

**Blended Learning:
Situations and Solutions**



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<http://SurveyShare.com>



This part of 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
6. Challenges for blended learning



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

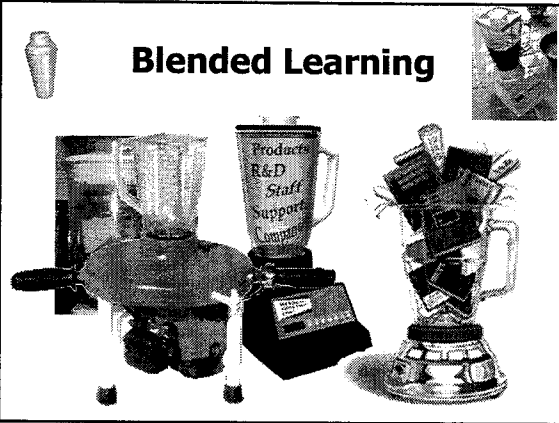
A = yes

B = no

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



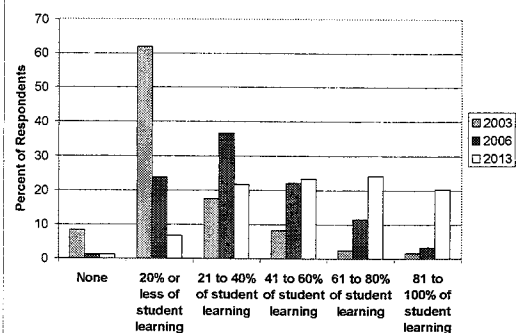
Blended Learning



Poll #2. What are you???

- A. Professor, trainer, instructor, lecturer
- B. Director or staff in a learning center, instructional designer, etc.
- C. Policy maker, government official
- D. Administrator, Dean, President, etc.
- E. Graduate student
- F. Corporate trainer, corporate director
- G. Other

Percent of Student Learning that is Blended



Emergence of Blended Learning Systems in Higher Ed

In 2002 the President of Pennsylvania State University said that the convergence between online and residential instruction was "the single-greatest unrecognized trend in higher education today."

Young, J. R. (2002, March 22). 'Hybrid' teaching seeks to end the divide between traditional and online instruction. *Chronicle of Higher Education*, pp. A33.

Blended Learning Definitions

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

The three most commonly cited definitions include:

1. BL = combining instructional modalities (or delivery media)
2. BL = combining instructional methods
3. BL = combining online and F2F instruction

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)

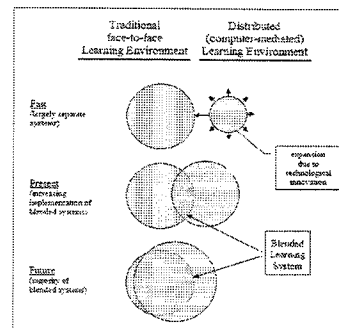
2. Blending Instructional Methods

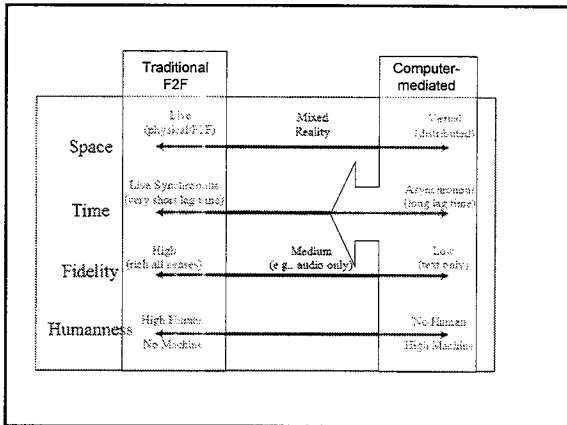
- "Blended learning: to combine various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology." (Driscoll, 2002, p. 54)

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)

