

**Blended Learning Models, Frameworks, Stories,
Examples, and 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



**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**

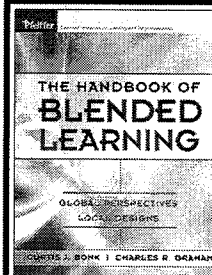


Blended Learning

- What is blended learning?
- What is being blended?
- How much to blend?
- Why blend?
- How to blend?



**Handbook of Blended Learning (HOBLe):
Global Perspectives, Local Designs
Expected Release: December 16, 2005?**



**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)

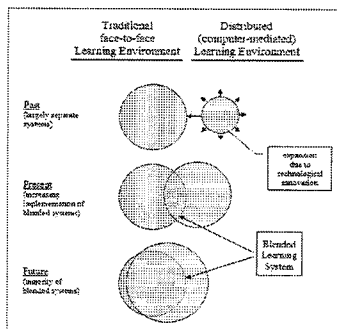
2. Blending Instructional Methods

- "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)
- "Hybrid or blended model of learning replace some in-person meetings with virtual sessions, hybrid courses offer some of the convenience of all-online courses without the complete loss of face-to-face contact." (Young, 2002, p. A33)

Historical Emergence of BL



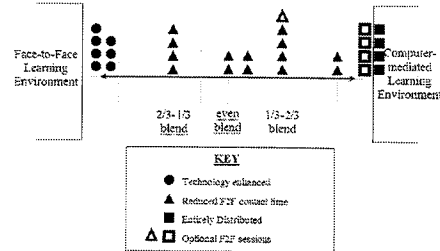
Why Blend? Three Key Reasons

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

Pew Foundation, PROGRAM IN COURSE REDESIGN (Carol Twigg, August 2004 Keynote Presentation at Wisconsin DL Conference)
<http://www.center.rpi.edu/PewHome.html>

To encourage colleges and universities to redesign their approaches to instruction using technology to achieve cost savings as well as quality enhancements.
\$6 million 30 projects

Graham & Allen (2005)
 Blended learning: An emerging trend in education



Range of blends in 30 course redesign projects funded by the PEW Charitable Trust

IMPROVED LEARNING OUTCOMES from Technology

(Carol Twigg, August 2004 Keynote Presentation)

- Penn State - 68% on a content-knowledge test vs. 60%
- UB - 56% earned A- or higher vs. 37%
- CMU - scores on skill/concept tests increased by 22.8%
- Fairfield - 88% on concept retention vs. 79%
- U of Idaho - 30% earned A's vs. 20%
- UMass - 73% on tougher exams vs. 61%
- FGCU - 85% on exams vs. 72%; 75% A's and B's vs. 31%
- USM - scored a full point higher on writing assessments
- IUPUI, RCC, UCF, U of S Maine, Drexel and U of Ala - significant improvements in understanding content

**25 of 30 have shown improvement;
 5 have shown equal learning.**

REDUCTION IN Drops, Failures, and Withdrawal RATES

(Carol Twigg, August 2004 Keynote at Wisconsin DL Conference)

- U of Alabama - 60% to 40%
- Drexel - 51% to 38%
- Tallahassee CC - 46% to 25%
- Rio CC - 41% to 32%
- IUPUI - 39% to 25%
- UNM - 39% to 23%
- U of S Maine - 28% to 19%
- U of Iowa - 25% to 13%
- Penn State - 12% to 9.8%

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/tic/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
- Supplementary classes
- New requirements for a profession
- Massive and widespread audience
- 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



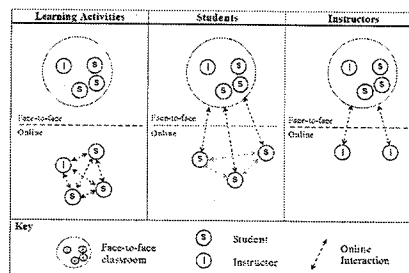
Models of Blending

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-Level Blends

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



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

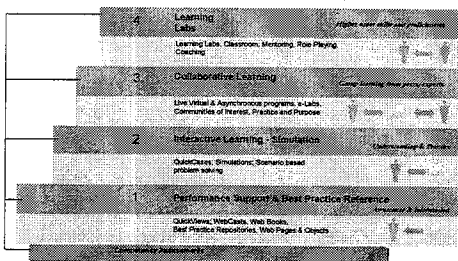
Blended Learning Scenario

(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

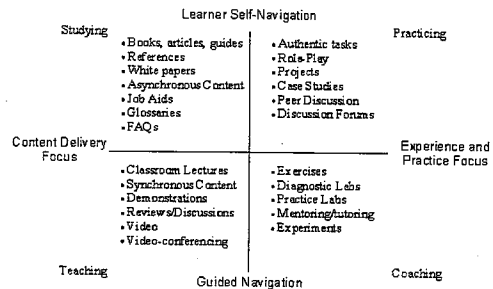
The IBM Four Tier Learning Model

Blending Learning for Business Impact – IBM's case for learning success, *In press, Handbook of Blended Learning, Nancy Lewis, Vice President, On Demand Learning*



