits.org/2006/February/kapp.htm

Teachers' Perceptions of Video Games: MMOGs and the Future of Preservice
Teacher Education
http://www.innovateonline.info/index.php?view=article&id=125

Using Games to Promote Girls' Positive Attitudes Toward
Technology
http://www.innovateonline.info/index.php?view=article&id=209

Instant Messaging:

Using Instant Messaging for Collaborative Learning: A
Case Study
http://www.innovateonline.info/index.php?view=article&id=170

Instant Messaging – Collaborative Tool or Educator's nightmare!
http://www.unb.ca/naweb/proceedings/2003/PaperFarmer.html

Instant Messaging: IM Online! RU?
http://www.educause.edu/ir/library/pdf/ERM0562.pdf

Managing the risks and rewards of instant messaging
http://www.findarticles.com/p/articles/mi_m0DXK/is_13_21/ai_n6169077

Instant Messaging and Interruption: Influence of Task Type on Performance
https://research.microsoft.com/~cutrell/OzCHI2000.pdf

Instant Messaging Reference in an Academic Library: A Case Study
http://news.ala.org/ala/acrl/acrlpubs/crljournal/backissues2002b/january02/foley.pdf

▶Wikis

The term wiki is a shortened form of wiki wiki (weekie, weekie) which is
from the native language of Hawaii, where it is commonly used as an
adjective to denote something "quick" or "fast". Here a wiki is a type of
website that allows users to easily add, remove, or otherwise edit all content, very
quickly and easily, sometimes without the need for registration. This ease of
interaction and operation makes a wiki an effective tool for
collaborative writing. The term Wiki can also refer to the
collaborative software itself (wiki engine) that facilitates the
operation of such a website (see wiki software). In essence, a
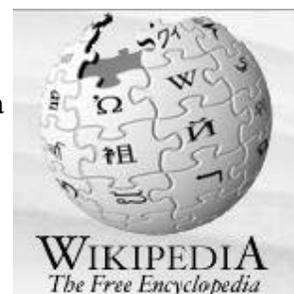
wiki is a simplification of the process of creating HTML pages combined with a system that records each individual change that occurs over time, so that at any time, a page can be reverted to any of its previous states. Most wikis will allow completely unrestricted access so that people are able to contribute to the site without necessarily having to undergo a process of 'registration', as had usually been required by various other types of interactive websites such as Internet forums or chat sites.

Tutorials:
Wiki Science:How to start a Wiki
http://en.wikibooks.org/wiki/Wiki_Science:How_to_start_a_Wiki

WikiWikiWeb
http://c2.com/cgi/wiki?WelcomeVisitors

Wikis: A Beginner's Look
http://meredith.wolfwater.com/cil06/

Seedwiki
http://www.seedwiki.com/

Comparison of wiki software
http://en.wikipedia.org/wiki/Comparison_of_wiki_software

WIKIMatrix
http://www.wikimatrix.org/

Recommended readings:
Wikipedia
http://en.wikipedia.org/wiki/Main_Page

Why use Qwiki (instead of Wikipedia)?
http://qwiki.caltech.edu/wiki/Why_Use_Qwiki

Making the Case for a Wiki
http://www.ariadne.ac.uk/issue42/tonkin/

English Wikipedia Publishes Millionth Article
http://wikimediafoundation.org/wiki/Press_releases/English_Wikipedia_Publishes_Millionth_Article

Wikipedia Creators Move Into News
http://www.wired.com/news/culture/0,1284,65819,00.html?tw=wn_tophead_1

Wikipedia founder admits to serious quality problems
http://www.theregister.co.uk/2005/10/18/wikipedia_quality_problem/

▶ Web Conferencing

Web conferencing is used to hold group meetings or live presentations over the Internet. In a web conference, each participant sits at their own computer, and is connected to other participants via the internet. The most basic feature of a web conference is screen sharing, whereby conference participants see whatever is on the presenter's screen. Usually this is accompanied by voice communication, either through a traditional telephone conference, VoIP, text chat, and/or video..