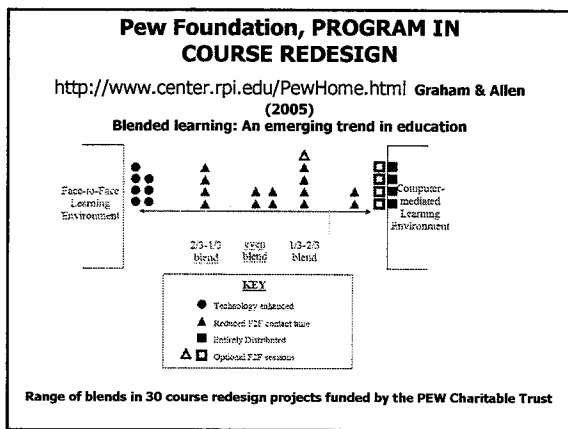
Historical Emergence of BL





Why Blend? 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

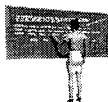


What are the advantages (and disadvantages) of blended learning?



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



Hybrid Classes: Maximizing Resources and Student Learning

http://courses.durhamtech.edu/tlc/www/html/Special_Feature/hybridclasses.htm

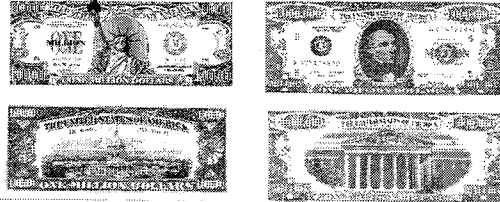
- Approximates real world/collaboration
- Students learned more, wrote better papers, performed better on exams, produced higher quality projects
- Students engaged in doing, rather than just experiencing or reading
- Students can review prerecorded lectures and access course notes/materials
- Presents materials in range of formats
- Lower withdrawal rates

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. Good ideas but lack of time, money, & support



Ok, Million Dollar Question: Where is blended learning beneficial?



Where is Blended Beneficial?

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

- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive 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



Upcoming 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



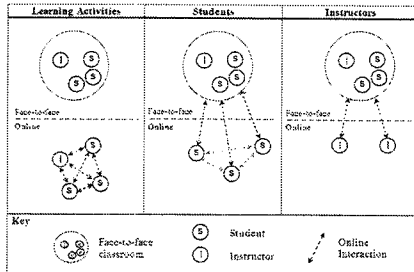
Models of Blending

Blending occurs at the following four levels:

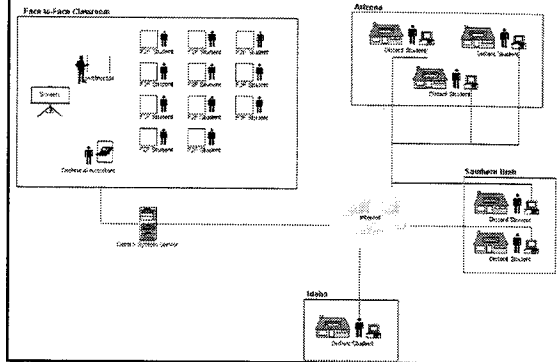
1. The **activity** level (e.g., start debate in class and complete it online)
2. The **course** level
3. The **program** level
4. The **institutional** level

1. Activity- and Course-Level Blends

Blended learning systems: Definitions and directions
(Osguthorpe & Graham, 2003)



2. Course-Level Blend: Using CMS



2. Course-level Blends

Jagannathan, S. (in press).

- Alternating F2F and e-learning activities in World Bank course.

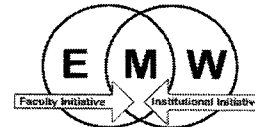
Session 1 Session 2 Session 3 Session 4

Background readings & notes	Small group discussion	Apply models to real case	Self-paced work to reinforce learning
Print or Web	Facilitator/online	Print, PDF or-discussions	Web, CD-ROM, print
+ Via Videoconferencing			
Topic 1	Topic 2	Topic 3	Topic 4
Introduce analytical model	Comments on group work, new concepts	Groups present, instructor clarifies & summarizes	Links from self-paced to analytical model

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: Cobble, C., Hartman, J., Page, F., Moskau, P., & Sarg, S. (in press). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), Handbook of blended learning: Global perspectives, local design. San Francisco, CA: Pfeiffer Publishing.