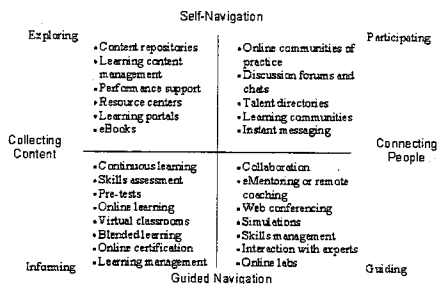
Specific Learning Elements

An Learning Ecology from Sun Microsystems



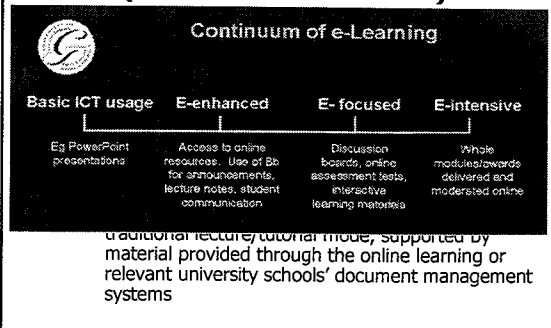
Specific Knowledge Resources

An Learning Ecology from Sun Microsystems



B. Enhancing Blends

(New Zealand and Wales)



Future learning systems may not be differentiated as much based on *whether* they blend but rather by *how* they blend.

- (paraphrase from Ross and Gage, WebCT)

What can we say about blended learning then???

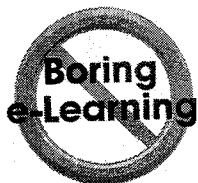
- **It is everywhere!!!!!!!**
- **Resistance is futile!!!!!!!**



3 3 3 3
Reflection: What are 3 things you learned so far?

3 3 3 3 3 3 3 3 3 3

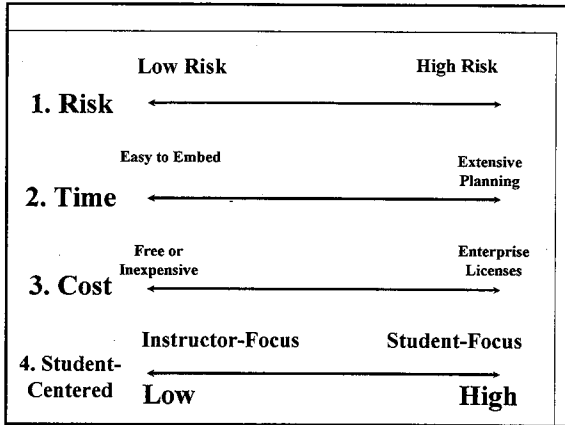
Boring Blended Learning???



Experience. The difference.

Blended Learning Problems and Solutions (50 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)**

Best of Bonk Handouts
For more information, contact Bob@BobWeb.com

Creativity Tests: Creative Behavior Inventory (Lees-Haley, 1978)
The Creative Behavior Inventory is a self-reported checklist of creative behaviors that the respondent has engaged in in the past.

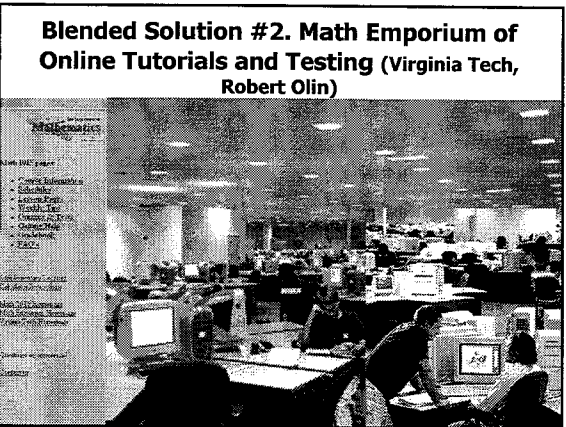
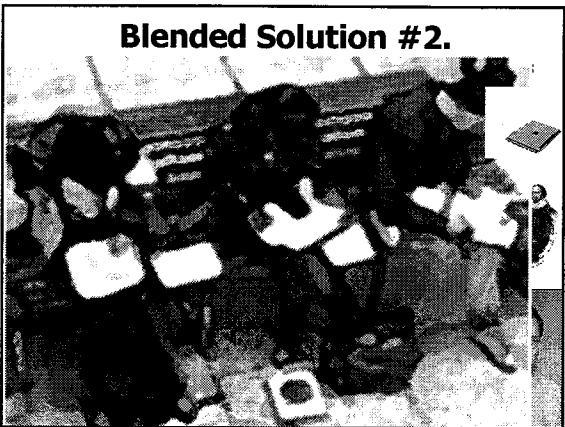
Have you ever published a poem?
 never once or twice often all the time all the time or more

