




### Active Learning with Technology: Myths, Magic, and Mucho Motivation




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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 Yarow, 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

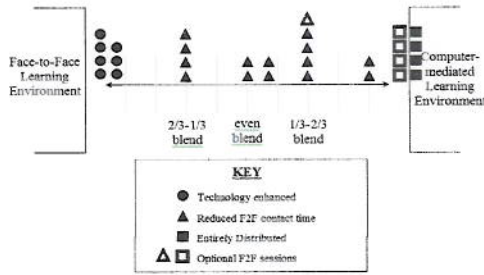


**Myth #1: People will know what I am saying when I say "blended learning."**  
**Myth #2: Blended is the same as "hybrid."**  
**The Sloan Consortium**

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. Bonticher & L. Justice & K. D. Schenk & 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

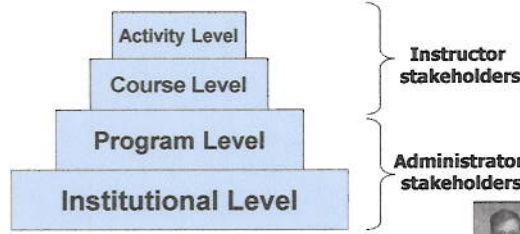



**Myth #7: People learn more in face-to-face settings.**  
**Fully Online and Blended Learning Advantages**

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 Ignéri, 2006)**

Source: American Management Association, AMA at Work.

**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](http://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

The screenshot shows a web page titled 'Music Acoustics' with a navigation menu on the left and a main content area on the right. The main content area has a heading 'Introduction to the acoustics of brass instruments' and a list of topics including 'Sound waves', 'Standing waves', 'Resonance', 'Sound intensity', 'Sound speed', 'Sound pressure', 'Sound power', 'Sound energy', 'Sound quality', 'Sound color', 'Sound field', 'Sound radiation', 'Sound propagation', 'Sound absorption', 'Sound reflection', 'Sound diffraction', 'Sound refraction', 'Sound scattering', 'Sound diffraction', 'Sound refraction', 'Sound scattering', 'Sound diffraction', 'Sound refraction', 'Sound scattering'. A small photo of a woman is visible in the bottom left corner of the screenshot.

### 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.

Small images of a smartphone and a tablet are shown to the right of the list.

### Part II. Some Online Motivational Ideas

A cartoon illustration featuring a yellow character with a blue and red striped shirt standing next to a train track. A train is moving along the tracks. To the right, there is a sign that says 'Fun Zone' with a red arrow pointing towards it.

### We are not motivating students with the technologies that they love

A photograph showing a student in the foreground sleeping at their desk in a classroom. Other students are visible in the background, some looking towards the camera.

### Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?

A large, stylized one-billion-dollar bill is shown. Two small figures, one in a purple shirt and one in a blue shirt, are standing on the bill. The bill features a portrait of a man and the text 'ONE BILLION DOLLARS' and 'FEDERAL RESERVE NOTE'.

### 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.

A small cartoon character is shown in the bottom right corner of the slide.

**I even reflected on this for a moment...and then something magical happened...**

**Magic #1: TEC-VARIETY Model for Online Motivation and Retention**

- Tone/Climate:** Psych Safety, Comfort, Belonging
- Encouragement, Feedback:** Responsive, Supports
- Curiosity:** Fun, Fantasy, Control
- ...
- Variety:** Novelty, Intrigue, Unknowns
- Autonomy: Choice:** Flexibility, Opportunities
- Relevance:** Meaningful, Authentic, Interesting
- Interactive:** Collaborative, Team-Based, Community
- Engagement:** Effort, Involvement, Excitement
- Tension:** Challenge, Dissonance, Controversy
- Yields Products:** Goal Driven, Products, Success, Ownership

**1. Risk** ← Low Risk (Easy to Embed) → High Risk (Extensive Planning)

**2. Time** ← Free or Inexpensive → Enterprise Licenses

**3. Cost** ← Instructor-Focus → Student-Focus

**4. Student-Centered** ← Low → High

**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.:**

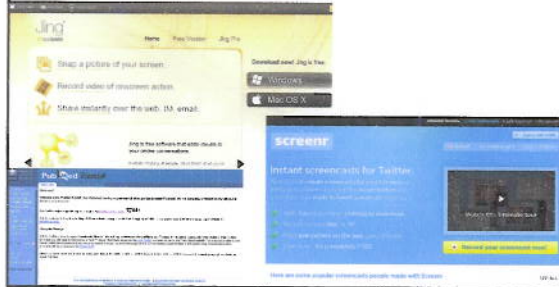
**A. Online Self-Testing** (e.g., self study in vocabulary, anatomy, chemistry, dissection, etc.)

**Upper Extremity Muscles**

Which of the following are ANTONYMS for the word MAXIMUM?

- clear, understandable, fashionable, intelligible
- well-placed, useful person
- retain, uphold, keep, hold
- make happy, cheer, amuse, please
- smaller, least, minimum, least

**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)



**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.



**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)

The image shows a composite of two web pages. On the left is a video player with a man speaking, titled 'Intro: What is the Flat World?'. On the right is a search results page for 'THOMAS L. FRIEDMAN' with various links and images.

**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

The image shows the '60 Second Recap' website. It features a video player with a woman (Jenny Sawyer) speaking, and a sidebar with 'Focus for this book' and other related content.

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

The image shows a screenshot of an online language learning website. It includes a 'Share Your World' section with a globe icon and a video player showing a person speaking.

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

The image shows a screenshot of a Ning collaborative group page. It features a header with 'Ning in Education' and a main content area with various posts and images.