4. Institutional-level Blending

(Brian Linquist, in press)

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 Learning Form Factors

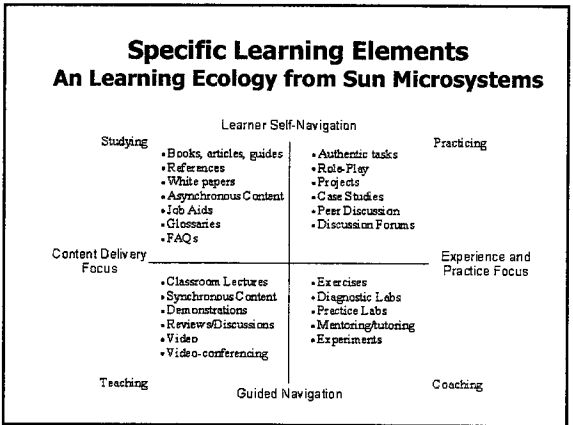
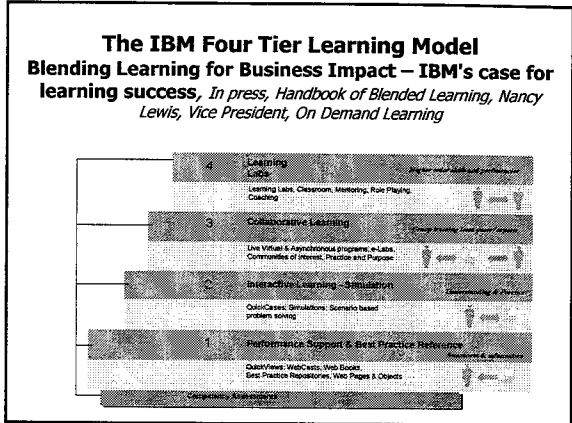
(copyright Microsoft, Ziob & Mosher, in press;
Handbook of Blended Learning Environments)

Live instructor-led	Self-paced learning	Tools for learning communities
<ul style="list-style-type: none"> • Traditional classroom • Onsite engagement • Virtual online classroom • Live video via satellite or videoconferencing • Online coaching/mentoring 	<ul style="list-style-type: none"> • Instructor-led classroom via e-mail • Online or computer-based training (CBT) • Self-study guides, manuals, texts • Online resources and databases 	<ul style="list-style-type: none"> • Chat • Instant messaging (IM) • Newsgroups and forums • Collaboration

Blended Learning Scenario

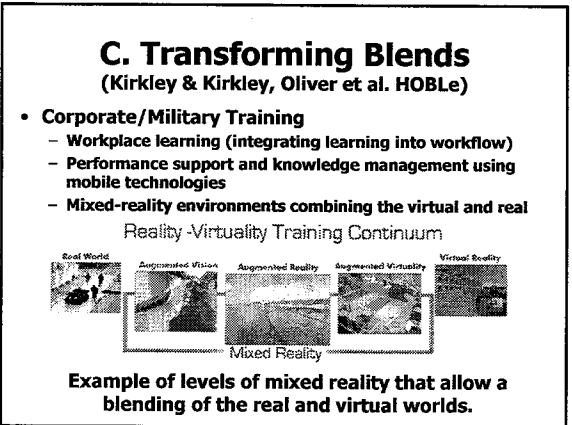
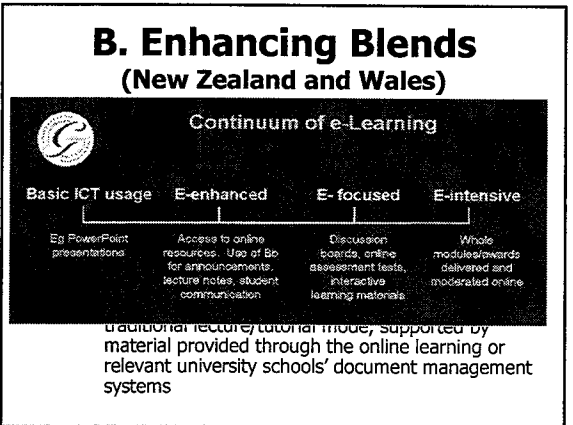
(copyright Microsoft, Ziob & Mosher, in press;
Handbook of Blended Learning Environments)