McLennan
 Administration
 Anyone can administer the Creative Behavior Inventory.

Also See
 Creativity Activities Checklist
 Statement of Past Creative Activities

**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 #3. CPA Exam Review (June 14, 2003) and Web Videos in Accounting (July, 2003)

- Texas A&M University-Corpus Christi combines CPA coursework 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.)

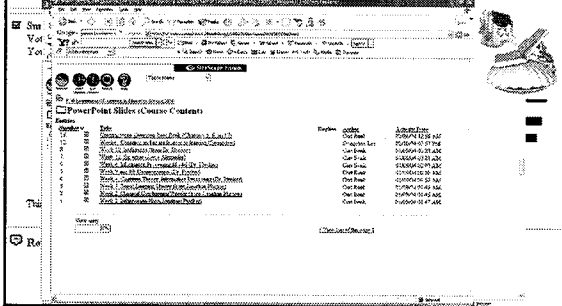


Problem Situation #3: Web Supplemental Activities

- 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.

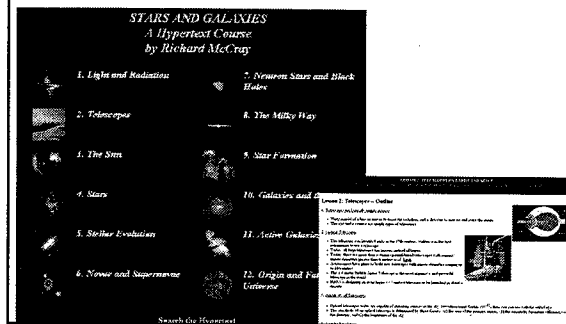
Blended Solution #4.

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

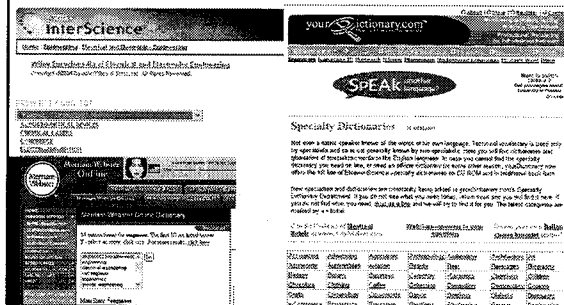


Blended Solution #5.

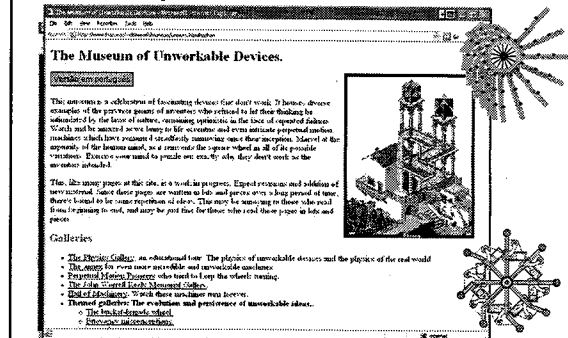
Extensive External Web Links (e.g., Astronomy class)



Blended Solution #6. Use of Online Reference Materials (e.g., Content Encyclopedia and Dictionaries on Web in Engineering)



Blended Solution #7. Exploration: Virtual Museums



Blended Solution #8. Post Foreign Language Practice Exercises Online (Grammar Practice on Spanish (Pew course))



Blended Solution #9. Just-In-Time-Teaching (JiIT) Created by Gregor Novak, IUPUI Physics Professor

JUST-IN-TIME TEACHING

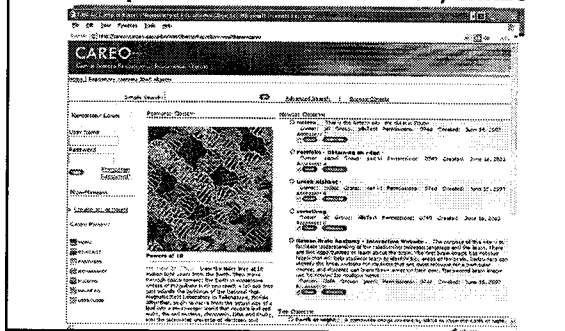
Learning and teaching should be designed to maximize and tailor to the needs of the individual student. The methodology provides an adaptive, individualized, and customized, step-by-step, and on-line process and tools.

