

**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



**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: Burning Blended
Learning Q's**

(Pick any that interest you)

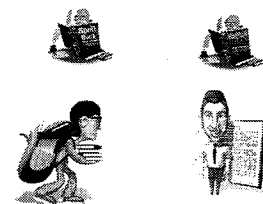
- A. What does blended learning mean?
- B. What is typically being blended?
- C. How much to blend?
- D. Why blend (advantages and disadvantages)?
- E. Where is this all headed?

**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

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.



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

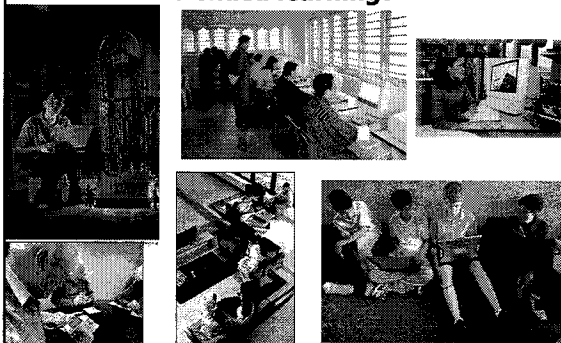
- **“Blended learning: to combine various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology.”**
(Driscoll, 2002, p. 54)

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?



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**



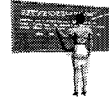
Examples of Blended Learning, Margaret Driscoll, e-Learning, March 2002

- **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**

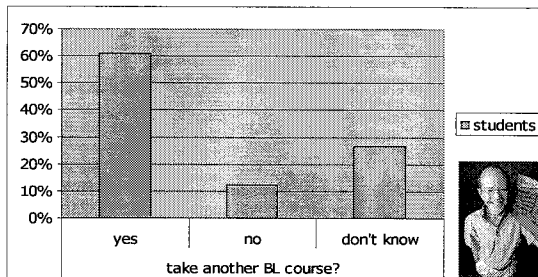


Fully Online and Blended Learning Advantages

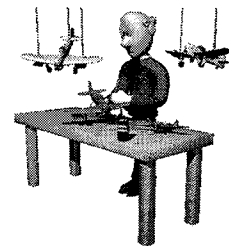
1. **Increased Learning** (better papers, higher scores)
2. **More effective pedagogy and interaction**
3. **Course access at one's convenience and flexible completion** (e.g., multiple ways to meet course objectives)
4. **Reduction in physical class or space needs, commuting, parking**
5. **Increased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

