

## Blended Learning Situations, Solutions, and Several Stunning Surprises

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## This the talk will cover:

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



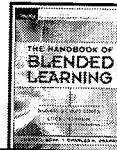
## Blended Learning: Two Parts

1. Models and Frameworks
2. Problems and Solutions  
(i.e., examples)



## Part 1. Handbook of Blended Learning (HOBLe)

- University of Phoenix, Capella University, JIU, National University
- Microsoft, IBM, Sun, Cisco, Macromedia, Oracle, WebCT
- The World Bank, the DOD in USA
- In Canada: York University and the University of Calgary
- Other universities in Japan, Korea, Malaysia, Singapore, China, NZ, South Africa, Israel, Mexico, Australia, Wales, England, USA



Poll #1. Have you taught, taken, or designed a blended learning course?

A = yes

B = no

C = not sure, I am here  
to find out what  
blended means



## Poll #2. What are you???

- A. Tutor, professor, trainer, instructor, lecturer, adjunct, visiting scholar
- B. Director or staff in a learning center, instructional designer, etc.
- C. Policy maker, government official
- D. Administrator, Dean, President, etc.
- E. Graduate student, informal learner
- G. Other

### Poll #3: Burning Blended Learning Q's

(Pick any that interest you)

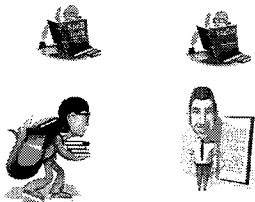
- A. What does blended learning mean?
- B. What is typically being blended?
- C. How much to blend?
- D. Why blend (advantages and disadvantages)?
- E. Where is this all headed?

Chris Dede, Campus Technology, June 2006: Changing the Gold Standard for Instruction

- "There is a widespread misconception that, for everyone, face-to-face is the "gold standard" in education, and that any kind of mediated interaction is second best. But we know from research, that's not true."



### Blended Learning Defined and Explained



The Sloan Consortium  
(2003). Sizing the Opportunity: The Quality and Extent of Online Education in the U.S., 2002 and 2003  
[http://www.sloan-c.org/resources/sizing\\_opportunity.pdf](http://www.sloan-c.org/resources/sizing_opportunity.pdf)

Proportion of courses 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.

### 1. Blending Delivery Media

- "Blended learning means the combination of a wide range of learning media (instructor led, web based courseware, simulations, job aids, webinars, documents) into a total training program designed to solve a specific business problem." (Bersin & Associates, 2003, p. 3)

### 2. Blending Instructional Methods

- "Blended learning: to combine various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology." (Driscoll, 2002, p. 54)

### 3. 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)



### Who is demanding fully online and blended learning?

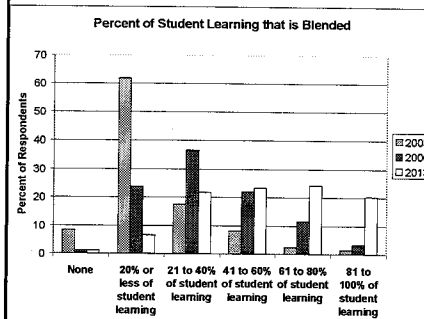


### More than 70 Million Adults Want to Head Back to School

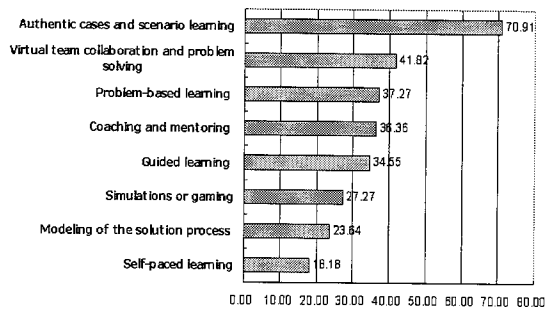
August 22, 2006, Yahoo News  
Report: "Degrees of Opportunity" from Capella University

- Degrees of Opportunity, a new national study of the attitudes of adult Americans toward continuing their education, indicates that more than half of American adults age 25 to 60 would like to pursue additional education -- the equivalent of more than 70 million adult Americans.