JiIT Adopted: 137 courses, 137 professors, 137 institutions in the US. Can be found at: www.jiit.org

The idea of JiIT is an example of a new approach to education. It is designed to be a response to the needs of the 21st century. It is a new way of thinking about education. It is a new way of thinking about learning. It is a new way of thinking about teaching. It is a new way of thinking about the future of education.

For a complete list of JiIT courses, visit the JiIT website at: <http://www.jiit.org>

Blended Solution #10. Online Course Portals and Digital Libraries for Student Exploration Activities: MERLOT, CAREO



#10. Continued

RNA was the first genetic molecule.

Links

The Possible Life of RNA

This site has video clips from Dr. Thomas Cech's 1995 lecture about RNA genes at the Howard Hughes Medical Institute.

Cosmic Ancestry

This site has articles, references, and theories relating to the origin of life and whether life could have come to Earth from outer space. There is an excellent [Timeline](#) page with interesting science facts.

Scientists Debate RNA's Role at the Beginning of Life on Earth

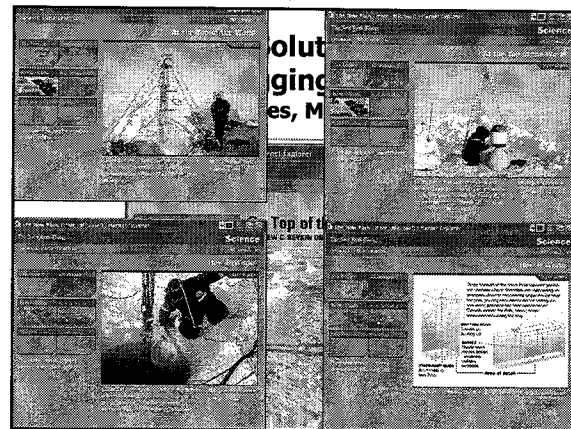
The 1997 story was published in *The Scientist*. It introduces some of the scientists currently working in the field of RNA as the first genetic molecule.

The Genetics of Human Evolution

An interview with Alan Wilson and Barry Moran. Both are under the bright lights of *Nature* magazine with an interest in the genetics of human evolution.

Blended Solution #11. Instructor Portal: e.g., self study in anatomy

Upper Extremity Muscles

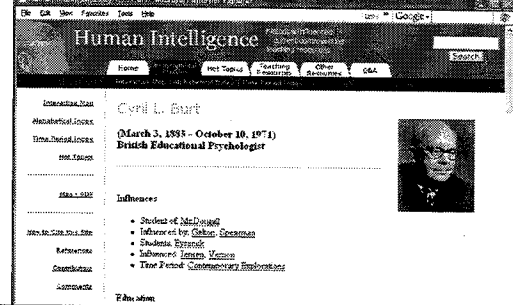


Problem Situation #4: Student Learning Control

- 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 #13. Internally Built Web Links

(Human Intelligence Homepage, Jonathan Plucker, IU)



Blended Solution #14.

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



Add a new question at the end of this survey

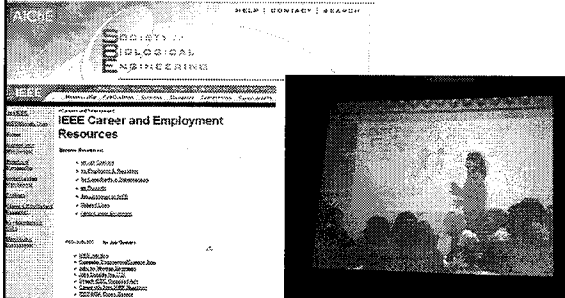
- 1) What is the name of the e-learning course in which you participated?
- 2) Did you access the course from your home computer, work or school computer or both?
 Select Here -
- 3) Overall, how satisfied or dissatisfied were you with the course?
 Very Dissatisfied
 Dissatisfied
 Neither Satisfied or Dissatisfied
 Satisfied
 Very Satisfied
 Don't Know
- 4) How satisfied or dissatisfied were you with the content of the course?

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.

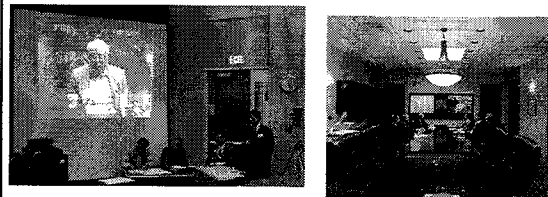
Blended Solution #15.

