


Best of the Best Practice: Blended Learning, R2D2, TEC-VARIETY, and the Best of Curriculum Design and Delivery




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21 Things That Became Obsolete This Decade
 December 11, 2009, Silicon Alley Insider



15 Gadgets that Changed Everything This Decade
 December 9, 2009, Jay Yarrow, Silicon Alley Insider




Technology for Learning Expands
 College tech 'catching up' with students
 Kathleen Gray & Robin Erb, USA TODAY, Oct. 6, 2009



Senior Emily Smak, 20, tries out the treadmill workstation in one of the study lounges in the new Education and Human Services Building at Central Michigan University. There is a new iMac computer attached to it so students can get a little exercise while doing homework or other things on the computer.


Mobile Learning and Blended Learning Exploding
 College tech 'catching up' with students
 Kathleen Gray & Robin Erb, USA TODAY, Oct 6, 2009

- At Abilene Christian (University)...about 2,800 students and 70% of the 250 professors use the Apple technology for instructional purposes.
 - Art students use app to draft sketch and send it to the teacher and other students for advice before starting the real art pieces.
 - A drama teacher takes video of the lead dancer in a production and sends that along to other students for rehearsal.




Part I. Blended Learning

1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Implications for blended learning

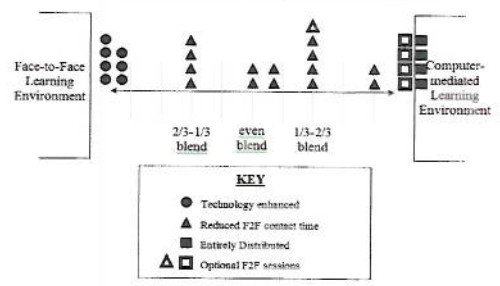


Myth #1: People will know what I am saying when I say "blended learning."
Myth #2: Blended is the same as "hybrid."
The Sloan Consortium

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used - content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically uses online discussions, typically has some face-to-face meetings.
80+%	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.




Myth #3: Knowing "how much" to blend is vital.
Range of Blends in Pew Cases



Source: Graham, C. R., & Allen, S. (2005). Blended learning: An emerging trend in education. In C. Howard & J. V. Boettcher & L. Justice & K. D. Schmitt & P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of Distance Learning* (pp. 172-179). Hershey, PA: Idea Group Inc.


Myths #4: Blended learning is easy to define.
Myth #5: Blended learning is hard to define.
Blending Online and F2F Instruction

- "Blended learning refers to events that combine aspects of online and face-to-face instruction" (Rooney, 2003, p. 26; Ward & LaBranche, 2003, p. 22)




Myth #6: Blended learning works everywhere.
Where is Blended Beneficial?

- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with working students
- Students spread over a distance
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive classes
- Theory classes

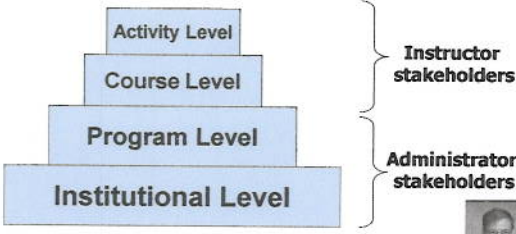



Myth #7: People learn more in face-to-face settings.
Fully Online and Blended Learning Advantages

1. Increased Learning (better papers, higher scores)
2. More effective pedagogy and interaction
3. Course access at one's convenience and flexible completion (e.g., multiple ways to meet course objectives)
4. Reduction in physical class or space needs, commuting, parking
5. Increased opportunities for human interaction, communication, & contact among students
6. Introverts participate more

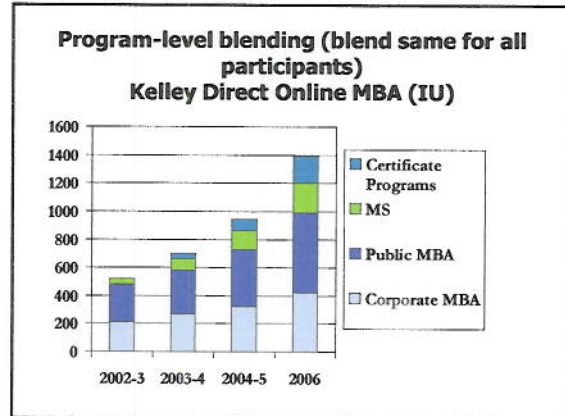


Myth #8: Faculty can have a logical discussion with administrators about blended learning.
Models of Blending
 Blending occurs at the following four levels:

Myth #9: There is one best model of blended.
AMA Special Report, Effectively Implementing a Blended Learning Approach
 (Steven Shaw & Nicholas Igneri, 2006)

Source: American Management Association, AMA at Work.