### Future Directions of Blended Learning (Bonk, Kim, & Zeng, 2006, Chapter 39)



### Which instructional strategies will become more widely used?



### Why Blend and Advantages and Disadvantages of BL...



## Why Teaching Fully Online or Blended? Three Key Reasons

1. **Improved Pedagogy**
  - Interactive vs. Transmissive environments
  - Authenticity integration into work
2. **Increased Access/Flexibility**
  - Reduced seat time courses – UCF M courses
3. **Increased Cost Effectiveness**
  - Corporate: ROI – IBM 47:1, Avaya, Microsoft
  - Higher Ed: PEW Grants

## Where is Blended Beneficial?

<http://www.center.rpi.edu/PewGrant/ProjDesc.html>

- **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**



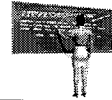
## Examples of Blended Learning, Margaret Driscoll, e-Learning, March 2002

- **Put assessments/reviews online**
- **Follow-up in community of practice**
- **Put reference materials on Web**
- **Deliver pre-work online**
- **Provide office hours online**
- **Use mentoring/coaching tool**
- **Access experts live online**
- **Use e-mail and instant messaging**

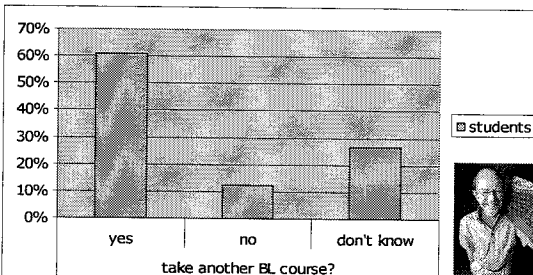


## Fully Online and Blended Learning Advantages

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**



## Student Satisfaction in Canada for Blended Learning (Owston, Garrison, & Cook 2006)

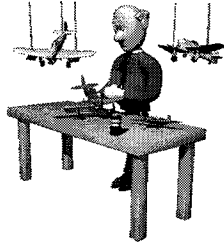


## Fully Online and Blended Learning Disadvantages

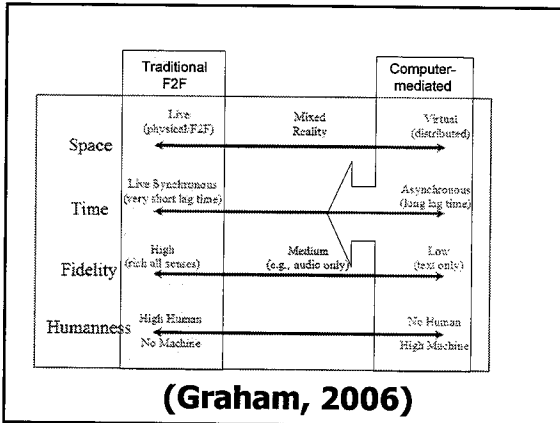
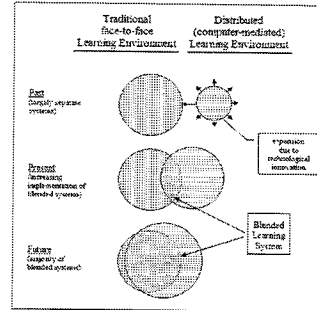
1. **Procrastination** (trouble managing time and requirements)
2. **Problems with technology at the beginning** (instructor tries too much)
3. **Can be overwhelming or too novel**
4. **Poor integration or planning**
5. **Resistance to change**
6. **Faculty skepticism, increase workload, and reduced productivity**



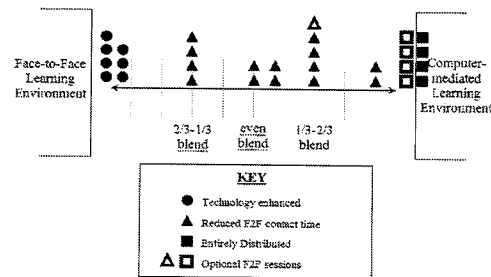
## Frameworks and Models of Blended Learning...



## Historical Emergence of Fully Online and Blended (Graham, 2006)



## 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. Schenk & P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of Distance Learning* (pp. 172-179). Hershey, PA: Idea Group Inc.

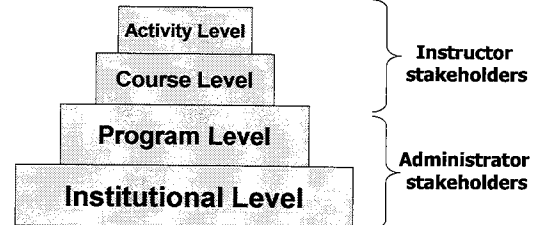
## Insung Jung & Katsuaki Suzuki, Blended Learning in Japan, 2006

- **Open Interaction:** create small group debate, assign online facilitators & wrappers
- **Knowledge Creation:** inviting external experts, combine async and sync
- **Information Distribution:** posting materials to review or read
- **Efficient Management:** allow electronic submission; list of standard feedback