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

The image shows two screenshots. The top one is a Google Docs page with the heading 'Create and share your work online' and a list of features. The bottom one is a Diigo bookmarking page with a search bar and various links.

**8. Engagement, Effort:**  
**A. Synchronous Learning**

The image shows a screenshot of a synchronous learning session on Wtq.com. It includes a video player, a chat window, and a 'Multimodal Interactions' section with text: 'Dr. Lee posts his discussion material on the web.' and 'Participants discuss the case synchronously'.

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

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

Students to protest human body exhibit

Maggie Yoerns  
 Issue date: 3/5/09 Section: News

**9. Tension, Challenge, etc.:**  
**B. Electronic Guests & Mentoring**  
 (Simon Fraser University News:  
<http://www.sfu.ca/mediasprts/news/2001/Sept6/hightech.html>)

**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**

Curis J. Bonk | Ke Zhang

**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)

**The International Review of Research in Open and Distance Learning**  
A refereed e-journal to advance research, theory and best practice in open and distance learning worldwide  
Athabasca University

### 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.

English in the Real World weekly podcasts

Better English

Information Technology

### 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>

IT Bootcamp

Audio Acquisition via Computer

Figure 1: Instructional Design Process

### 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

Reflective

Observational

Active

Kinesthetic

### Reflect 2a. Critical Friend Blog Postings

Dr. Jane

Deepali685's Weblog

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

The English Blog

Film of the Week: This is It

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

Welcome to PodCases CMC Portal

### 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

### 3. Visual Learners

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

### 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

### 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)

**WORLDMAPPER** The world as you never see it before

Home Map Categories Thematic Index A-Z Map Index About Worldmapper RSS

Previous Map Science Growth Map No. 222 Open PDF poster Next Map

This map shows the growth in scientific research of countries between 1990 and 2002. If there was an increase in scientific publications that territory has an area on the map.

In 1990, 60 scientific papers were published per million people living in the world. This increased to 200 per million by 2002. This increase was experienced primarily in territories with strong existing scientific research. However, the United States, with the highest total publications in 2002, experienced a smaller increase since 1990 than that in Japan, China, Germany and the Republic of Korea. Singapore had the greatest per person increase in scientific publications.

Territory size shows the proportion of the number of entire scientific papers that were published by 2002 compared with 1990, whereas outline shows change.

- Open PDF poster, designed for printing. You need Acrobat Reader.
- Use labelled territory map or population map for comparison.
- Click Map Control (change with mouse, Press (control) to track). Thematic Normal (see index).
- Helpdesk, click on the page.
- All of the data on this is automatic, see data page.

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

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

WORLD DIGITAL LIBRARY

Map of South and North Korea in Eight Perspectives

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

Howcast

WonderHowTo

Link TV

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

ONLINE GALLERY

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

YouTube

3D Human Anatomy

### Display 3j. Online Timelines (US Presidents)

EARLY LIFE OF LINCOLN

WILLIAM WASHINGTON WOODROW

### Display 3k. Videos of the Periodic Table

This display features a central periodic table grid surrounded by several video thumbnails and educational content. The videos appear to be related to chemistry and the periodic table, with some showing laboratory experiments and others showing educational presentations.

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

This display shows two online history portals. On the left is the Civil Rights Digital Library, which has a search bar and navigation options. On the right is the Amistad website, which features a header with the name 'AMISTAD' and a main content area with text and images related to the Amistad case.

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

This display shows an educational website for human embryology. It includes a large image of a developing embryo, several smaller diagrams of internal organs, and text explaining the development of the embryo. The website is titled 'Human Embryology Animations' and 'Embryological Development'.

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

This display shows a screenshot of the Google 3D Warehouse website. It features a 3D model of a bridge, the Roosevelt Island Bridge & Motorgate Parking. The interface includes search bars, navigation options, and a 'Download Model' button.

### 4. Tactile/Kinesthetic Learners

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

The diagram shows a circular learning cycle with three main stages: 'Doing' (represented by a yellow arrow), 'Thinking' (represented by a blue arrow), and 'Planning' (represented by a green arrow). The center of the cycle is labeled 'Learning and Assessment'. Surrounding the cycle are several images of students engaged in various activities, including role-playing, dramatization, and hands-on projects.

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

Web 2.0 and Emerging Learning Technologies  
From Wikibooks, the open content textbook project. Table of Contents

This display shows a screenshot of a Wikibooks page. The page title is 'Web 2.0 and Emerging Learning Technologies'. It includes a table of contents with sections like 'Part I: Introduction', 'Part II: Learning', and 'Part III: Overcoming the Digital Divide'. The page also features a search bar and navigation options.

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

The image shows four different survey tool interfaces. From top-left to bottom-right: SurveyShare, Mister Poll, MicroPoll, and Zoomerang. Each interface displays various options for creating and managing online surveys.

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

The image features the 'Just-In-Time Teaching' logo on a yellow background. To the right is a black and white photograph of a man looking at a map of the United States. Below the map is a small outline of the US with red dots indicating locations.

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

The image shows a screenshot of a wiki page with a table of contents and a photo of Ron Owston, a man in a blue shirt, smiling.

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

The image is a collage of various podcast and video thumbnails. One prominent thumbnail shows a blue background with the text: 'Hey Jude, don't make it bad / Take a sad song and make it better'. Other thumbnails show different podcast covers and video player interfaces.

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

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

Illustrations of three cartoon figures (two small, one larger) and a red and white striped obstacle resembling a hurdle or a small bridge.

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

Sample papers : <http://www.publicationshare.com/>  
Archived talks: <http://www.trainingshare.com/>

Three small photographs: a person in a dark hood holding a sword, a man and a woman smiling, and a person in a dark hood holding a sword.