The IBM Four Tier Learning Model (2006)
Blending Learning for Business Impact – IBM’s case for learning success, 2006 Handbook of Blended Learning,
 Nancy Lewis, VP, & Peter Orton, IBM

Institutional-level Blending
 (Abtar Kaur & Ansary Ahmed, 2006, Open U Malaysia)

FIGURE 22.1. OPEN UNIVERSITY MALAYSIA'S BLENDED LEARNING MODEL.

Enrollment Growth at the UOM

Myth #10: Blended learning has exploded at the University of Phoenix.
Institutional-level Blending (Brian Linquist, 2006)

Example 2: University of Phoenix

- Completely online courses
- Residential F2F courses
- Blended Courses
 - *Local Model* = 5 week courses with first and last week F2F
 - *Distance Model* = 5 week courses with half first and half last week F2F (the last meeting of one course is coordinated to be back-to-back with the first meeting of the next 5 week course)

Blended Solution #1+.
Sample Activities for Brief Mtgs

1. Assign web buddies, email pals, critical friends based on interests, confidence, location, etc.
2. Ice breakers—paired introductions, corners.
3. Solve case in team competitions with awards.
4. Test technology in a lab.
5. Assign teams and exchange info for small teams using text messaging.
6. Library (digital and physical) scavenger hunt.
7. Do a podcast documenting the meeting.
8. Have everyone create a blog on the experience.
9. Open an e-portfolio for each student
10. Brainstorm how might use technology in program.

Blended Solution #2. Online Professional Development (e.g., STARLINK, www.starlinktraining.org)

Blended Solution #3. Expert Video Reflections and Scaffolds online (E-Reading First Ohio; reflect, share, and compare)

Blended Solution #4. Flash, 3-D Visualization, & Laboratory Software

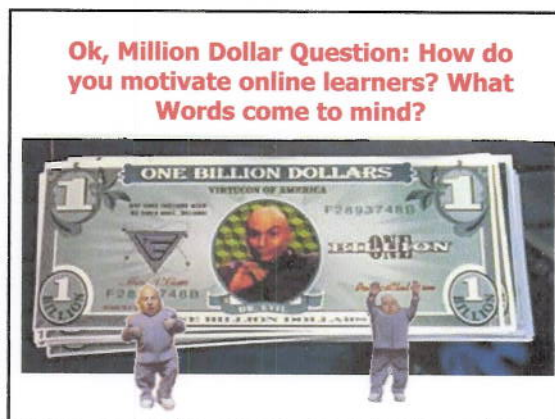
Blended Solution #5. Online Portals Basic Acoustics of Musical Instruments 2005 MERLOT Classics Award

Implications and Challenges for Blended Learning

1. Faculty and students are more mobile.
2. Students more choices.
3. Student expectations rise.
4. Greater self-determined learning.
5. More corporate university partnerships.
6. Courses increasingly modular.
7. Less predefined schedules.
8. When teaching less clear; when learning less clear.

Part II. Some Online Motivational Ideas

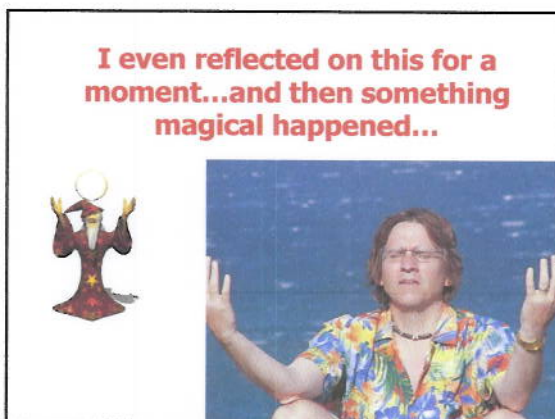
THE UNIVERSITY OF MICHIGAN LIBRARIES • JANUARY 18, 2010



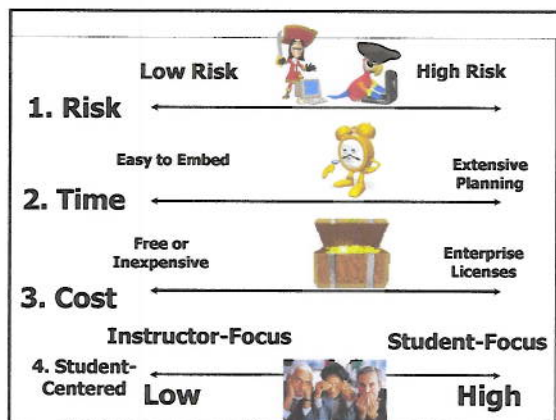
Intrinsic Motivation

“...innate propensity to engage one’s interests and exercise one’s capabilities, and, in doing so, to seek out and master optimal challenges
(i.e., it emerges from needs, inner strivings, and personal curiosity for growth)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum Press.