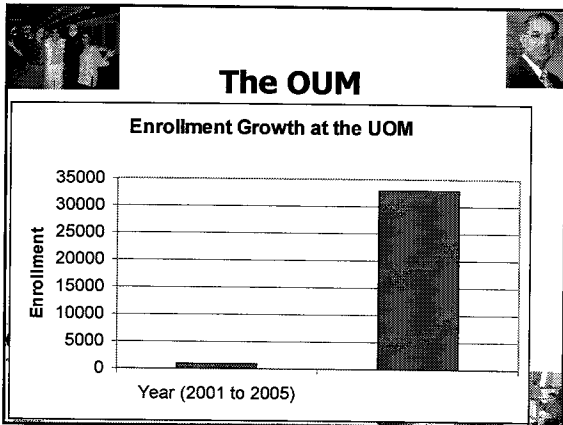


## Models of Blending

Blending occurs at the following four levels:







## 4. 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)

## Categories of Blends

A. Enabling Blends	Enabling blends primarily focus on addressing issues of access and convenience; provide similar learning experiences.
B. Enhancing Blends	Enhancing blends allow for incremental changes to the pedagogy; additional or supplementary online resources.
C. Transforming Blends	Transforming blends are blends that allow for a radical transformation of the pedagogy and learner construction of knowledge.

## A. Enabling Blends

- Many of the for-profit institutions like **Capella**, **Jones International University**, and **University of Phoenix** have models that focus on making educational opportunities available to those who don't have access due to time and location constraints.
- **National University** has a teacher preparation program geared towards access and flexibility.

### National University Department of Teacher Education (Reynolds & Greiner, 2006)

- 12,000 Enrolled Students
- Since 2004 More than 50% of Candidates Enrolling as Online rather than On-site
  - They will take a majority of classes online
- Each Candidate Takes 7 Credential Classes
- Each Class Contains 2 Field-based Exp.
- 500 Classes/Yr. & 20 Students/Class =
- 20,000 Field-based Experiences/Year

## B. Enhancing Blends

(Univ of Waikato, New Zealand, 2006)

### University of Waikato, New Zealand

#### - Model for enhancing F2F courses includes:

- **Fully online** - students can complete qualifications without coming onto the campus
- **Mostly online** - there is a mix of online and some on-campus work in the qualification
- **Somewhat online** - there is an online component for on-campus students
- **Supported online** - courses are taught in the traditional lecture/tutorial mode, supported by material provided through the online learning relevant university schools' document management systems

### C. Transforming Blends

(Kirkley & Kirkley; Oliver, Herrington, & Reeves, HOBLE, 2006)



- **Corporate/Military Training**

- Workplace learning (integrating learning into workflow)
- Performance support and knowledge management using mobile technologies
- Mixed-reality environments combining the virtual and real Reality-Virtuality Training Continuum



Example of levels of mixed reality that allow a blending of the real and virtual worlds.

What can we say about blended learning then???

- **It is everywhere!!!!!!!**

- **Resistance is futile!!!!!!!**



### Part II: 13 Fully Online and Blended Learning Problems and 33 Solutions



### Problem Situation #1: Brief FTF Experiences

- Face-to-face (FTF) experiences are brief, one-week journeys. Need to need to build self-confidence, create social supports, teams, camaraderie, etc.

Ok, Million Dollar Question: What can you do in 1 week?





**Solution #1+.**  
**Sample Activities for Brief Meetings**

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.

**Problem Situation #2:**  
**Student Absenteeism**

- Students miss class to attend a conference or event or a personal problem arises. Or students asks to watch the class a second time.

**Solution #2. Video Streamed Lectures and Expert Commenting**

The screenshot shows a video player interface with a 'Streamed Class Sessions for 546' table below it. The table lists course information and provides links to stream or download content.

Department	Course ID	Section	Date	Part	Media Type	Stream (click to play)	Download
EDUC-P	546	00000	01/22/2005	Real	Real Player	<a href="#">Real Player</a>	<a href="#">Download (641 813)</a>
EDUC-P	546	00000	01/15/2005	Real	Real Player	<a href="#">Real Player</a>	<a href="#">Download (394 242)</a>

**Blended Solution #3.**  
**Webcast Lectures (slides synched)**

The screenshot shows a webcast interface with a large central window displaying mathematical equations. The equations include:
 
$$10 + \frac{x}{\tan 32^\circ} = \frac{x}{\tan 30^\circ}$$

$$\frac{x}{\tan 32^\circ} - \frac{x}{\tan 30^\circ} = -10$$

$$x \left[ \frac{1}{\tan 32^\circ} - \frac{1}{\tan 30^\circ} \right] = -10$$
 The interface also includes a video player on the right and a navigation bar at the top.

**Problem Situation #3:**  
**Facilities and Time**

- Limited facilities or rooms for teaching. Or students cannot make it to class every week or are working full time.