Some Web Conferencing Packages:
Elluminate (Currently used at RPI)
http://www.elluminate.com/

Adobe® Connect™
http://www.adobe.com/products/connect/

iLinc
http://www.ilinc.com/fortrainers/index.php

Centra
http://www.saba.com/centra-saba/

Microsoft Office Live Meeting
http://www.microsoft.com/office/uc/livemeeting/default.mspx

Recommended readings:
Designing for the Virtual Interactive Classroom
http://campustechnology.com/articles/40223/

Web Conferencing And Live Collaboration Tools
http://www.kolabora.com/reviews/best_new_tools_update/web_conferencing_and_live_collaboration.htm#

Web Conferencing Tools and Applications: Are they Ready for Us?
http://www.campus-technology.com/techtalks/trans/021024webconf.asp

Tips on Conferencing
http://www.webconferencingsolutions.net/articles/8/1/Tips_on_Conferencing

Full-Featured Web Conferencing Systems
https://www.e-education.psu.edu/resources/Article_FullFeaturedWebConferencingSystems.pdf

Tips on Conferencing
http://www.visualtec.com/pics_homepage/TT_WebConferencing_0204/Main.html

▶**Voice over IP**

Voice over Internet Protocol (also called VoIP, IP Telephony, Internet telephony, and Broadband Phone) is the routing of voice conversations over the Internet or through any other IP-based network. In general, phone service via VoIP is free or costs less than equivalent service from traditional sources. VoIP can facilitate tasks that may be more difficult to achieve using traditional phone networks, it allows users to travel anywhere in the world and still make and receive phone calls. VoIP technology still has a few shortcomings that have led some to believe that it is not ready for widespread deployment.

Some Voice over IP packages:
Skype
http://www.skype.com/

Google Talk
http://www.google.com/talk/

MSN Messenger
http://join.msn.com/messenger/overview

Paltalk
http://www.paltalk.com/

Recommended readings:
Finding your Voice online
http://flexiblelearning.net.au/knowledgetree/edition05/download/Coghlan.doc

Skype in the Classroom
http://www.wtvi.com/teks/05_06_articles/skype-in-the-classroom.html

A Framework for Tracking Developments in Voice over IP
http://www.educause.edu/ir/library/html/cem/cem99/cem9941.html

Telecommunications >> VoIP is for Victory
http://campustechnology.com/articles/40285/

▶Videoconference

A videoconference (also known as a videoteleconference) is a set of interactive telecommunication technologies which allow two or more locations to interact via two-way video and audio transmissions simultaneously. It has also been called visual collaboration and is a type of groupware.

Tutorials:
Videoconferencing for Learning
http://www.kn.pacbell.com/wired/vidconf/

Tips and Techniques for Successful Video

Conferencing
http://www.ir101.net/irATT2.html

Techniques to Enhance Online Learning
PDF document

Teacher's Guide to Videoconferencing
http://www.netc.org/digitalbridges/teachersguide/preface.html

Recommended readings:
Videoconferencing as a Technology to Support Group Work: A Review of its Failure
http://www.ischool.washington.edu/mcdonald/courses/info447_au02/wk4/Egido.Failure.CSCW88.pdf

Telepresence: Integrating Shared Task and Person Spaces
http://www.dgp.toronto.edu/OTP/papers/bill.buxton/shared_space.html

videoconferencing: Using Compressed Video for Distance Learning
http://www.kn.pacbell.com/wired/vidconf/Using.html

Resources and Information on videoconferencing
http://www.trecc.org/education/videoconf.php#intro

Media Creation Tools

▶Flash

Macromedia Flash, or simply Flash, refers to both the Adobe Flash Player and to a multimedia authoring program used to create content for it as well as games or movies created using the program. Since its introduction in 1996, Flash technology has become a popular method for adding animation and interactivity to web pages. Flash is commonly used to create animations and advertisements; to design web-page elements; to add video to web sites; and, more recently, to develop Rich Internet Applications. The Flash files, traditionally called "flash movies", usually have a .swf file extension and may appear as an element of a web page or to be "played" in the standalone Flash Player.