- Magic #1: TEC-VARIETY Model for Online Motivation and Retention**
- 1. Tone/Climate:** Psych Safety, Comfort, Belonging
 - 2. Encouragement, Feedback:** Responsive, Supports
 - 3. Curiosity:** Fun, Fantasy, Control
 - ...
 - 4. Variety:** Novelty, Intrigue, Unknowns
 - 5. Autonomy:** Choice: Flexibility, Opportunities
 - 6. Relevance:** Meaningful, Authentic, Interesting
 - 7. Interactive:** Collaborative, Team-Based, Community
 - 8. Engagement:** Effort, Involvement, Excitement
 - 9. Tension:** Challenge, Dissonance, Controversy
 - 10. Yields Products:** Goal Driven, Products, Success, Ownership
-



1. Tone/Climate: Social Ice Breakers


A. Public Commitments:
Have students share how they will fit the coursework into their busy schedules



B. Favorite Websites

- Everyone posts 1-2 of their favorite Websites and explain why.
- Peers comment on or rate them.


1. Tone/Climate: C. Video Course Intros
 (examples from Northern Virginia Community College and Indiana University KD (online MBA) program)



2. Encouragement, Feedback, etc.:

A. Online Self-Testing (e.g., self study in vocabulary, anatomy, chemistry, dissection, etc.)


Upper Extremity Muscles



Which of the following are ANTONYMS for the word MAXIMUM?

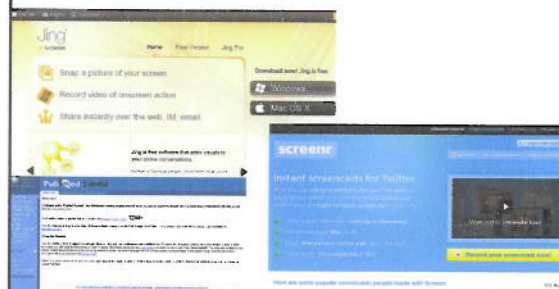
- clear, undetectable, fatemorable, sunlight
- non-placer, troubled person
- remain, withhold, keep, hold
- make happy, cheer, assure, please
- weakest, least, minimum, lesser

A B C D



2. Encouragement, Feedback, etc.:


B. Tutorials with Screen Capture (e.g., Jing, Screencr)




3. Curiosity, Fun:

A. Online News
 (Giant jellyfish, Tiny T. rex, and Ardi)

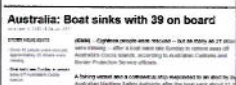
Japanese fishermen brace for giant jellyfish




First U.S. man since 1982 wins NYC race



Australia: Boat sinks with 39 on board



Tiny T. rex and Ardi

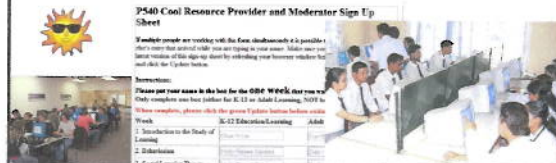


4. Variety, Novelty:

A. Cool Resource Provider or Tech Demos


- Have students sign up to be a cool resource provider once during the semester.
- Have them find additional paper, people, electronic resources, etc.
- Share and explain what found with class.

PS40 Cool Resource Provider and Moderator Sign Up Sheet




**4. Variety, Novelty:
B. Expert Chats**
(Bonk, 2007; Liang & Bonk, 2009)

1. Agree to a weekly chat time.
2. Bring in expert for discussion or post discussion topics or issues.
3. Summarize or debrief on chat discussion.



5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)
(links to text, soundtracks, video clips, etc.)



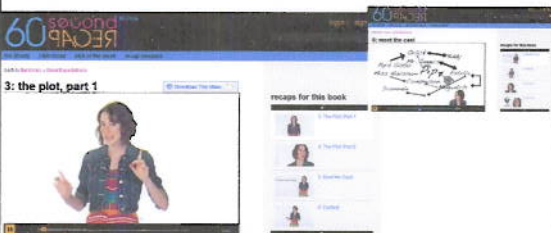
**5. Autonomy, Choice:
B. Clickers; Innovation is but one click away...**




**5. Autonomy, Choice:
C. Famous Person Web Explorations, Searches, Twitter Tracking, and Interviews**
(e.g., Thomas Friedman, NY Times reporter)



**6. Relevance, Meaningfulness:
A. 60 Second Recap, Jenny Sawyer**
<http://www.60secondrecap.com/>
Actress to students: Lend me your earbuds!
English major, 24, rambunctiously recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009



**7. Interactive, Collaborative:
A. Online Language Learning**
(ECpod, Mixxer, Livemocha, Babbel, KanTalk)



7. Interactive, Collaborative: B. Collaborative Groups (Ning, Google Groups, MSN Groups, Yahoo Groups, Diigo)

The screenshot shows a Ning group page for 'Ning in Education'. It features a header with navigation links like 'Home', 'About', and 'Members'. Below the header, there are several posts and images, including a large image of a person's face. The page layout is typical of a social networking site, with a sidebar on the right containing additional information and links.