Pre Class	Day 1	Day 2	Day 3	Day 4	Day 5	Post Class
Self-study prep	In classroom	Virtual class	e-Learning	Virtual class	In classroom	Community newsgroups



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.

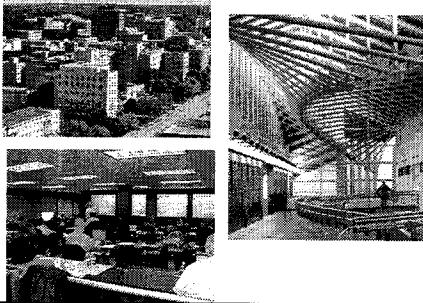


What can we say about emerging technology then???

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



Blended Learning Problems and Solutions (40 examples)



Problem Situation #1: 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 #1. Video Streaming Course Sessions (e.g., BobWeb)

IStream

Please enter your IP (or host name, e.g., 215.310) and click on continue to see a list of streamed class sessions. If you are a...

For help, please see the IStream Help Page

Streamed Class Sessions for 546

Department	Course ID	Section	Date	Part	Media Type	Stream (click to play)	Download
EDUC-P	546	06006	01/22/2005		Real	Real Player	Download (641.813K)
EDUC-P	546	06006	01/15/2005		Real	Real Player	Download (634.243K)

For more information about this course, e-mail: jpratt@bobweb.edu. Dr. Scott J. Pratt, Southeastern Louisiana University, 7000 Lakeshore Drive, Hammond, LA 70402

This course was developed by Edg... with support from the Louisiana State Department of Education

Problem Situation #2: 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 #2.

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).



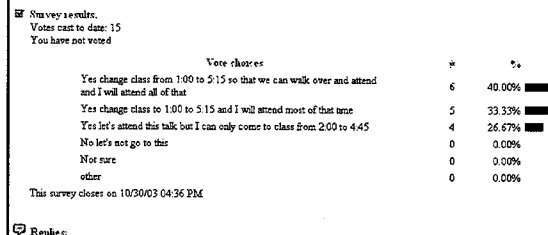
Blended Solution #3. Post Foreign Language Practice Exercises Online (Grammar Practice on Spanish (Pew course))

Problem Situation #3: 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.

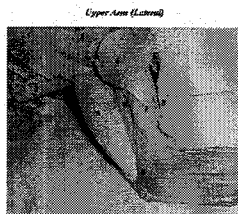
Blended Solution #4.

Use Async Forum or Course Management System (Discussion Forums, Surveys, Word Docs, Web Links, PP slides)



Blended Solution #5. Instructor Portal: e.g., self study in anatomy

Upper Extremity Muscles



Problem Situation #4: 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 #6.

Survey Research (e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyKey)

The collage shows four different survey software interfaces. SurveyShare.com features a 'Survey Console' and 'Online Surveys without Limits'. WebSurveyor highlights 'Survey Data Services'. Zoomerang promotes 'Direct Surveys & Get Feedback!'. SurveyConsole offers 'Survey Tools' and 'Survey Reports'.

Blended Solution #7. The Valley of the Shadow

The map is titled 'The Valley of the Shadow' and 'The Eve of War'. It shows a central 'Reference Center' surrounded by 'Letters & Diaries', 'Maps & Images', 'Newspapers', 'Census & Tax Records', and 'Site Maps'. A timeline at the bottom indicates 'Fall 1859 to Spring 1861'. The map is credited to 'The Valley of the Shadow'.