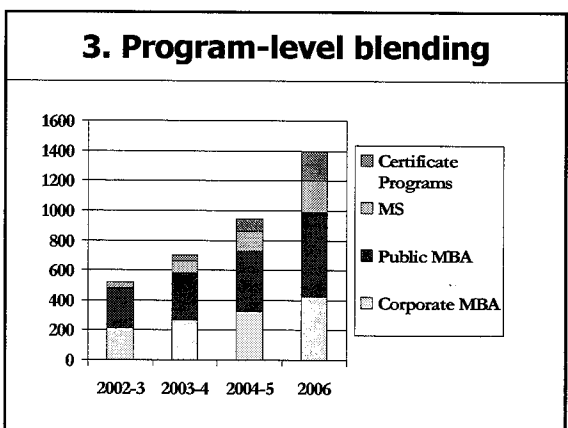
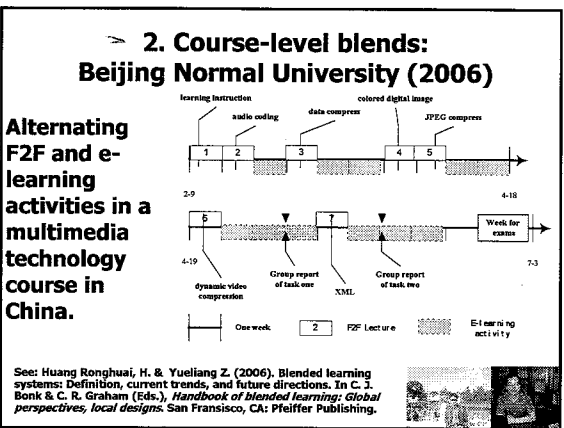
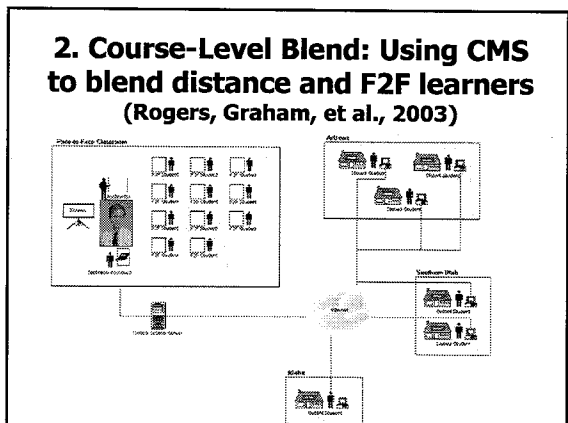
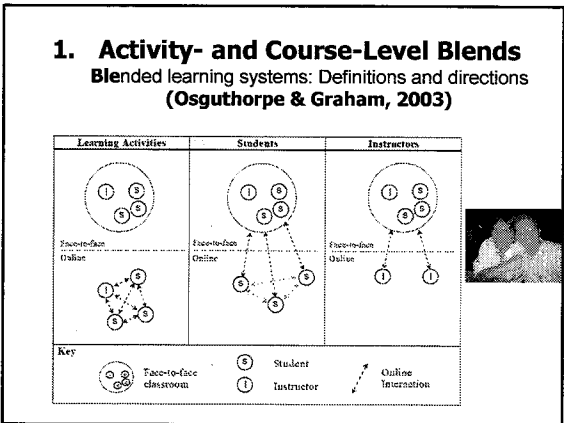
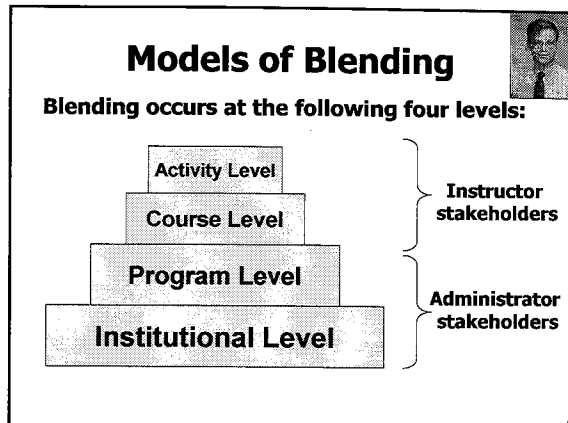
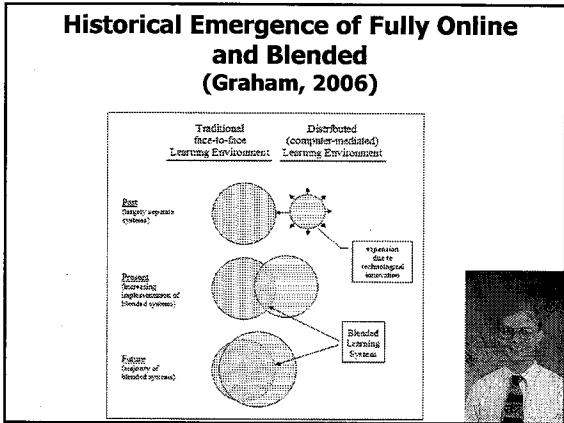


Student Satisfaction in Canada for Blended Learning (Owston, Garrison, & Cook 2006)



Frameworks and Models of Blended Learning...