7. Interactive, Collaborative: C. Collaborative Documents (Google Docs) and Bookmarking (Diigo, Delicious)

This block contains two screenshots. The top one is a Google Docs page titled 'Create and share your work online', listing features like 'Search for and use in your library', 'Add sharing for updates', and 'Share changes in real time'. The bottom screenshot shows the Diigo bookmarking interface, which includes a search bar and a list of saved items.

8. Engagement, Effort: A. Synchronous Learning

The screenshot shows a Wiziq live session interface. It features a central video window showing a person speaking, surrounded by smaller windows for chat and document sharing. Text on the right side of the interface reads: 'Dr. Lee posts his discussion materials on the web.' and 'Participants discuss the case synchronously'. The URL 'www.wiziq.com' and 'Live Session' are visible at the bottom.

8. Engagement, Effort: B. Synchronous and Asynchronous Events (e.g., Breeze + Video + Online Forum + Online Papers)

This block is a collage of several screenshots related to online learning and events. It includes a video player showing a person speaking, a forum post, and various other web-based interfaces. The text 'Breeze + Video + Online Forum + Online Papers' is prominently displayed, indicating the types of activities shown.

9. Tension, Challenge, etc.: A. Ethical Medical Debates

Students to protest human body exhibit

Meggie Ybarra
Issue date: 3/5/08 Section: News

The screenshot shows a news article from a website. The main headline is 'Students to protest human body exhibit'. The article text includes: 'Plasticized human corpses will be on display inside Coombs Hall Center through May.' and 'But a group of UNH medical students says it will protest the exhibit because it's...'. There are several images accompanying the article, including a photograph of a human body in a display case and a group of people.

9. Tension, Challenge, etc.: B. Electronic Guests & Mentoring (Simon Fraser University News)

http://www.sfu.ca/mediaprfsnews/2001/Sept/hightech.html

This block is a collage of news articles and photos. The main headline is 'Electronic Guests & Mentoring (Simon Fraser University News)'. The URL 'http://www.sfu.ca/mediaprfsnews/2001/Sept/hightech.html' is provided. The collage includes several small images and snippets of text, such as 'Advance Mentoring Healthcare' and 'White Paper - To be well, we need...'. There are also photos of people in various settings, including a person at a computer and a group of people in a meeting.

10. Yields Products, Goals:
A. Movie Festivals, Concept Maps, Video Papers/Blogs, Virtual Timelines, Digital Movies

Poll #1: How many ideas did you get so far?

1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.
7. More than 10.

99 seconds: What have you learned so far?

- Solid and Fuzzy in groups of two to four

III. Addressing Diverse Learners

Magic #2: The R2D2 Model

Empowering Online Learning
 100+ Activities for Reading, Reflecting, Displaying & Doing

The R2D2 Method

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



Read 1a. Publishing in Open Access Journals (e.g., PLOS)



Read 1b. Course Announcements (e.g., Teaching with Twitter)



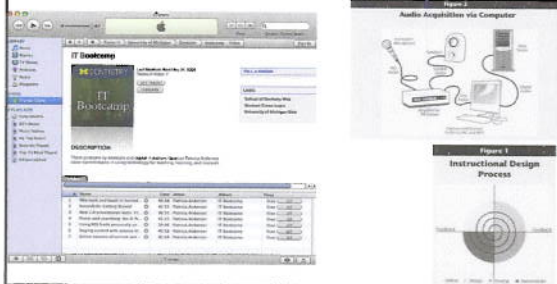
Read 1c. Podcast Paper Reflections

- Students listen to a podcast.
- Reflect on what they learned in an online forum.
- Students comment on each other's post.



Read 1d. Podcasting Medical Lectures (School of Dentistry, Univ of Michigan)

Educause Quarterly, 29(3), 2006, <http://connect.educause.edu/Library/EDUCAUSE+Quarterly/PodcastingLectures/39987>



2. Reflective and Observational Learners

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



Reflect 2a. Critical Friend Blog Postings

This block shows a screenshot of a blog post. The main content is a text-based entry with several paragraphs. To the right, there is a sidebar for 'Deepati685's Weblog' which includes a profile picture, a bio, and a list of recent posts. The overall layout is typical of a personal or professional blog from the early 2010s.

Reflect 2b. Expert and Domain Specific Blogs (English Teacher Blogs)

This block displays a screenshot of 'The English Blog'. The header identifies it as a resource for English teachers. A prominent feature is the 'Film of the Week' section, which highlights the movie 'THIS IS IT' with a colorful poster of the Backstreet Boys. Other sections include 'EM' and 'Google' search links.