Problem Situation #5: 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 #8. Apprenticeship in Professional Devel Sites (jobs, organizations, mentors, conferences, etc.)

The collage includes a screenshot of 'IEEE Career and Employment Resources' with a list of links such as 'Job Alerts', 'Job Postings', and 'Career Development'. It also features a logo for 'AICPE' and a video thumbnail showing a person in a laboratory setting.

Blended Solution #9. Virtual Psychiatric Interview (Trinity College, Dublin)

showcases

22

Department: **Psychiatry**
Academics: Prof. Michael O'R, Dr. Brian Fitzmaurice, Kate Armstrong

The screenshot shows a virtual interview environment with a video feed of a person and a text input area. The text input area contains the text: 'Psychiatric Interview: The Interview'.

This is a Virtual Interview project that has been developed by CLT and the Department of Psychiatry. The first iteration was launched in March, 2014 for students. In this project students are given the opportunity to carry out a virtual interview with a patient. The student decides what questions are asked and with the aid of video cross can listen and watch the patient responses.





Blended Solution #10. Webinars Synchronous Learning Example

The screenshot shows the 'HorizonLive' interface. On the left, a list of features includes: Audio/Video, Interactive Chat, Slide List, Polls and Surveys, eLearning Templates, eBoard, LiveApp, and Archives System. On the right, there is a video player showing a webinar session.


Blended Solution #11. E-mail Expert Job Interviews (or post from actual internships)

Field Definition: Have student interview (via e-mail, if necessary) someone working in the field of study and share their results

- As a class, pool interview results and develop a group description of what it means to be a professional in the field.

Blended Solution #12. Virtual Surgery



Virtual Autopsy Scores Some Success

The virtual autopsy is poised to get the most widespread use as the virtual autopsy, they expect to be developed.

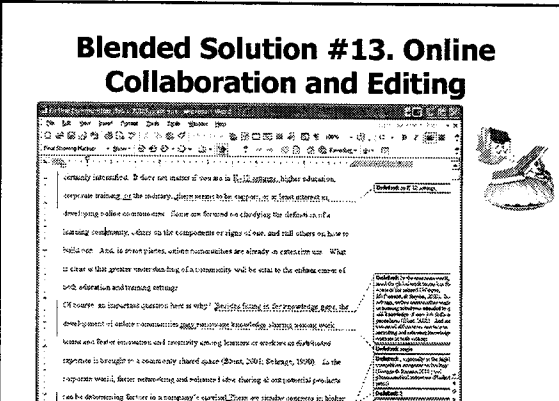
Such studies by leading virtual autopsy experts like Atsuhiko Osumi (Japan) and the State Health Virtual Autopsy Center (Japan) are expected to see the number of autopsies performed in their labs, which have declined in recent years. A body is preserved with a headless method of preserving the body, then scanning the specimen on the scanner, and then a computer reconstructs the body.

By performing virtual autopsies, forensic pathologists can avoid the need for a physical autopsy. The use of such systems to medical training.

Problem Situation #6: 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 #13. Online Collaboration and Editing



...currently interested. If there are members of you are in field, attend higher education, ...

...young people continue. There are focused on studying for degree in a ...

...learning community, a class on the component or right of one, and still others to have to ...

...hills are. And, in general, when communities are already in existence, what ...

...to ease the greater number of a community will be able to the extent of ...

...and training settings.

...of course, an important question here is why? ...

...development of online communities ...

...and their resources and resources using business or services or ...


...response is brought in a community shared space (Bhat, 2001; DeLong, 1999). In the ...

...response will, faster networking and reduce time sharing of ...