**Solution #4.**

**Divide Online and Class Experiences: English Classes Online**

Graham, Ure, & Allen (2003, July). Blended Learning Environn  
 A Literature Review and Proposed Research Agenda

- Freshman English at BYU: Students are required to meet F2F once a week instead of three times a week. Online modules provide writing instruction and teaching assistants use online and F2F contact to provide feedback and guidance on writing (Waddoups et al., 2003).



### Blended Solution #5.

CPA Exam Review (June 14, 2003)  
and Web Videos in Accounting (July, 2003)

- Texas A&M University–Corpus Christi combines CPA courseware with bi-monthly class meetings to prep for CPA Exam. (study text, proficiency questions, electronic flashcards and practice exams, scheduled assignments, goals, online grading, progress reports, tailored discussion groups, and personalized assistance from leading professors at the nation's top accounting schools.)

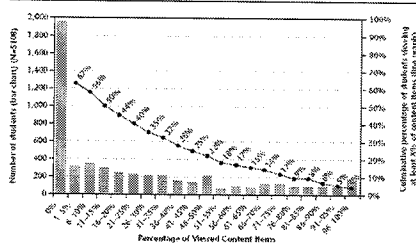


### Problem Situation #4: Web Supplemental Activities

- Fail to finish class discussion or other activity in time. Or desire to integrate the Web more in your face-to-face instruction or outside of class. Want to provide course resources and activities for students to explore.

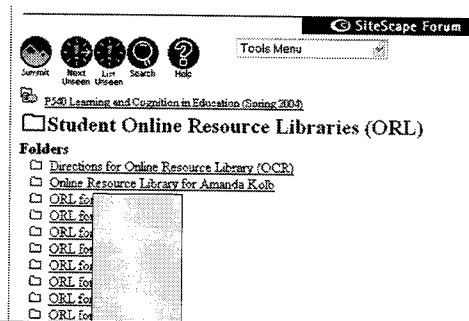
### Content Use (Tel Aviv University) Nachmias, Ram, & Mioduser, 2006

Virtual TAU 381  
FIGURE 27.2. DISTRIBUTION OF PERCENTAGE OF CONTENT ITEMS VIEWED BY STUDENTS.



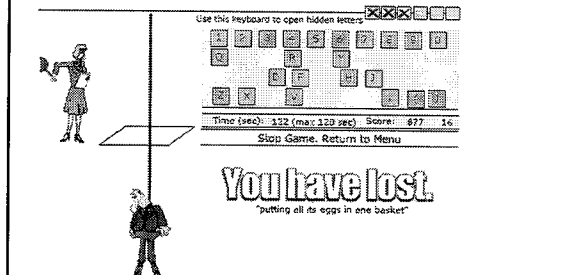
Note. N = 5,106 in 137 courses.

### Solution #6. Online Resource Libraries

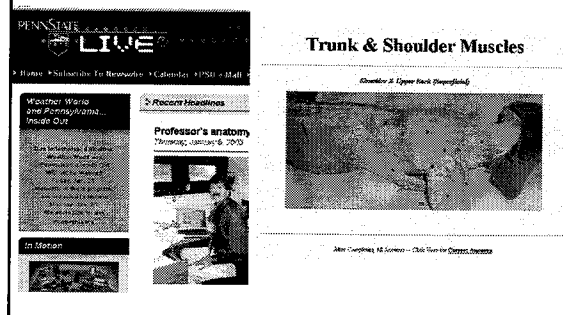


### Solution #7. Referenceware and Terminology Exercises Online (puzzles, games, etc.)

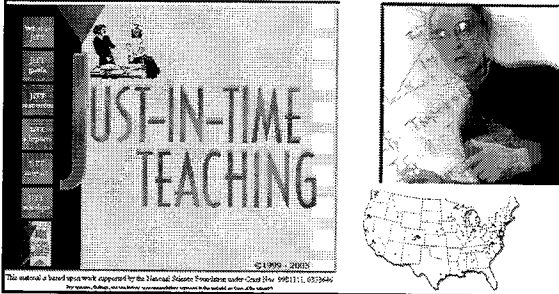
"putting all its eggs in one basket"



### Solution #8. Instructor Portal: e.g., self study in anatomy



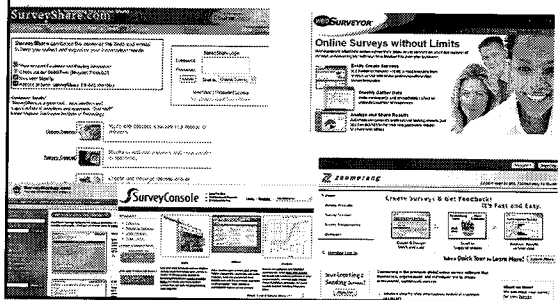
**Solution #9: Warm-ups Online  
Just-In-Time-Teaching (JiTT)**  
<http://webphysics.iupui.edu/jitt/jitt.html>



**Problem Situation #5:  
Student Learning Control**

- Want to give students more control and ownership over their own learning. Want to foster student generative learning or being authors of their own knowledge.