Reflect 2c. Analyze Online Cases (problems, solutions, etc.)

This block shows a screenshot of a medical case study website. The page is titled 'Introduction to HealthCare Case Portal' and contains several articles or case studies. It features text-based content, small images of medical professionals, and a navigation menu on the left side.

Reflect 2d. Workplace and Field Reflections

1. Instructor provides reflection or prompt for job related or field observations
2. Reflect on job setting or observe in field
3. Record notes on Web and reflect on concepts from chapter
4. Respond to peers
5. Instructor summarizes posts

This block contains a list of five steps for workplace and field reflections. The steps are: 1. Instructor provides reflection or prompt for job related or field observations; 2. Reflect on job setting or observe in field; 3. Record notes on Web and reflect on concepts from chapter; 4. Respond to peers; 5. Instructor summarizes posts. The text is surrounded by a collage of small images depicting various work environments, including classrooms, hospitals, and field settings.

3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.


This block is titled '3. Visual Learners' and lists a preference for visual aids. Below the text are three visual elements: a circular flowchart with four colored segments (blue, red, green, yellow) and arrows indicating a cycle; a diagram of the Death Star with various parts labeled; and a photograph of an astronaut in a space helmet.

Display 3a. Pubcasts! (videos of scientific papers and science)


NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee

This block features the title 'Display 3a. Pubcasts! (videos of scientific papers and science)' and a paragraph explaining that NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. Below the text is a screenshot of the SciVee website, which shows a grid of video thumbnails and search results.

Display 3b. Anchored Instruction Discussions (YouTube, CNN, BBC, TeacherTube, CurrentTV)



- In a synchronous lecture interrupt it with a summary video (could be a movie clip) explaining a key principle or concept.
- Refer back to that video during lecture.
- Debrief on effectiveness of it.




Display 3c. Adventure Learning

Australian adventurer Don McIntyre and teenage circumnavigator Mike Perham to re-enact Capt William Bligh's epic mutiny on the Bounty open boat voyage, September 9, 2009



Display 3d. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Glify, Mindmeister, or Mindomo)





Display 3e. World Trends and Indices (e.g. Worldmapper)



Display 3f. United Nations Opens World Digital Library, April 21, 2009

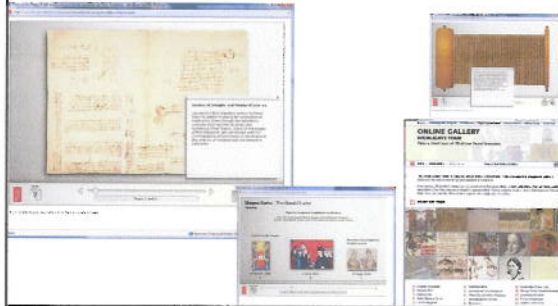
Chronicle of Higher Ed, <http://www.wdl.org/en/>



Display 3g. Shared Online Video (e.g., Howcast, WonderHowTo, Clip Chef, Link TV, Fora TV, etc.)



Display 3h. Online Historical Document
(e.g., Turning The Pages, British Library)



Display 3i. Medical Animations and Videos
(find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV))



Display 3j. Online Timelines
(US Presidents)



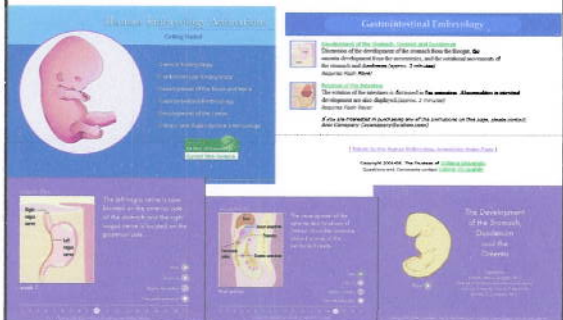
Display 3k. Videos of the Periodic Table



Display 3L. Online History Portals and Resources
(Civil Rights Digital Library and Amistad)



Display 3m. Human Embryology Animations
(Valerie O'Loughlin, Indiana University)



Display 3n. Download and Use Online 3D Sketches (Google SketchUp; download <http://sketchup.google.com/3dwarehouse>)

The screenshot shows the Google 3D Warehouse interface. At the top, there's a search bar and navigation links. The main content area displays a 3D model of a bridge and parking structure. Below the model, there are options to 'Download Model' and 'View' it. The interface includes a map, image search, and related items.

4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.

The diagram is a circular flow with four quadrants: 'Doing' (top-left, yellow), 'Feeling' (top-right, blue), 'Thinking' (bottom-right, red), and 'Feeling' (bottom-left, green). The central text describes how tactile/kinesthetic senses can be engaged through various activities like role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives, and hands-on projects. Images include a person in a white suit, a person using a green laser, and a person in a dark vest.