Recommended Readings:
Adopt and Adapt - 21st-Century Schools Need 21st-Century Technology
http://www.edutopia.org/adopt-and-adapt

Child's Play: Local animation firms look to wheel and deal at festival
http://www.ottawabusinessjournal.com/309212395649751.php

Good Flash Design
http://www.animationarena.com/good-flash-design.html

<u>Tutorials:</u>
Wikivid
http://wikivid.com/index.php/Main_page

Flash 8 Tutorial
http://www.baycongroup.com/flash/01_flash_5_tutorial.htm

Flash Developer Center
http://www.adobe.com/devnet/flash/?promoid=CABD

Free flash video tutorials
http://www.video-tutes.com/packages/FDesign1.php

▶**Graphics**

Graphics software or image editing software is a program or collection of programs that enable a person to manipulate visual images on a computer. Most graphics programs have the ability to import and export one or more graphics file formats.

<u>Some Graphic Software:</u>
ACDSee
http://www.acdsee.com/

Adobe Fireworks
http://www.adobe.com/products/fireworks/

Corel
http://apps.corel.com/

Illustrator
http://www.adobe.com/products/illustrator/

Microsoft Paint
http://www.microsoft.com/

Photoshop
http://www.adobe.com/products/photoshop/family/

<u>Recommended Readings:</u>
ACDSee 9 Photo Manager
http://graphicssoft.about.com/cs/imagemanagement/gr/acdsee.htm

Adobe Fireworks – Review
http://www.applelinks.com/index.php/more/review_adobe_fireworks_cs3/

Adobe Photoshop CS3 Reviews
http://brainstormsandraves.com/archives/2007/05/16/photoshopcs3/

Corel Paint Shop Pro X - Review
http://www.pcmag.com/article2/0,1895,1855974,00.asp

How to paint the MONA LISA with MS PAINT
http://www.youtube.com/watch?v=uk2sPl_Z7ZU

Is Photoshop worth the extra $500 compared to Photoshop Elements?
http://graphicssoft.about.com/cs/photoshop/f/elementscompare.htm

Fireworks CS3 – Review
http://www.digitalartsonline.co.uk/reviews/index.cfm?reviewID=758

Photo-Editing Software Reviews
http://www.consumersearch.com/www/software/photo-editing-software/index.html

Software Comparisons – PC Magazine
http://www.pcmag.com/category2/0,1874,1639152,00.asp

Tutorials:
Wikivid
http://wikivid.com/index.php/Main_page

ACDSee 9 Photo Manager tutorials
http://files.acdsystems.com/english/support/tutorials/acdsee9-using-the-calendarpane.pdf

ACDSee Photo Manager 9 Tutorials
http://www.digiscrapinfo.com/dsiwiki/ACDSee_Photo_Manager_Tutorials

Microsoft Paint Overview
http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/enus/mspaint_overview.mspx?mfr=true

MS Paint Tricks
http://www.albinoblacksheep.com/tutorial/mspaint

Paint Shop Pro X Tutorials
http://www.corel.com/servlet/Satellite?pagename=Corel3/Section/Display&sid=1047024315119&gid=1047024331836&cid=1047024353448

Photoshop CS2 Basics Online Course
http://graphicssoft.about.com/od/photoshopcs2lessons/Photoshop_CS2_Basics_Online_Course_Index_of_Lessons.htm

►PowerPoint

Microsoft Office PowerPoint is a ubiquitous presentation program. As in most other presentation software, text, graphics, movies, and other objects are positioned on individual pages or "slides". Slides can be printed, or (more usually) displayed on-screen and navigated through at the command of the presenter. Transitions between slides can be animated in a variety of ways, as can the emergence of elements on a slide itself. The overall design of a presentation can be controlled with a master slide; and the overall structure, extending to the text on each slide, can be edited using a primitive outliner. Presentations can be saved and run in any of the file formats : the default .ppt (presentation), .pot (template) or .pps (PowerPoint Show).