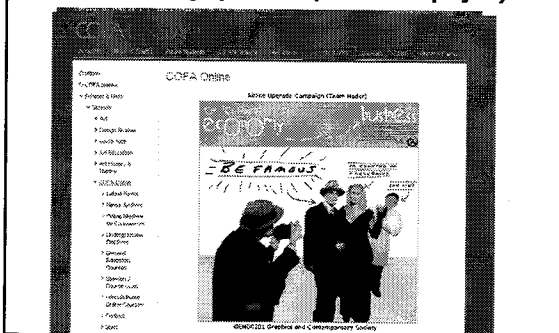
**Solution #10.  
Survey Research and Market Analysis  
(e.g., WebSurveyor, Zoomerang, SurveyShare,  
SurveyKey)**



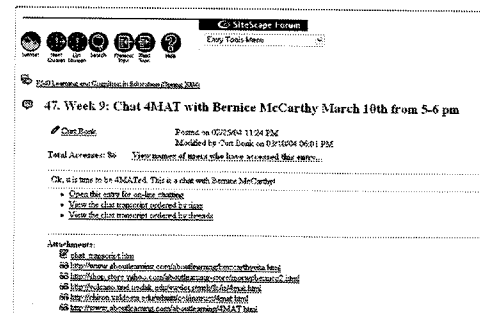
**Problem Situation #6:  
Preparedness for the Profession**

- Students are not prepared for their professions when they graduate. Or want to better apprentice students into their chosen profession. What to provide opportunities to work with practitioners, experts, mentors, and coaches in authentic learning environment.

**Solution #11. Expert Mentoring Online in Art  
and Design (COFA Online, Omnium Project, Creative  
Waves—online graphics and photomedia project)**



**Solution #12. Reuse Chat  
Transcripts**



## Solution #13.

### Video Observations (e.g., Virtual Psychiatric Interview, Trinity College, Dublin)

showcases

12

Department: **Psychiatry**  
 Academics: Prof. Michael Gill, Dr. Brian Fitzmaurice, Katie Armstrong

This is a Virtual Interview project that has been developed by CLT and the Department of Psychiatry. The first Revision was launched in March, 2004 for students. In this project students are given the opportunity to carry out a clinical interview with a patient. The student decides what questions are asked and with the aid of video clips can listen and watch the patient responses.

## Solution #14.

### E-Reading First Ohio (video-based scaffolding from expert instructors)

## Problem Situation #7:

### Collaborative Skill Deficit

- Students need collaboration and teamwork skills. Want to build virtual teaming skills in class activities or work with learners in other locales or situations.

## Solution #15. Cross-Class Collab

### (Indiana Univ and Open U of Malaysia)

## Solution #16. Online Groups...

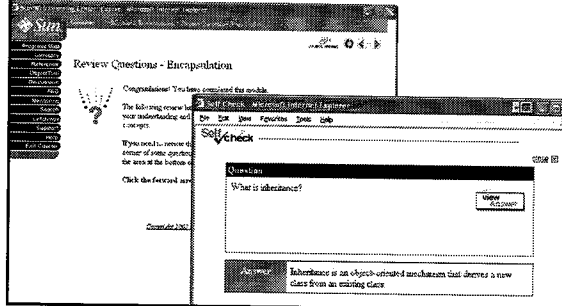
## Solution #17.

### Team Meetings in Skype

### Problem Situation #8: Student Reflections and Connections

- Students are not connecting content. They are just turning pages and going through the motions. Minimal student reflection is seen.

### Solution #18. Learner-Self Interactions and Reflections



### Solution #19. Apprenticeship: Electronic Guests & Mentoring

(Simon Fraser University News:  
<http://www.sfu.ca/mediaplus/news/2001/5>)

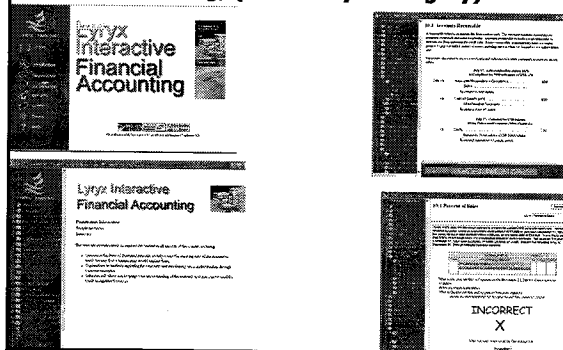


### Blended Solution #20. Workplace and Field Reflections



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

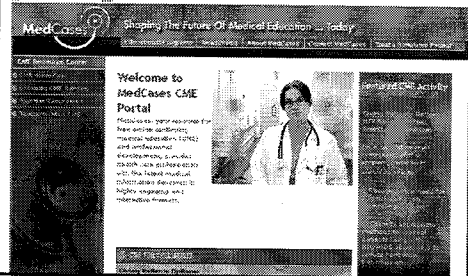
### Solution #21. Online Simulation: Financial Accounting; (University of Calgary)