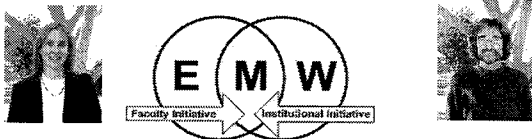




4. Institutional-level Blending

Example 1: University of Central Florida

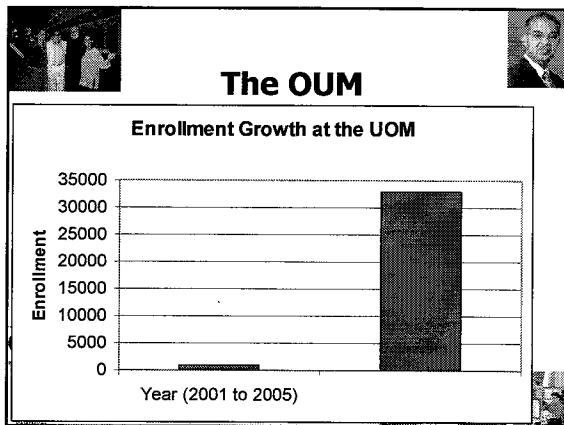
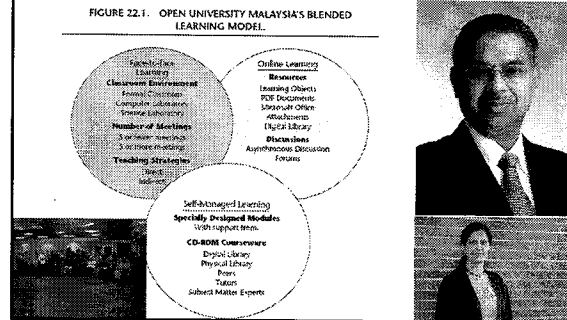
- E courses are technology enhanced courses
- M courses are blended courses with reduced seat time
- W courses are web courses (completely online)



See: Daluban, C., Hartman, J., Juge, F., Moskal, P., & Sorg, S. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *Handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer Publishing.

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

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



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 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:

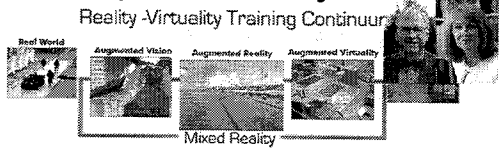
- **Fully online** - students can complete qualifications without coming onto the campus
- **Mostly online** - there is a mix of online and some on-campus work in the qualification
- **Somewhat online** - there is an online component for on-campus students
- **Supported online** - courses are taught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

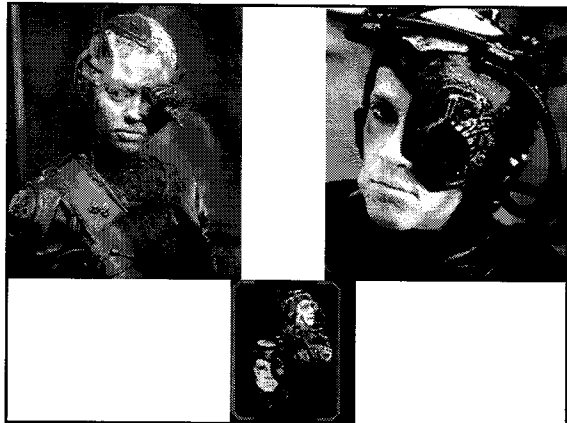
Reality-Virtuality Training Continuum



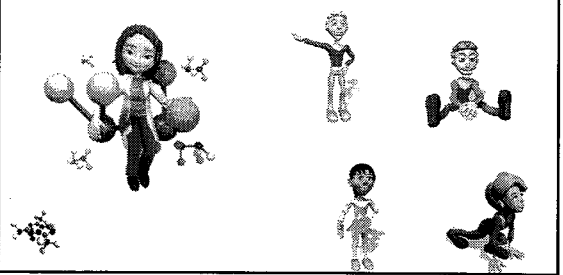
Example of levels of mixed reality that allow a blending of the real and virtual worlds.

What can we say about blended learning then???


- **It is everywhere!!!!!!!**
- **Resistance is futile!!!!!!!**



Best BL Model 99 Second Stretch Break!!!



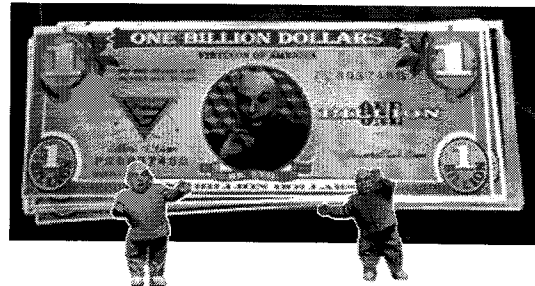
Part II: 13 Fully Online and Blended Learning Problems and 32 Solutions



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?



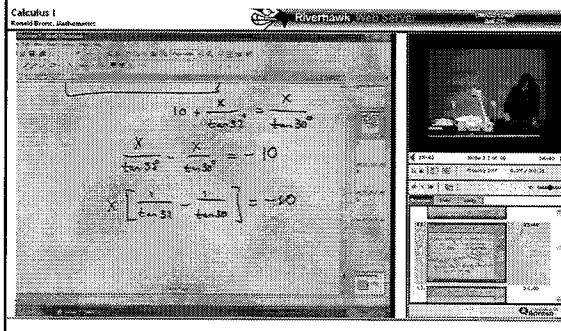
Blended Solution #1+. Sample Activities for Brief Meetings

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.