<u>Recommended Readings:</u>
Countering 'death by PowerPoint'
http://people.senecac.on.ca/selia.karsten/MRK/Death.html

Death By PowerPoint
http://www.smallbusinesscomputing.com/biztools/article.php/684871

Death by PowerPoint or Twelve Steps to Better E-Presentations
http://www.marshall.edu/it/cit/Presentations/2002/WVNET/Preventing_Death_by_PowerPoint.pdf

On the lighter side: Project Manager Leaves Suicide PowerPoint Presentation
http://www.theonion.com/content/node/30903

PowerPoint: shot with its own bullets
http://norvig.com/lancet.html

Random Thoughts . . . Death by PowerPoint
http://www.ncsu.edu/felder-public/Columns/PowerPoint.pdf

<u>Tutorials:</u>
Wikivid
http://wikivid.com/index.php/Main_page

PowerPoint 97, 2000, 2002, 2003
http://www.soniacoleman.com/Tutorials/tutorials.htm

PowerPoint in the classroom
http://www.actden.com/pp/index.htm

Rutgers Writing Program – Power Point
http://getit.rutgers.edu/tutorials/powerpoint/index.html

▶**Screencasting**

A screencast is a digital recording of computer screen output, often containing audio narration. Just as a screenshot is a picture of a user's screen, a screencast is essentially a movie of what a user sees on his monitor. Screencasts are useful for demonstrating features of both simple and complicated software and are often used to create tutorials.

Some Screencasting Software:
Camtasia
http://www.techsmith.com/camtasia.asp?

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

SnagIt
http://www.techsmith.com/screen-capture.asp?

Recommended Readings:
A Quick Look at Macromedia Captivate
http://www.learningcircuits.org/2005/feb2005/clothier.htm

Camtasia vs. Captivate Studio
http://themarketingbooth.blogspot.com/2005/03/captivate-vs-camtasia-studio.html

Camtasia vs. Captivate
http://meredith.wolfwater.com/wordpress/index.php/2005/04/16/camtasia-vs-captivate/

Tutorials:
Wikivid
http://wikivid.com/index.php/Main_page

Camtasia Community Center
http://www.techsmith.com/learn/camtasia/getting-started/

Camtasia Tutorial
http://www.frostburg.edu/admin/cit/blackboard/instructorhelp/iTechCamtasia.html

Captivate Developer Center
http://www.adobe.com/devnet/captivate/

Creating a Captivate Movie
http://www.communitymx.com/content/article.cfm?cid=A8847

How To Work with Audio in Macromedia Captivate
http://mxdj.sys-con.com/read/114249.htm

Learning to use Camtasia
http://www.iddl.vt.edu/instructors/camtasia/

SnagIt Learning Center
http://www.techsmith.com/learn/snagit/default.asp

Creating Interactive Simulations using Macromedia Captivate
http://itrc.wvu.edu/openhouse/resources/captivate_handout.pdf

Enhancing the "Show and Tell" Aspects of Class Engagement Using Camtasia
http://www.mtsu.edu/~itconf/proceed04/hoyer.pdf

Allow Me to Demonstrate
http://redmondmag.com/features/article.asp?editorialsid=557

▶PDF

Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems. PDF files don't encode information that is specific to the application software, hardware, or operating system used to create or view the document. This feature ensures that a valid PDF will render exactly the same regardless of its origin or destination. PDF is also an open standard in the sense that anyone may create applications that read and write PDF files without having to pay royalties to Adobe Systems. While the PDF format can describe very simple one page documents, it may also be used for many pages, complex documents that use a variety of different fonts, graphics, colors, and images.