### Problem Situation #9: Learning Community

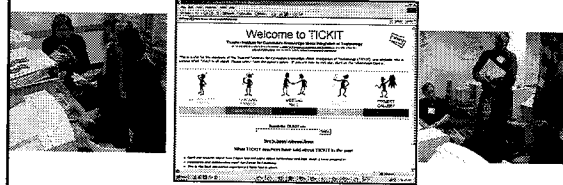
- There is a preference for creating an online learning community in order to increase student learning and retention in the program. Such a community might be in a single class or across a series of classes.

**Solution #22. Community of Learners:  
Medical and Business Cases Online  
(cases community)**  
<http://optionstraining.org/login>



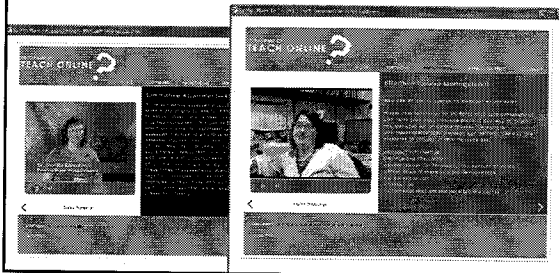
**Blended Solution #23: Teacher  
Professional Development in Technology  
Integration (the TICKIT Program)**

(Bonk, Ehman, & Yamagata-Lynch, in press, AACE Journal)  
<http://www.iub.edu/~tickit>



**TICKIT: Teacher Institute for Curriculum  
Knowledge about Integration of Technology**

**Solution #24. Community of  
Practice: Online Professional  
Development**

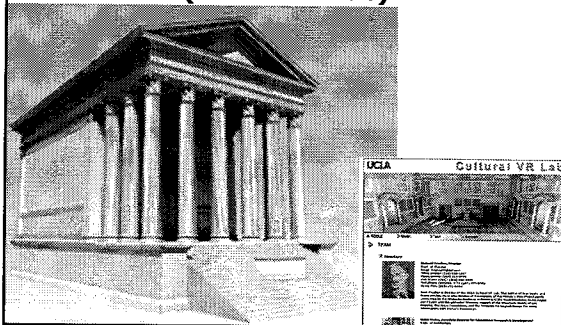


**Problem Situation #10:  
Need to Visualize Content**

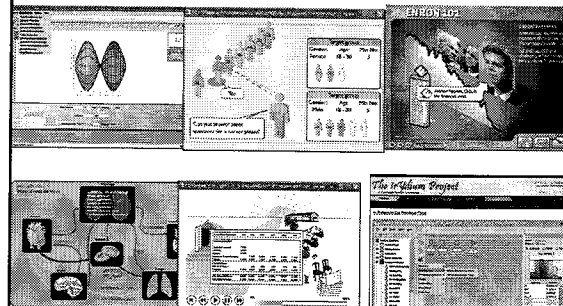
- Content is highly visual in nature and difficult to simply discuss in class. Or students have a preference for visual learning.



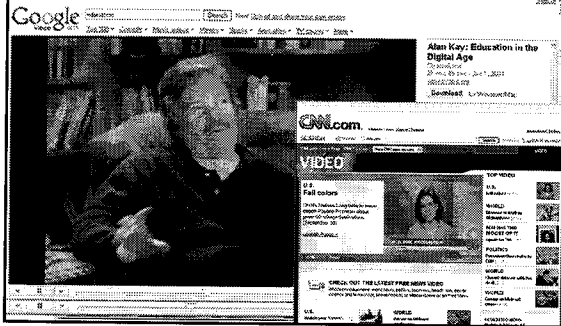
**Blended Solution #25. Explore Virtual  
Worlds and Online Representations  
(UCLAs CVRLab)**



**Blended Solution #26. 3-D Visualization  
& Laboratory Software**



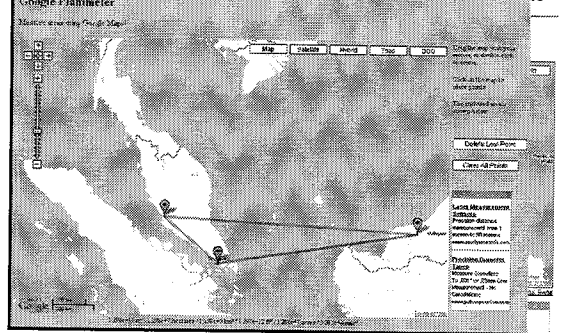
### Solution #27. Anchored Instruction: News Content Videos (CTGV, 1990?)