Blended Solution #2. Video Streamed and Webcast Lectures



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.

Blended Solution #3.

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 #4.

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

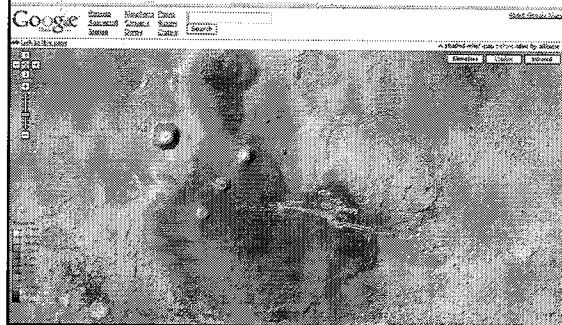
- **Texas A&M University–Corpus Christi combines CPA courseware with bi-monthly class meetings to prep for CPA Exam. (study text, proficiency questions, electronic flashcards and practice exams, scheduled assignments, goals, online grading, progress reports, tailored discussion groups, and personalized 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.**

Blended Solution #5. Electronic Cameras and Maps



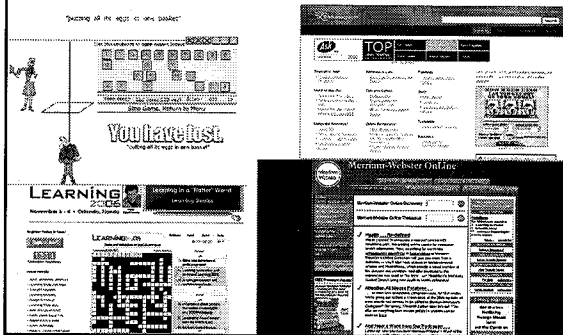
Blended Solution #6. Course Portal: e.g., self study in anatomy

Blended Solution #7: Warm-ups Online

Just-In-Time-Teaching (JiTT)

<http://webphysics.iupui.edu/jitt/jitt.html>

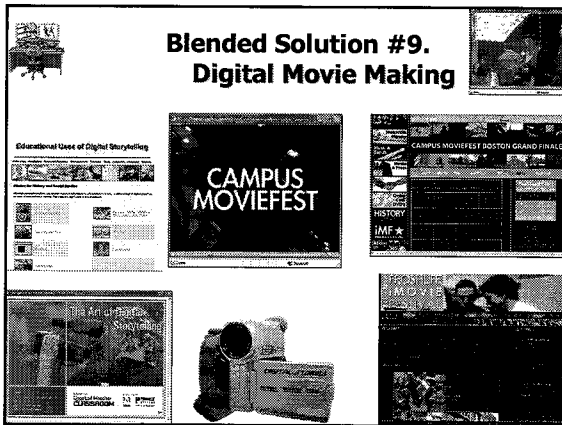
Blended Solution #8. Referenceware and Terminology Exercises Online (puzzles, games, etc.)



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.

Blended Solution #9. Digital Movie Making



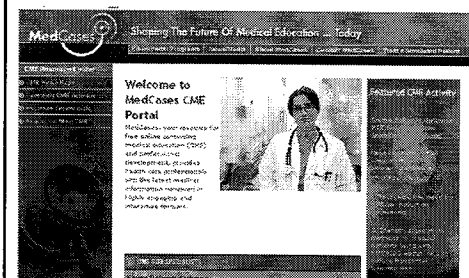
Blended Solution #10. Student Vlogging (Video Blogs) Chronicle of Higher Ed, May 11, 2007 An Anthropologist Explores the Culture of Video Blogging By JEFFREY R. YOUNG; Michael Wesch, KSU, asst prof of cultural anthro



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.