Apprenticeship in Professional Devel Sites (jobs, organizations, mentors, conferences, etc.)



Blended Solution #16. Conferences with Live Video Feeds

(Internet Time Group, 6/23/03)
<http://www.internettime.com/visual/gallery6.htm>



Blended Solution #17. Electronic Guests & Mentoring (Simon Fraser University News: <http://www.sfu.ca/~news/2004/16/16-high-tech.html>)

Christian Science Monitor - Cambridge, MA

Special Offer: **Subscribe to the Monitor and get 32 issues FREE!**

Learn about the Monitor's **Treeless Edition**

Need a tutor? Call India.

By Anupama Das and Amanda Paslow

NEW DELHI AND CHICAGO — Some Indian's learning style is hardly unusual. The engineering graduate spends lessons with games, offers rewards for excellent performance, and tries to keep her students' interest by linking the math formulas they struggle with to real-life examples they can relate to.

Unlike most tutors, however, Ms. Dasak lives thousands of miles away from her students — in a New Delhi apartment who goes to work at 5 a.m. — up that line often with America's students doing their homework around dinner time.

Blended Solution #18. International Exchanges and Mentoring

Classrooms from 182 Countries speaking 124 Languages now participating!

Just click on one of the regions below to see a map of it at work. From there, you can click on any country to see all of that country's schools. You can then click on a school to see its details or using the pull-down menu to see each school's details.

TO REGISTER, CLICK HERE

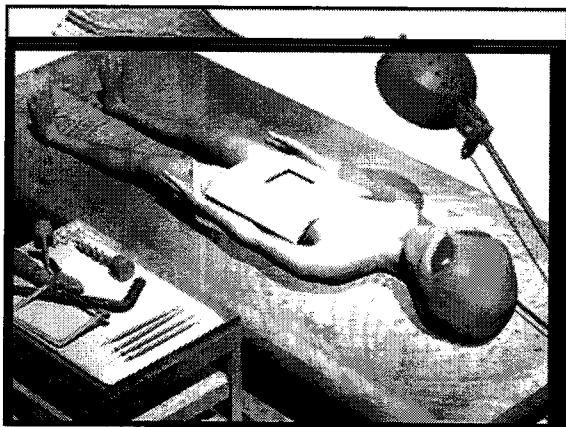
Members from:

- USA
- Canada
- UK
- France
- Germany

Who's searching where?

ePALS users are currently searching for classrooms in:

- United States
- United Kingdom
- France
- Germany



Blended Solution #20. Real-time Cases (i.e., business)

REAL TIME case study

Supercharging the case method, making it more realistic and engaging

OUR

Professor James Thomas
Dean, Professor of Leadership Studies,
University of Massachusetts, Amherst

Blended Solution #21. Webinars Synchronous Learning Example

Webinar

Did I cover it? Anything more you want to add?

You've covered it: YES

You did not cover it: NO

Yes, but more to add here in the Q and A area: YES

No, but more to add here in the Q and A area: NO

Participants:

- John Doe
- Jane Smith
- Bob Johnson
- Alice Brown
- Charlie White
- David Green
- Eve Black
- Frank Blue
- Grace Red
- Henry Purple
- Ivy Gold
- Jack Silver
- Karen Bronze
- Leo Iron
- Mia Copper
- Noah Nickel
- Olivia Tin
- Peter Lead
- Quinn Zinc
- Rachel Cadmium
- Sam Cadmium
- Tina Cadmium
- Uma Cadmium
- Victor Cadmium
- Wendy Cadmium
- Xavier Cadmium
- Yara Cadmium
- Zoe Cadmium

Synchronous Conferencing

Any questions or comments: Hit the "audio" button or type in the chat window...



Blended Solution #22. E-mail Expert Job Interviews (or post from actual internships)

Offline Activities

Conducting Your Interview

During your interview of a bank manager or financial planner, please ask the following questions. Aside from these questions, you are welcome to ask questions that you determine to be appropriate. If you ask additional questions, be sure to include them in your report. These questions and the answers that the previous questions must be documented and sent to the instructor as part of Activity 2.

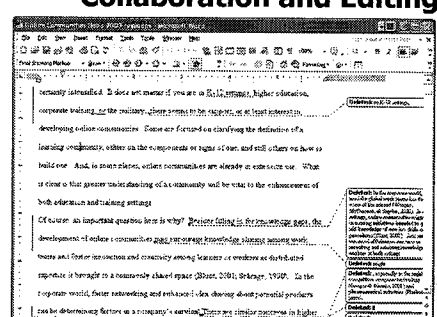

1. What are the implications of having either a positive or negative credit history? (Ask for specific examples.)
2. What would constitute a responsible use of credit?
3. What are three (or more) inappropriate uses of credit?
4. When selecting a credit card, what factors should one consider?