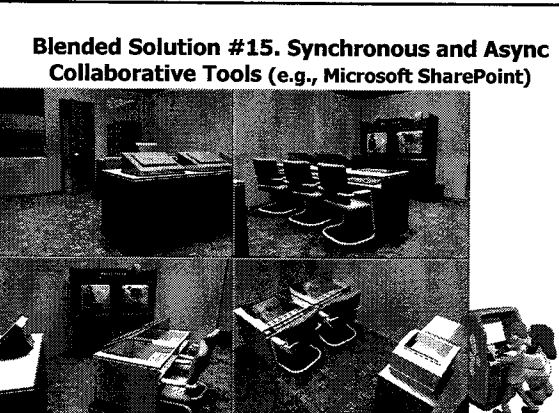
...can be determining factors in a company's survival, ...

Blended Solution #14. Gallery Tours, Team Products

- Team or Course White Paper, Business Plan, Study Guide, Glossary, Journal: Have students work in teams to produce a product and share with other groups
- Post work to online gallery. Expert Review and rate projects (authentic audience)
- Students generate products for the class



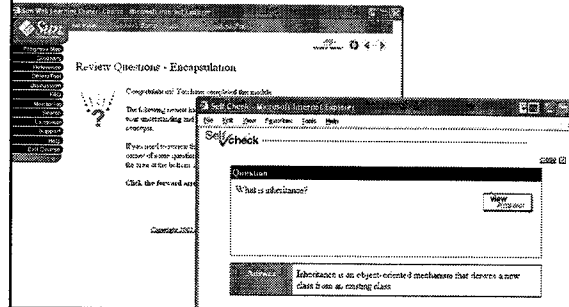
Blended Solution #15. Synchronous and Async Collaborative Tools (e.g., Microsoft SharePoint)



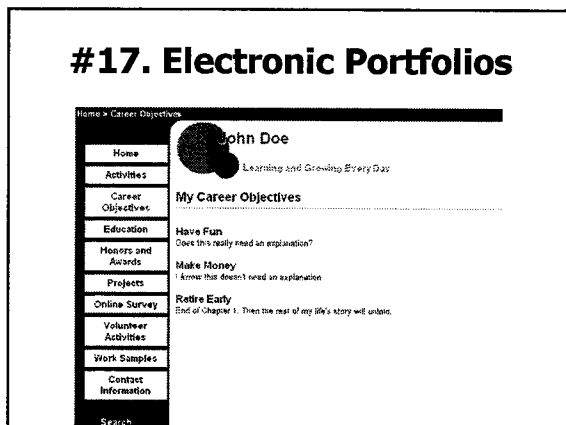
Problem Situation #7: Student Reflections and Connections

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

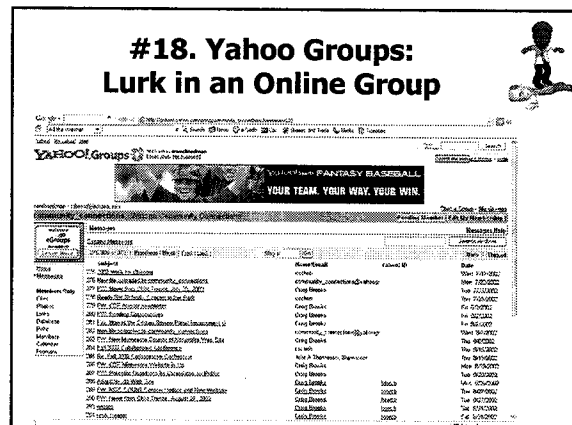
Blended Solution #16. Learner-Self Interactions (Sun Microsystems)



#17. Electronic Portfolios



#18. Yahoo Groups: Lurk in an Online Group



Blended Solution #19. 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

Problem Situation #8: 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 #20: Teacher Professional Development in Technology Integration (the TICKIT Program)