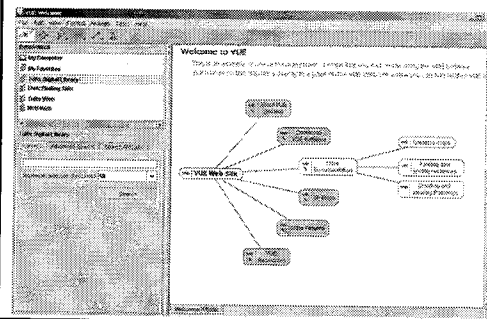
### Solution #28. Use Google Maps Mashups in K-12 Education

By Jeffrey Branzburg, May 15, 2006

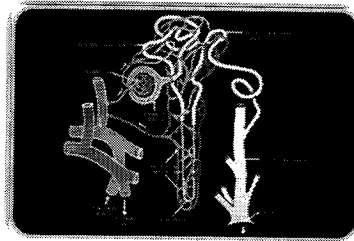
<http://www.techlearning.com/story/showArticle.html?articleID=187002846>



### Solution #29. Concept Mapping Tools

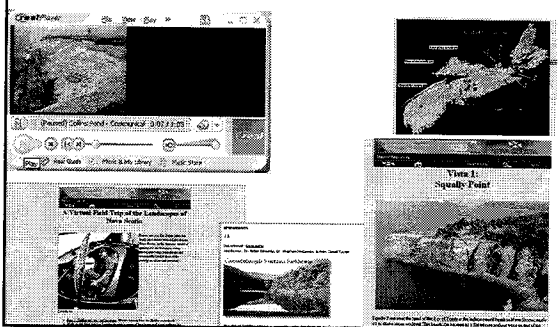


### Blended Solution #30. Flowcharts, Diagrams, Maps, etc.

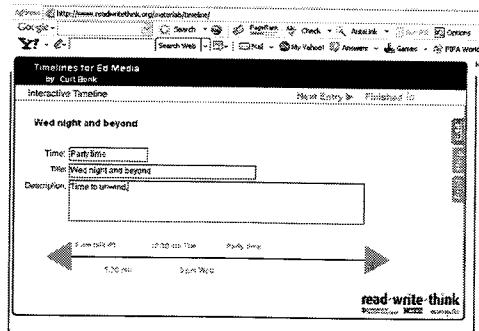


Elements in the system for control of oxygenation in the human body (e.g., the Kidney): From: Next-Generation Educational Software Why We Need It and a Research Agenda for Getting It. Van Dam, Becker, & Simpson, *Educause Review*, March/April 2005

### Solution #31. Exploration and Demonstration: Virtual Fieldtrip and Tours

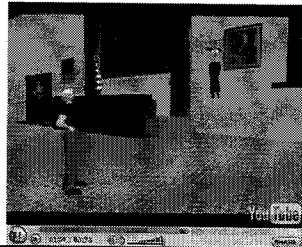


### Solution #32. Virtual Timelines



**Solution #33. Virtual Reality/Worlds  
First Course in a Virtual World (Second Life)**

Wednesday, August 30, 2006  
Harvard Law School (Charles & Rebecca Nesson)  
Chronicle of Higher Ed (open to the public)  
<http://chronicle.com/daily/2006/08/2006083001t.htm>



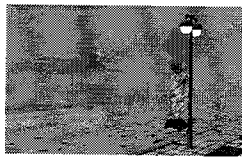
**Problem Situation #11:  
Need for Hands-On Learning**

- To learn the material requires that students try it out in a lab or real-world situation. Or students prefer hands-on learning activities.

**Solution #34. Educational Simulations  
(HEALING GAMES: Computer simulations don't have to be violent -- they can give peace a chance, Scott Duke Harris May 21, 2006, San Fran Chronicle; and Medical Traumas from TD Magazine, August 2006)**



U.N. Food Force, called the first humanitarian game, simulates problems of getting supplies to wartime refugees.



Terrorist Bus Bombing is a virtual-reality tool to help psychotherapists treat survivors of actual terrorist attacks.