Recommended Readings:
Planet PDF
http://www.planetpdf.com/

PDF Zone
http://www.pdfzone.com/

PDF Reference
http://partners.adobe.com/public/developer/pdf/index_reference.html

From RSS To PDF: Acrobat 7 Does It
http://www.masternewmedia.org/news/2005/02/11/from_rss_to_pdf_acrobat.htm

Tutorials:
Wikivid
http://wikivid.com/index.php/Main_page

Download the latest version of Adobe Reader
http://www.adobe.com/products/acrobat/readstep2.html

Creating a PDF file
http://www.espere.org/pdffile.htm

Acrobat For Educators Quick Reference Sheet
http://www.adobe.com/education/instruction/acrobat/pdfs/creatingPDF.pdf

Creating Your Own Acrobat Documents
http://www.bgsu.edu/cconline/sammons/creating.htm

▶Podcasting

Podcasting is the method of distributing multimedia files, such as audio programs or music videos, over the Internet for playback on mobile devices and personal computers. The distribution format of a podcast uses either the RSS or Atom syndication formats. The term podcast, like "radio", can mean both the content and the method of delivery. Usually the podcast features one type of "show", with new episodes either sporadically or at planned intervals, such as daily or weekly. Podcasting's essence is about creating content (audio or video) for an audience that wants to listen or watch when they want, where they want, and how they want.

Tutorials:
Wikivid
http://wikivid.com/index.php/Main_page

How Podcasting Works
http://computer.howstuffworks.com/podcasting2.htm

Podcasting Explained
http://www.rss-specifications.com/podcasting-explained.htm

Podcasting Tools
http://www.podcasting-tools.com/

Podcasting Tools and Downloads
http://www.deitel.com/Podcasting/PodcastingResourceCenter_Page4.html

The new podcasting tools
http://reviews.cnet.com/4520-6450_7-6212319-1.html

Tools for Podcasting
http://www.feedforall.com/tools-for-podcasting.htm

▶Videocasting

Video podcast (sometimes shortened to vidcast or vodcast) is a term used for the online delivery of video on demand video clip content via Atom or RSS enclosures. From a web server, a video podcast can be distributed as a file or as a stream. A podcasting client may work with a separate, or integrated player. One

such example of the latter is iTunes, which is an unusual case of a web feed aggregator being added to a media player rather than vice versa

Sites to check:
Tools for Videocasting
http://www.rssray.com/tools_for_videocasters.php
The tools of the trade for every videocast creator. On this site, you will find everything you
need to run, improve, and promote your videocast online.

Capture, Edit and Share your Life!
http://video-editing-software-review.toptenreviews.com/
Film lovers, family historians and YouTube enthusiasts, you can produce professional looking video clips easily, without high tech editing equipment — with Video Editing Software. Good video editing software provides you with the tools needed to capture, edit
and share your video creations. Comparison of:

ShowBiz DVD - http://www.arcsoft.com/products/showbiz/
Ulead Video Studio - http://www.ulead.com/vs/
Easy Media Creator - http://www.roxio.com/
Adobe Premiere Elements - http://www.adobe.com/products/premiereel/
Pinnacle Studio Plus - http://www.pinnaclesys.com/PublicSite/us/Home/
WinDVD Creator - http://www.intervideo.com/jsp/WinDVDCreator_Profile.jsp
Nero Ultra Edition - http://www.nero.com/enu/index.html
Vegas Movie Studio DVD -
http://www.sonycreativesoftware.com/products/product.asp?pid=446
DVD Movie Factory - http://www.ulead.com/dmf/runme.htm

REF -
http://www.rpi.edu/coursedevelopers/InstructionalTools/IT_ET/IT_emergingtechnologies.htm