Blended Solution 11. Community of Learners: Medical and Business Cases Online (cases community) <http://optionstraining.org/login>

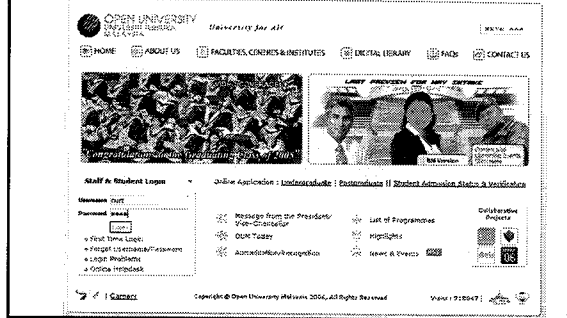


Problem Situation #7: Collaborative Skill Deficit

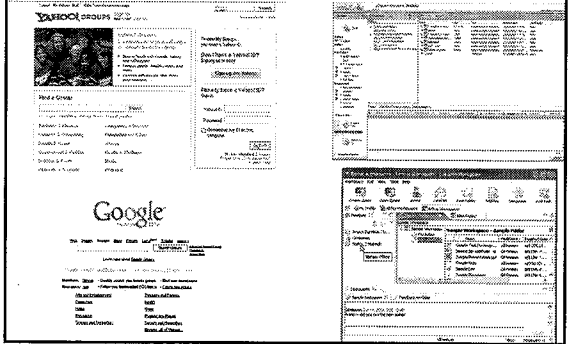
- Students need collaboration and teamwork skills. Want to build virtual teaming skills in class activities or work with learners in other locales or situations.



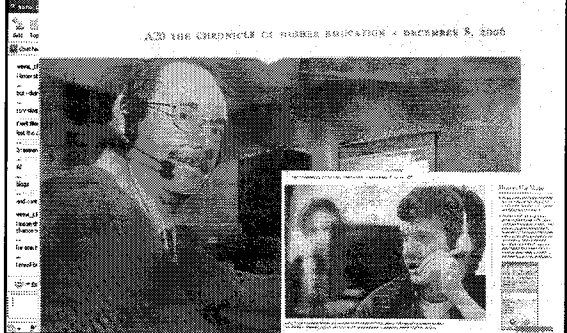
Blended Solution #12. Cross-Class Collab (Indiana Univ and Open U of Malaysia)



Blended Solution #13. Online Groups and Collaborative Tools...



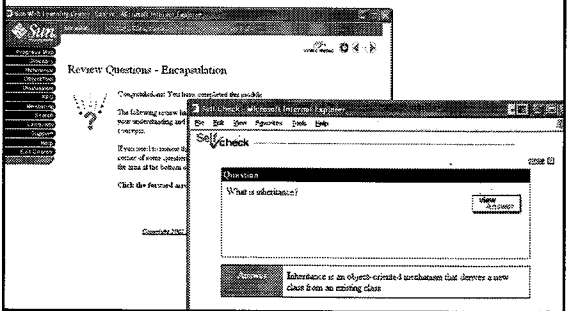
Blended Solution #14. Team Meetings in Skype



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.

Blended Solution #15. Learner-Self Interactions and Reflections

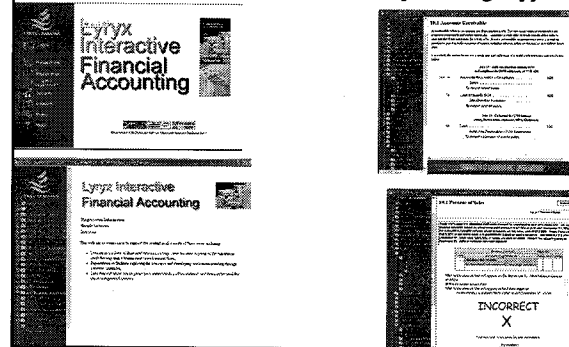


Blended Solution #16. Workplace and Field Reflections

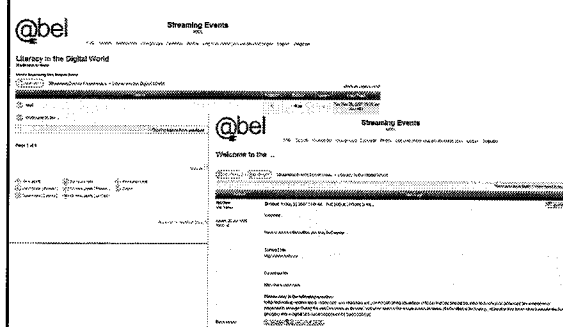
1. Instructor provides reflection or prompt for job related or field observations
2. Reflect on job setting or observe in field
3. Record notes on Web and reflect on concepts from chapter
4. Respond to peers
5. Instructor summarizes posts



Blended Solution #17. Online Simulation: Financial Accounting; (University of Calgary)



Blended Solution #18. Asynchronous Discussion of Weekly Topics

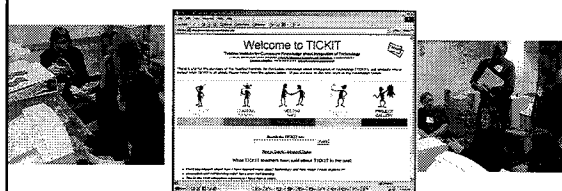


Problem Situation #9: Learning Community

- 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.