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 #23. Online Collaboration and Editing

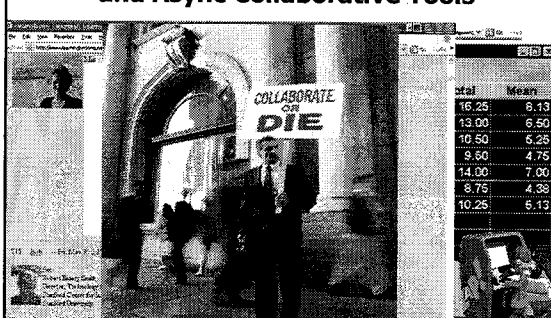



Blended Solution #24. Gallery Tours, Team Products


Secondary School

Project Details	Project	Subject Area	Project Type	Teacher Name
Project	Non-traditional agriculture class web site on HoopWind.com	Agriculture	Web	Cara (Hutchinson) Kowal
Project	SimFarm	Agriculture/Business	Web, Excel, Simulation Software	Cara (Hutchinson) Kowal
Project	Prepare a portfolio, including PP to apply for a job as an advertising director for a Bread Association	Agriculture	Web, Mail Mail, PowerPoint	Amy Turner-Watson
Project	Web Site for the Alternative School student created demo web pages	Alternative School	Web	Lisa Tyler
Project	Virtual Vacation	Alternative School	Web	Lisa Tyler
Project	Class Web Site	Biology	Web	Randy Mattox

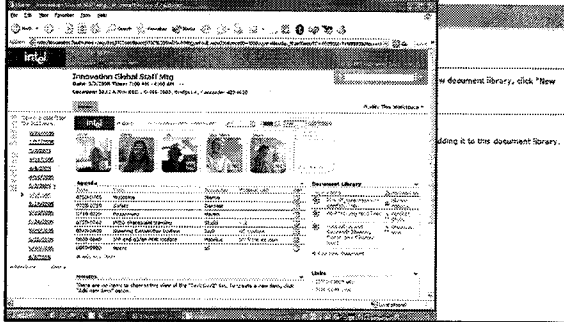
Blended Solution #25. Synchronous and Async Collaborative Tools



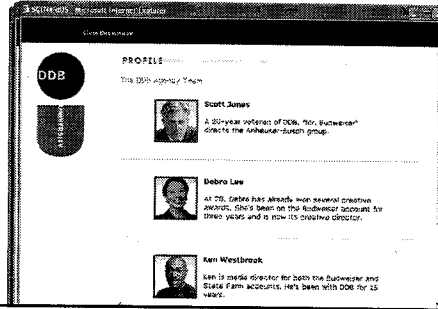
Solution #25. Continued (Groove)



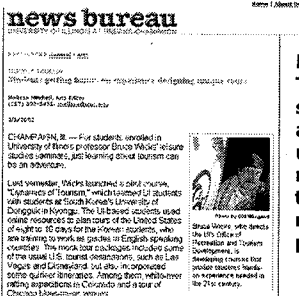
Solution #25. Continued (e.g., Microsoft SharePoint)



Blended Solution #26. Facilitated and Group Scenario or Case Learning (Wisdom Tools)



Blended Solution #27. Cross Cultural Exchanges and Product Based: PBL: Tourism Mock Tours

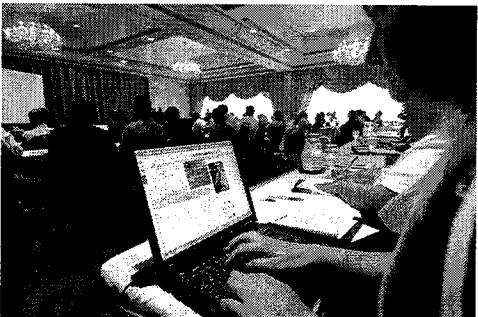


Dynamics of Tourism: students from IU and South Korea use online resources to plan tours and create mock tour packages.