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

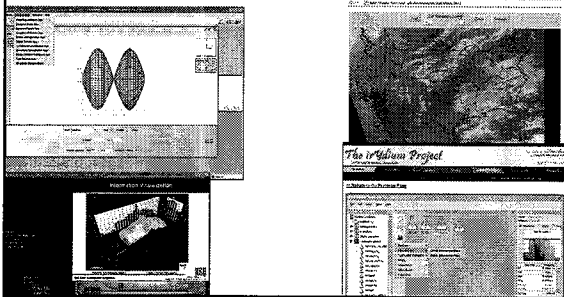


TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology

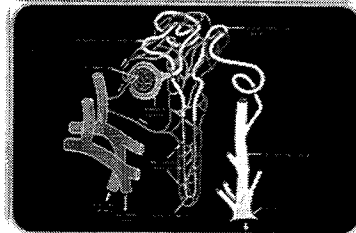
**Problem Situation #9:
Need to Visualize Content**

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

Blended Solution #21. 3-D Visualization & Laboratory Software



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

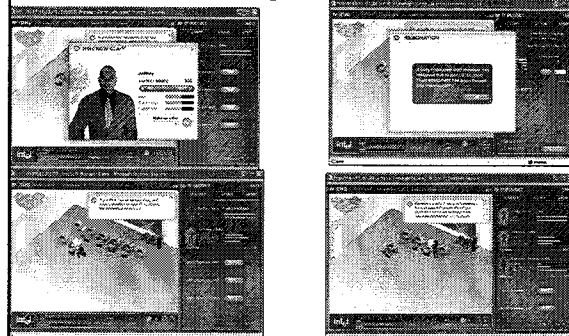


Elements in the system for control of oxygenation in the human body (e.g., the Kidney): From: Next-Generation Educational Software Why We Need It and a Research Agenda for Getting It. Van Dam, Becker, & Simpson, *Educause Review*, March/April 2005

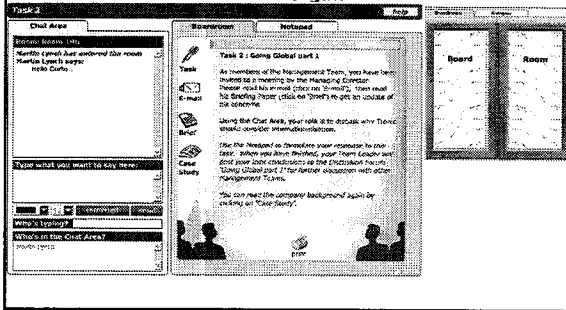
**Problem Situation #10:
Need for Hands-On Learning**

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

Blended Solution #23. Intel IT Manager Game



**Blended Solution #24.
Online Synchronous Cases and Teams
Simulated Boardroom Chat; College Wales, Univ. of
Glamorgan**



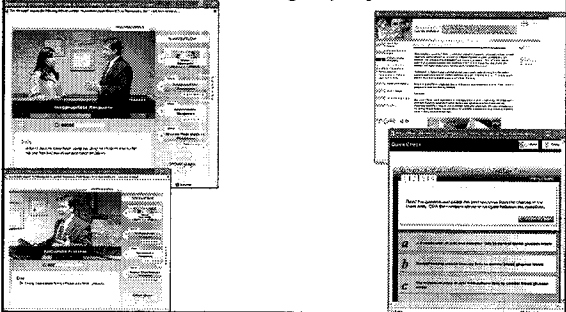
**Blended Solution #25. Posting Oral Histories,
Interviews, and Perspective Sharing**

Have learners relate the course material to a real-life experience.

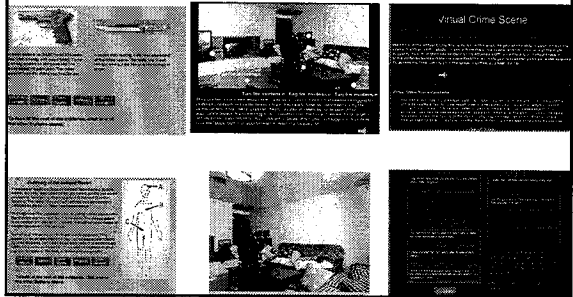
Example: In a course on Technology & Culture, students freely shared experiences of visiting grandparents on rural farms.