Blended Solution #19: Teacher Professional Development in Technology Integration (the TICKIT Program)


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



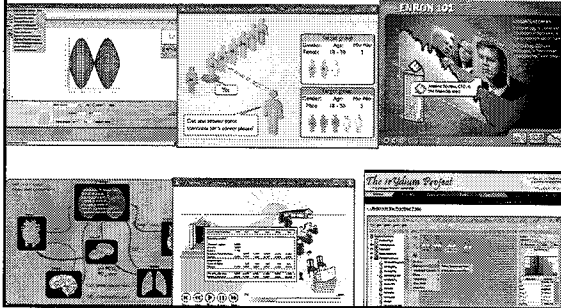
TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology

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.



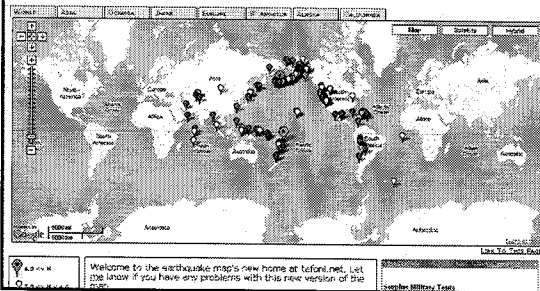
Blended Solution #20. 3-D Visualization & Laboratory Software



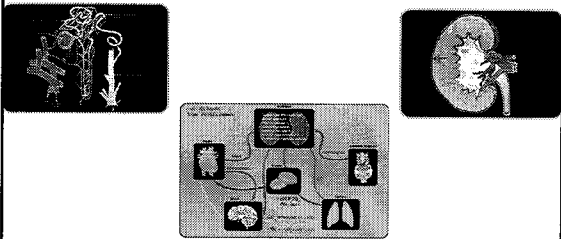
Blended Solution #21. Use Google Maps Mashups in K-12 Educ

By Jeffrey Branzburg, May 15, 2006
<http://www.techlearning.com/story/showArticle.jhtml?articleID=187002846>

Maps: Earthquakes in the last week

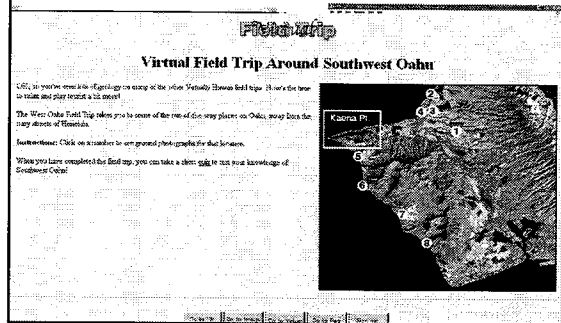


Blended Solution #22. Flowcharts, Diagrams, Maps, etc.



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 #23. Exploration and Demonstration: Virtual Fieldtrip and Tours



Blended Solution #24. Assign a YouTube Videos to Watch and Reflect on



Blended Solution #25. Virtual Worlds/Virtual Reality/MMOG (e.g., Second Life)



Blended Solution #26. Reading Vlogs
e.g., Andy Calvin's Waste of Bandwidth

The image shows a screenshot of a reading vlog. It features a main text area on the left, a video player in the center with a play button, and several smaller video thumbnails on the right. The interface is clean and modern, typical of a web-based learning platform.

**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.

A small inset image shows a group of students in a laboratory or classroom setting, engaged in a hands-on activity. They appear to be working together at a table, possibly conducting an experiment or a project.

BlendedSolution #27. 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)

The image displays a screenshot of educational simulation software. It features a central video player showing a medical scene, with various control buttons and text overlays. The interface is designed to provide an immersive learning experience for medical students.