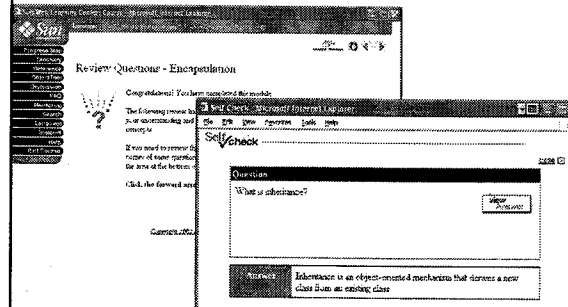
Problem Situation #7: Student Reflections and Connections

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

Blended Solution #28. Blogs (diaries, writing)



Blended Solution #29. Learner-Self Interactions (Sun Microsystems)

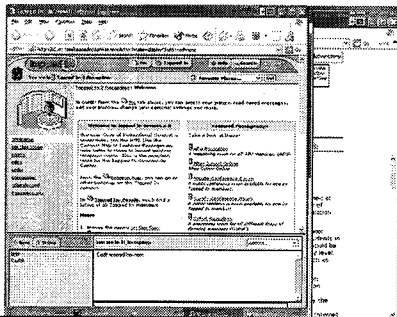




Problem Situation #8: Learning Community

- 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.

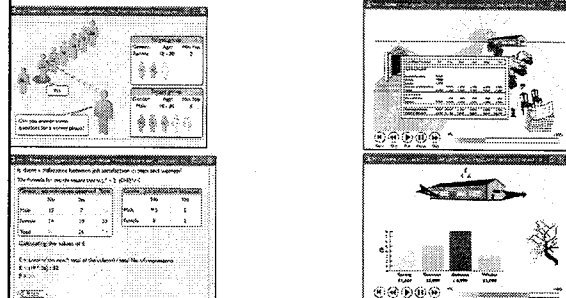
Blended Solution #31. Professional Development Learning Communities



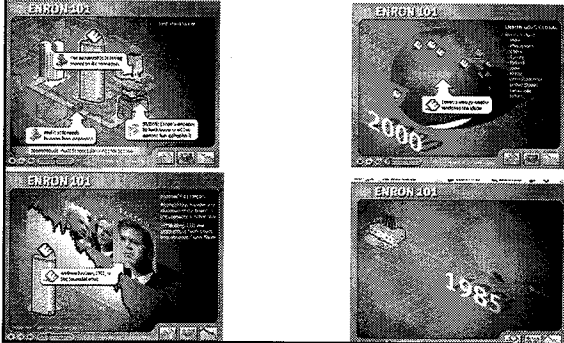
Problem Situation #9: Need to Visualize Content

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

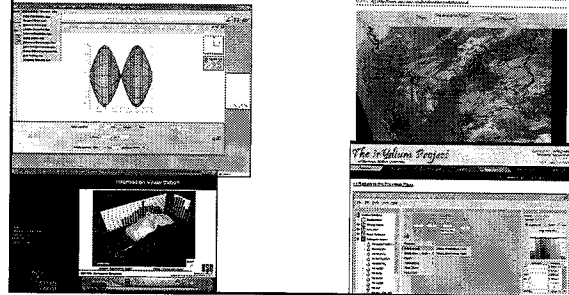
Blended Solution #32. Flash Visuals and Animations (e.g., Statistics, Cash Flow, online news, etc.) eCollege Wales, Univ. of Glamorgan



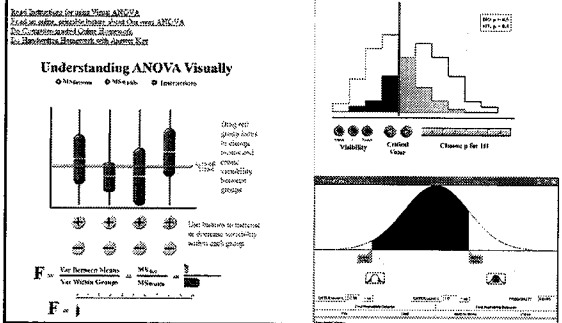
**Blended Solution #33.
Interactive Online New Stories**



**Blended Solution #34. 3-D
Visualization & Laboratory Software**



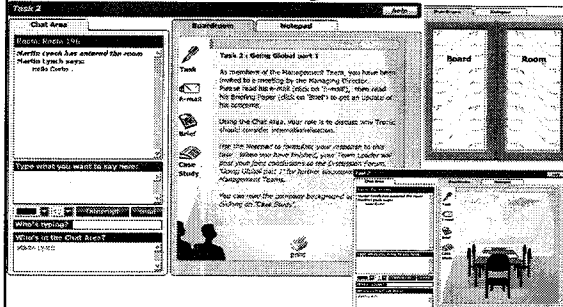
**Solution #34. Continued
(Online Statistical Visualizations)**