Do 4a. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))

Web 2.0 and Emerging Learning Technologies

The screenshot shows a Wikibooks page titled 'Web 2.0 and Emerging Learning Technologies'. It features a colorful graphic with icons for a play button, RSS, an @ symbol, and a film strip. The page content includes sections for 'Part I: Foundations' and 'Part II: Learners'. The page is part of an international collaboration effort.

Do 4b. Survey Research and Market Analysis (e.g., Mister Poll, MicroPoll, Zoomerang, SurveyShare)

The image shows three different online survey platforms. On the left is SurveyShare.com, in the middle is Mister Poll, and on the right is MicroPoll. Each platform has its own branding and interface for creating and conducting surveys.

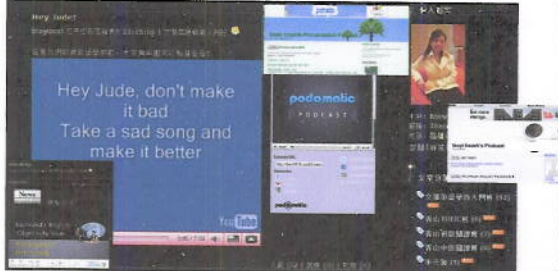
Do 4c. Online Warm-ups Activities Just-In-Time-Teaching (JiTT) <http://webphysics.iupui.edu/jitt/jitt.html>

The graphic for 'JUST-IN-TIME TEACHING' has a yellow background. It features a person reading a book, a map of the United States, and the text 'JUST-IN-TIME TEACHING'. The graphic is dated 2009-2010 and is supported by the National Science Foundation.

Do 4d. Syllabus, Glossary, etc. in wiki: Students sign up for tasks (Ron Owston, York University)

The screenshot shows a wiki page titled 'BNUC 2006-07 Issues in Digital Technology in Education'. The page includes a syllabus, glossary, and other educational resources. It features a photo of Ron Owston and a list of tasks for students to sign up for.

Do 4e. Podcasts for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)



Poll #2: How many ideas did you get from the second part of this talk?

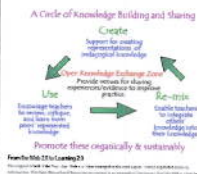
- a. None—you are an idiot.
- b. 1 (and it is a lonely #).
- c. 2 (it can be as bad as one).
- d. 3-5
- e. 6-10
- f. Higher than I can count!



Part IV: Instructional Design Considerations from the Best



What if our minds were on fire for learning?



MINDS ON FIRE: OPEN EDUCATION, THE LONG TAIL, AND LEARNING 2.0. JOHN SEELY BROWN AND RICHARD ADLER, EDUCAUSE REVIEW, JANUARY-FEBRUARY, 2008.
<http://connect.educause.edu/Library/EDUCAUSE+Review/MindsonFireOpenEducation/45823>

Dual Coding Theory (DCT) (Allan Paivio, Canada)

- **Dual Coding Theory (DCT), proposed by Paivio in 1972, is a model that is based on Cognitive Information Processing Theory. DCT model assumes that information is processed and stored in memory by two separate, but interconnected systems - one visual, the other verbal. DCT claims that pictures are faster and easier to recall since they are coded in both memory systems and the visual system is continuous and parallel in its organization. Verbal memory, on the other hand, is structured in discrete, sequential units.**



Dual Coding Theory (Allan Paivio)

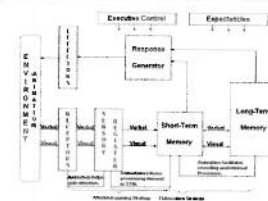


Figure 1. A Model of Attention, Dual Coding, and Information Processing.
 Retrieved from "The Basic Model of Learning and Memory: Linking Cognitive Information Processing Theories," by R. M. Gagne and M. P. Driscoll, 1988. *Journal of Learning for Instruction*, p. 15.

The promise of multimedia learning: Using the same instructional design methods across different media

Richard E. Mayer, *Learning and Instruction*, 13 (2003) 125-139.

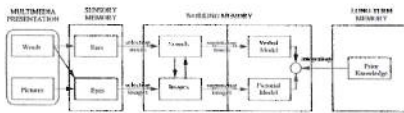


Fig. 2. A framework for a cognitive theory of multimedia learning.



Seven Principles for the Use of Animation in Multimedia Instruction
(Mayer & Moreno, 2002)

1. **The multimedia principle** (present animation and narration rather than narration alone)
2. **Spatial contiguity principle** (present on-screen text near rather than far from corresponding animation)
3. **Temporal contiguity principle** (present corresponding animation and narration simultaneously rather than successively)



Seven Principles for the Use of Animation in Multimedia Instruction
(Mayer & Moreno, 2002)

4. **Coherence principle** (exclude extraneous words, sounds, and video)
5. **Modality principle** (present animation and narration rather than animation and on-screen text)
6. **Redundancy principle** (present animation and narration rather than animation, narration, and on-screen text)
7. **Personalization principle** (present words in conversational rather than formal style)



The promise of multimedia learning: Using the same instructional design methods across different media

Richard E. Mayer, *Learning and Instruction*, 13 (2003) 125-139.