Blended Solution #28. Real World Problems (PBL online): Real-time Cases

Supercharging the case method, making it more realistic and engaging

The image shows a screenshot of a real-time case study interface. It includes a video feed of Professor Jeffrey Thomas, a text area with the title "Supercharging the case method, making it more realistic and engaging", and various navigation and control elements. The interface is designed to facilitate real-time problem-based learning.

**Blended Solution #29.
Video Scenario Learning**
(Option 6, Arjuna Multimedia, Bloomington, IN)

The image displays a screenshot of a video scenario learning interface. It features a large video player showing a man in a suit, with a control panel below it. The interface is designed to provide a structured learning experience through video scenarios.

Blended Solution #30. 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

A small inset image shows a videoconferencing session. It depicts a group of people in a virtual meeting environment, likely engaged in a tutoring or instructional activity. The interface includes video feeds and communication tools.

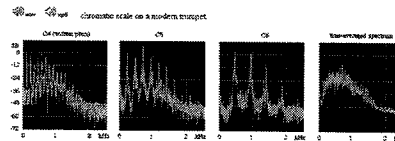
Problem Situation #12: Preference for Auditory Learning

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

Blended Solution #31. Basic Acoustics of Musical Instruments

Spectra of brass instruments.

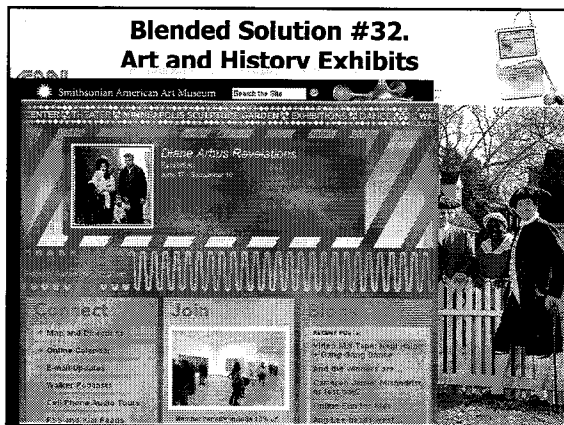
When the player and instrument are playing a particular note, the lips are vibrating at one particular frequency. But, depending on the vibration is large, as it is when playing freely, it generates harmonics in the sound (see *What is a sound spectrum?*). These harmonics in the lip vibration set up, and are usually in turn reinforced by, standing waves, because the instrument is engaged to produce standing waves with various frequency modes. Let's listen to a chromatic scale played on a modern trumpet, and look at the spectra.



The three individual spectra are for the lowest note played (written C4 = sounding Bb3), and the next one and two octaves higher. The fourth spectrum is the average over time for the whole scale. Why do the spectra have that characteristic shape?

In all wood instruments, the higher frequency harmonics are relatively weak because they lose energy as various losses — a mix of friction with the walls, as the reeds do, or sharp or high frequencies. However, for brass instruments, the radiated power sometimes increases with frequency over the low part of the range, as here. This means that one needs to get maximum radiation at a moderately high frequency (typically around several hundred Hz, although it has a different value in each lip reed instrument), and less power at lower and higher. Further, the radiated air is far quieter and the construction beyond it also tend to show the lips most efficiently at this frequency, further contributing to the result.

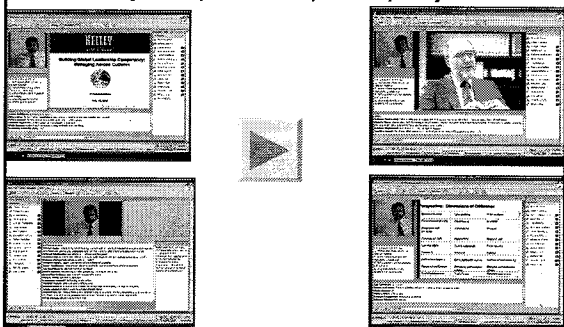
Blended Solution #32. Art and History Exhibits



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.

Blended Solution #33. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)



Blended Solution #34. Peer Critique in Breeze (Table of Benefits of Peer Critique; Park & Bonk, in review)

- Providing immediate feedback
- Increasing interactions among participants
- Encouraging to exchange multiple perspectives
- Enhancing dynamic interactions
- Promoting passive to become active
- Strengthening social presence allowing to exchange of emotional supports
- Apply skills just learned
- Exchange constructive feedback on each other's projects