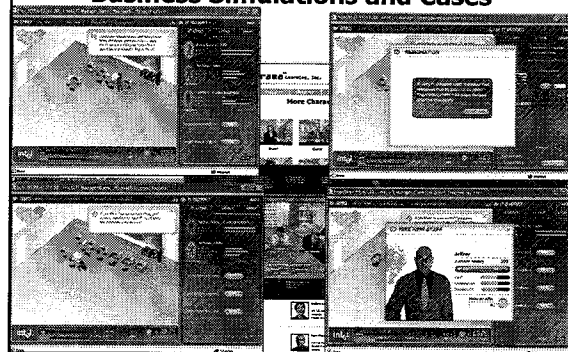
**Problem Situation #10:
Need for Hands-On Learning**

- 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 #35.
Online Synchronous Cases and Teams
Simulated Boardroom Chat; College Wales, Univ. of
Glamorgan**



**Blended Solution #36.
Business Simulations and Cases**



Blended Solution #37. Online Labs (e.g., Foreign Language Practice Exercises Online)

PSYCHEPERIMENTS
Psychology Experiments for Students

With Online and Assessment

Blended Solution #38. Healthcare Case-Based Learning: My Patient.com

2002

MyLine chest pain
Anne is a 37-year-old adolescent with a recent onset of midline chest pain.

Blended Solution #39. Online Games www.km-solutions.biz/caa/quiz.zip Games2Train: The Challenge; Thiagi.com

Blended Solution #40. Learner-Content Interactions Allen Interactions (sales closing) http://sales.alleni.com/client/Bonk/Bonk_Web_Links.htm

Blended Solution #41. Video Scenario Learning (Option 6, Bloomington, IN)

Solution #42. Continued (UNext and Option 6)

Assessment!

The Myth Buster
This animated game engages students in identifying misconceptions they hold about velocity and non-velocity concepts. The animation helps students realize these misconceptions.

Blended Solution #43. Virtual Performances and Models (Music, Cyber Fashion Shows, etc.)

INFORMATION TECHNOLOGY

Internet at a Glance

Blended Solution #44. Cascaded Instruction (e.g., A

Statements:

I was in the other room posing with my video camera when I heard a gunshot.

She had a lot of beer to drink last night, which made her more aggressive than she was.

I never touched her and I have no idea where she got it.

I went out with friends and came back and found her in the other room. I was not out with another woman, but I'm thought I was.

Questionable Statements:

"Hello teacher and we were getting along well."

"I was not pulled out of her hand and put in the face. That she said "I'm sorry."

Drag the statements made by the boyfriend that are questionable given the evidence you have gathered to the column above, titled "Questionable Statements."

When you have finished, click "Submit."

Finished

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 #45. Audio Dramas

eCollege Wales, Univ. of Glamorgan

http://www.e-college-wales.co.uk/learn/audiodrama/audiodramat.swf

AUDIO DRAMA

The Chemical Set - Episode 1

Listen to John and Terry talking about their start-up ideas. What do they need to consider before deciding to pursue their interest in starting a business? Think about their personal as well as their professional situations. Click PLAY to begin.

BACK PLAY PAUSE STOP

46.

m Curry;
1)

Now Hear This

MARC

Wan

Time

Style

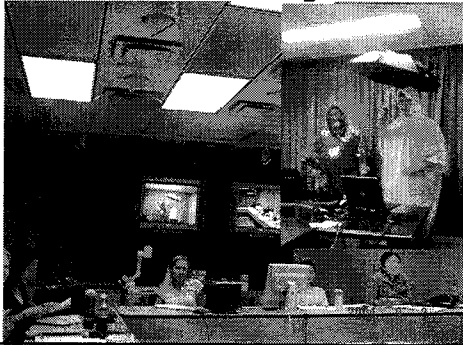
Inter

Focus

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 #53.
Videoconferencing Lectures**



Blended Works: Here's Proof

Jeff Barbian, September 2002, Online Learning

"The question is not if we should blend...rather the question is what are the ingredients."

– Per Marc Rosenberg, E-Learning: Strategies for Delivering Knowledge in the Digital Age



Poll #4. Which blended learning strategy might like to try?

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

Poll #5. What blended ideas do you think work or have you tried?

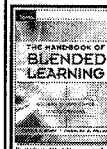
- A. Online simulations, games, demos, and hands-on activities
- B. Online surveys, polls, research, and authentic data collection
- C. Extensive Web explorations (student selected and reported)
- D. Extensive Web support materials (papers, discussion forums, test examples)
- E. Alternative class and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

This part of the talk addressed

- 1. Definitions of blended learning
- 2. Advantages and disadvantages
- 3. Models of blended learning
- 4. Examples of blended learning



Any questions, comments, or concerns?



The Handbook of
Blended Learning
Global Perspectives
Local Designs
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