A review of research on the design of multimedia explanations:

- (a) **a multimedia effect**: in which students learn more deeply from words and pictures than from words alone—in both book-based and computer-based environments,
- (b) **a coherence effect**: in which students learn more deeply when extraneous material is excluded rather than included—in both book-based and computer-based environments,



The Multimedia Principle

- **Adding graphics to words improves learning**
 - Use a variety of graphics, including line drawings, charts, and photographs as well as motion graphics such as animation and video
 - Make sure graphics are aligned with the instructional message
- **Research point**
 - An average gain of 89% for learners who studied with text and graphics over learners who studied along

The Modality Principle

- **Explaining graphics with audio improves learning**
 - Audio narration can greatly impact learning achievement
- **Research point**
 - Narrated animations improved learning 80% over animation with text explanations

The Redundancy Principle

- Explaining graphics with audio and redundant text can hurt learning
 - Narration and reading occur at different rates and split attention
- Research point
 - Audio explaining a graphic alone was more effective by 79% than audio explaining a graphic with redundant text

The Coherence Principle

- Gratuitous visuals, text, and sounds can hurt learning
 - Simple and focused is better
 - Keep from being pure entertainment or distracting
 - Includes extra text explanation (nice to know information = "seductive details")
- Research point
 - A basic lesson saw 105% more learning gains than an enhanced one

The Contiguity Principle

- Placing text near graphics improves learning
 - Refers to alignment of text and graphics on screen
- Research point
 - Integrating words and visuals improved retention by 68%

The Personalization Principle

- Use conversational tone and pedagogical agents to increase learning
- Research point
 - Programs that use first/second person rather than formal third person are more effective
 - Agents improve learning, and audio can be sufficient. Agents must use informal language for effectiveness

Designing Interaction/Interactivity



What is the Interaction Rationale?

(per Ellen Wagner, April, 2004)

- ✓ • Interaction is the **most debated construct** in the world of technology mediated learning design and development.
- ✓ • In these settings, interaction is the **defining attribute of the quality and value**
- ✓ • Interactivity (equated with interaction) is the **most expensive component** of a technology mediated learning design.




Types of Interactions Possible?

(Moore, M. G. (1989). Editorial: Three types of interaction. *American Journal of Distance Education*, 3 (2), 1-7.)

1. **Learner-Instructor**
2. **Learner-Learner**
3. **Learner-Content**

4a. **Learner-Self:** highlighted the importance of 'self talking', or internal dialogue when engaging with learning materials (Soo & Bonk, 1998)

4b. **Learner-Interface:** The learner's ability to use the communication medium facilitating the online course (Hillman, Willis, & Gunawardena, 1994)




Designing Interaction/Interactivity

- **Multiple types of interactions (Moore)**
- **Learners need templates, models, guides**
- **Feedback/responsiveness key**
- **Build teaming & collaboration**
- **Reflection & dialogue build knowledge**
- **Build consistency in design of resources**
- **Outcomes of interaction (Wagner)**
- **Simulations & games increasingly impmt**

What are the Design Considerations for Learner Interaction???

(Insung Jung, 2003, Handbook of Distance Education, Moore & Anderson (Eds.))

- **Multiple layers of online content & resources**
- **Increase social presence & interpersonal interaction**
- **Embed different types of interactions with detailed guidelines and good topics**
- **Provide quick and frequent feedback**
- **Include visual layouts where possible**
- **Allow flexible course structure**




Matrix of Web Interactions

(Cummings, Bonk, & Jacobs, 2002, Internet in Higher Ed)

Instructor to Student: Syllabus, notes, feedback.
to Instructor: Course resources, syllabi, notes.
to Practitioner: Tutorials, articles, news.


Student to Student: Comments, sample work, links.
to Instructor: Votes, tests, papers, evals.
to Practitioner: Web links, resumes, reflections

Practitioner to Student: Internships, jobs, e-fieldtrips
to Instructor: Opinion surveys, fdbk, listservs
to Practitioner: Forums, listservs, prof devel.



Let's Explore These Hats Again With Specific Examples!