**Blended Solution #26.
Video Scenario Learning (Option 6,
Bloomington, IN)**



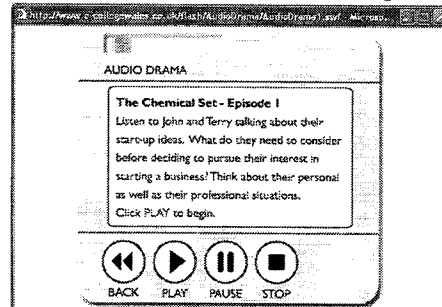
**Blended Solution #27.
Cascaded Instruction (e.g., A
Virtual Crime Scene)**



**Problem Situation #11:
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 #28.
Audio Dramas
eCollege Wales, Univ. of Glamorgan**



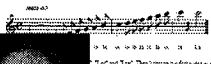

Blended Solution #29. Basic Acoustics of Musical Instruments

Sound files

These sound files do not form part of the study; they are simply illustrative of the phonetic effect of the widely spaced harmonics and the resonance tuning. For these recordings, an experienced soprano, who had no knowledge of the purpose of the study, was asked to sing an ascending scale over two octaves, from Eb2 to Eb5. She was asked to sing the scale five times, each time using a different vowel sound. The vowels (phonetic symbols in parentheses) are those in the English words: "hat" (ə), "heat" (i), "hit" (ɪ), "hit" (i), "hit" (i), and "hit" (i), but sang with an initial consonant "L". (The music and the phonemes to be sung were presented in writing.)

Response challenge

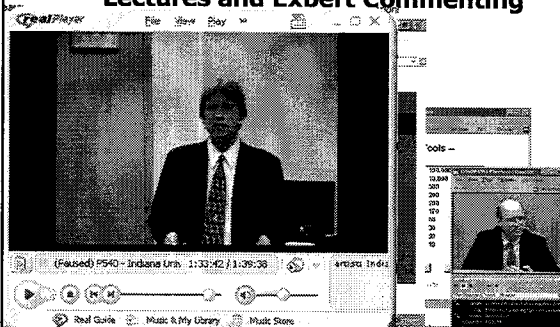
Download a program and the data used in the study. Use the information in the phonetic symbols to all aspects, to make an error of identity, unless you wish to do so. To prepare the session described in the study file above, all the parts of the program and a computer to help you. It would help if you had some musical notation such as the one for the different notes and harmonics. To help you, the study file above, in your professional judgment, with previous knowledge, in your available time, you could want to make a copy of the page.

Problem Situation #12: 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 #30. Video Streamed Lectures and Expert Commenting




Poll #3. Which blended learning strategy might like to try?

- Post assessments and reviews online
- Follow-up activities in a community of practice
- Put reference materials on the web
- Use online mentors, experts, and coaches
- Rely on instant messaging and chat

Poll #4. What blended ideas do you think work or have you tried?

- Online simulations, games, demos, and hands-on activities
- Online surveys, polls, research, and authentic data collection
- Extensive Web explorations (student selected and reported)
- Extensive Web support materials (papers, discussion forums, test examples)
- Alternative class and face-to-face meetings and activities

Implications for Blended Learning in Higher Education



Some Implications of Blended Learning

- Instructors can be anywhere
- Students expect choices
- More corp partnerships
- Courses more modular
- More individualization
- Scheduling a nightmare!



Six Important Challenges and Issues

1. The role of live interaction
2. Role of learner choice and self regulation
3. Models for support and training
4. Digital Divide
5. Cultural adaptation
6. Finding balance between innovation (creativity) and production (need for cost reduction)

The End...Remember



It's Over...

Poll #5. Ok, then, who wants more???

A. Yes
B. No
C. Not sure

Sorry...it really is the end!!!



Your skeletal muscles' maximum burn rate is double that of your brain. Think about it.



Any questions, comments, or concerns?



The Handbook of Blended Learning
Global Perspectives
Local Designs
Curtis J. Bonk
Clayton R. Koppelman

Sample HOBLE chapters at:
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