**Solution #35. Real World Problems  
(PBL online): Real-time Cases**

**Solution #36.  
Video Scenario Learning  
(Option 6, Arjuna Multimedia, Bloomington, IN)**

**Solution #37. Videoconferencing with  
Hearing Impaired Students Online**

- College students tutoring high schools on their homework
- Instructors observing how teacher education students are doing in field placements (practice presentation and communication skills)
- Interpret speaker via Web cam





## Solution #38. Romantic Poetry Project

THE LIFE AND WORK OF JOHN KEATS  
1795-1821

A COLLECTION OF RESOURCES  
DEDICATED TO THE SECOND  
GENERATION ROMANTIC POET

ENTER  
THE  
WEBSITE

## Solution #39. Digital Storytelling

Educational Uses of Digital Storytelling

Digital Storytelling: The Art of Storytelling

### Problem Situation #12: Preference for Auditory Learning

- The content is heavily verbal or words. Or students have a preference to listen to a lecture or hear an instructor deliver a lecture.

## Solution #40. Art and History Exhibits

CNN.com

SEARCH

TECHNOLOGY

Modern media meets Colonial Williamsburg

WILLIAMSBURG, Virginia (AP) — Thomas Jefferson isn't about to start listening to an iPod. With his sidekick, architect James O'Gorman, he's been busy in the streets of Colonial Williamsburg.

But despite the fact the restored 18th-century capital of Virginia can't use its mobile phone or laptop, it has a growing number of modern media products for visitors.

The world's largest living history museum has spent money to create its own mobile devices, ranging from iPods to MP3 players, to help visitors learn about the city's history.

## Solution #42. Basic Acoustics of Musical Instruments

Introduction to the acoustics of brass instruments

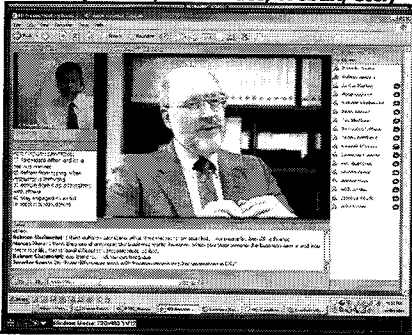
How does a trumpet work? Why does a trombone sound the way it does? Why is the French horn hard to play? This page explains the physics of brass instruments (the family that by itself family). It requires no mathematics beyond multiplication and division, nor any technical knowledge of acoustics. For a range of background topics in acoustics (waves, frequencies, resonance, decibels etc) click on "Review" in the navigation bar at left.

- Overview
- Some brass instrument families
- The brass instrument air flow
- Playing notes and tones
- Brass instruments and resonance
- Resonance and harmonics of cones with different shapes
- The effect of the lip
- The effect of the mouthpiece
- Resonance and real notes
- Harmonics of the natural trumpet and horn
  - o Harmonics of the natural trumpet
  - o Harmonics of the natural horn
- How the resonance and tone are affected by the shape of the instrument
- Notes
- Values and limits
- Different aspects of the brass instrument
- Frequency response and acoustic impedance

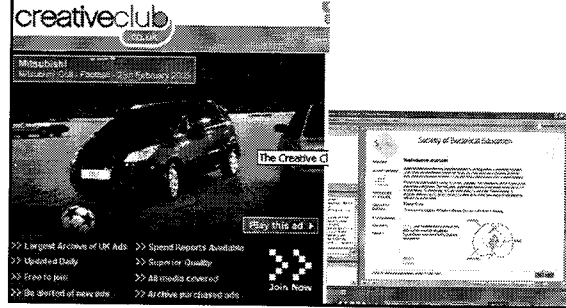
### Problem Situation #13: Lack of Instructor Presence

- Students need to see or hear from the instructor. They need a sense that the instructor is supporting their learning. They prefer face-to-face but are willing to try online.

**Solution #43. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)**



**Solution #44. Peer Critique in Breeze (Table of Benefits of Peer Critique; Park & Bonk, in review)**



**10 Predictions for Blended Learning**

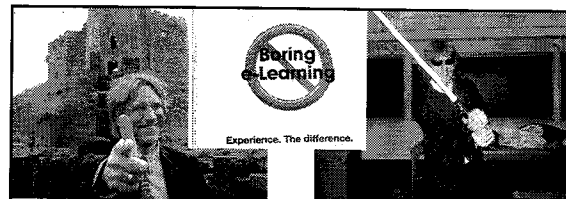
- From: Bonk, C. J., & Kim, K. J. (in press). **Future directions of blended learning in higher education and workplace learning settings.** To appear in C. J. Bonk & C. R. Graham (Eds.), *Handbook of blended learning: Global Perspectives, local designs.* San Francisco, CA: Pfeiffer Publishing.



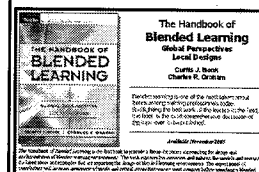
**Implications and Challenges for Blended Learning**

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.

**The End...Remember**



**Questions???**



Sample HOBLE chapters at: <http://www.publicationshare.com/>  
 Archived talks at: <http://www.trainingshare.com/>