- Technical**
- Social**
- Managerial**
- Pedagogical**



Vanessa Dennen's Research on Nine Online Courses


(sociology, history, communications, writing, library science, technology, counseling)

Poor Instructors

- Little/no feedback given
- Always authoritative
- Kept narrow focus of what was relevant
- Created tangential discussions
- Ultimate deadlines

Good Instructors

- Provided regular feedback
- Participated as peer
- Allowed perspective sharing
- Tied discussion to grades, other assessments.
- Incremental deadlines



Model of Teaching and Learning Through CMC (Gilly Salmon, 2000)

E-Moderating

LEVEL OF INTERACTIVITY

- E-Moderating
- Technical support

E-Moderating

E-Moderating: The Key to Teaching and Learning Online, (Gilly Salmon, (1999) Kogan Page)

1. Know when to stay silent for a few days.
2. Close off unused or unproductive conferences.
3. Provide a variety of relevant conference topics.
4. Deal promptly with dominance & harassment.
5. Weave, summarize, and archive often.
6. Be an equal (co-) participant in the conference.
7. Provide sparks or interesting comments.
8. Avoid directives and right answers.
9. Acknowledge all contributions.
10. Support others for e-moderator role.

E-Moderating

Managerial Recommendations

(Berge, 1995, The role of the online instructor/facilitator)

- Distribute lists of participants
- Provide timely administrative info books, enrollment, counseling, etc.
- Change procedures that are not working
- Change misplaced subject headings
- Decisively end discussion sessions
- Don't overload

Facilitating Student Responsibility

(The Virtual Student, Rena Palloff & Keith Pratt, 2003)

- Openness: Share from work of life
- Flexibility: Develop sense of online learning
- Honesty: Willing to give and receive feedback
- Willing to Take Charge/Responsibility
- Willing to Work Collab
- Post intros, bios, create social space, mode humor
- Give up control, co-create, allow time for reflection
- Model open, honest feedback, approp commun
- Rotate facilitation or leadership roles
- Post grading rubrics

Ron Oliver, Edith Cowen University, Collab & Constructivist Web Tasks

(McLoughlin & Oliver, 1999; Oliver & McLoughlin, 1999)

1. Apprenticeship: Q&A; Ask an Expert forums.
2. Case-Based and Simulated Learning: exchange remote views; enact events online.
3. Active Learning: Design Web pages & databases.
4. Reflective/Metacognitive Learning: Reflect in online journals, bulletin boards
5. Experiential Learning: Post (articulate ideas) to discussion groups
6. Authentic Learning: PBL, search databases

Linda Harasim's Model of Online Collaborative Learning

1. **Idea Generating:** implies divergent thinking, brainstorming, verbalization and thus sharing of ideas and positions.
2. **Idea Linking:** involves evidence of conceptual change, intellectual progress and the beginning of convergence as new or different ideas become clarified and identified and clustered into various positions.
3. **Intellectual Convergence:** is typically reflected in shared understanding (including agreeing to disagree) and is especially evident in co-production, whether a theory, a publication, an assignment, a work of art.

Ideal Environment of Synchronous Trainer

Jennifer Hoffman, Online Learning Conference, 2001, Oct.;
Synchronous Trainers Survival Guide, August, 2003)

- A private, soundproof room.
- High-speed connection; telephone; powerful computer; additional computer; tech support phone #
- Studio microphone and speakers
- A "Do Not Disturb" sign
- Near restroom; pitcher of water



Considerations: The Event

Jennifer Hoffman, ASTD, Learning Circuits, (2001, March)
http://insynctraining.com/Insync_Home.html#Home

- Log on early; students come 15 minutes early.
- Check to see if students brought needed items
- Vary instructional strategies; maximize interactivity
- Make it visual—color, sound, animation
- Design 10-minute breaks every 90 minutes
- Do tech checks of microphones (sound check).



Framework for Pedagogical CMC Techniques

(Paulsen, 1995, The Online Report on Pedagogical Techniques for CMC; morten@nki.no)

1. **One-alone Techniques:** Online journals, online databases, interviews, online interest groups.
2. **One-to-one Techniques:** Learning contracts, internships, apprenticeships.
3. **One-to-many Techniques:** Lectures, symposiums, skits.
4. **Many-to-many Techniques:** Debates, simulations, games, case studies, discussion groups, brainstorming, Delphi techniques, nominal group process, forums, group projects.



How Facilitate Online Community?

- **Safety:** Establish safe environment
- **Tone:** Flexible, inviting, positive, respect
- **Personal:** Self-disclosures, open, stories telling
- **Sharing:** Share frustrations, celebrations, etc
- **Collaboration:** Camaraderie/empathy
- **Common language:** conversational chat space
- **Task completion:** set milestones & grp goals
- **Other:** Meaningful, choice, simple, purpose...

Steps in Building an Electronic Community (Palloff & Pratt, 1999)

- Clearly define the purpose of the group.
- Create distinctive gathering place for group.
- Allow members to resolve their own disputes.
- Promote effective leadership from within.
- Define norms and a clear code of conduct.
- Allow for a range of member roles.
- Allow for and facilitate subgroups.



Try the R2D2 Method! Try TEC-VARIETY! And hope for some magic!!!

Sample papers :

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

Archived talks:

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

