




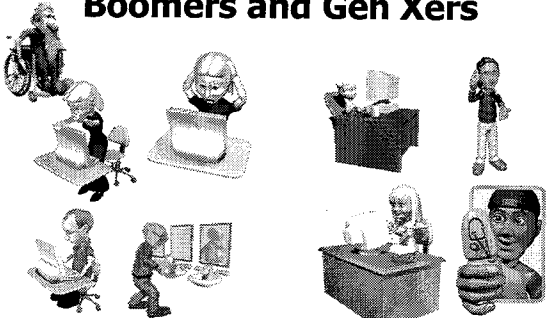
Blended Learning: Situations and Solutions



Curt Bonk, Professor, Indiana University
President, SurveyShare, Inc.
cjbonk@indiana.edu
http://php.indiana.edu/~cjbonk
http://SurveyShare.com

Differences between Boomers and Gen Xers



Prefer online to traditional!

EDUCATION with Student News

Students prefer online courses

Classes popular with on-campus students

APU — Andy Steele lives just a few blocks from the campus of Clark Mills State University in Spanish, South Dakota. So commuting to class isn't the problem. But he doesn't like lectures much. It's a morning person, and wastes time during the day to restore motorcycles.

On South, a half five minor economics major. The state history of motorcycles.

Andy Steele likes to restore cars & motorcycles in Clark Mills, South Dakota.

Always online -- and always talking

When Doro says without a word in an elevator






Money

Generation Y: They've arrived at work with a new attitude

By Stephanie Armour, USA TODAY

They're young, smart, impatient. They may wear flip-flops to the office or listen to iPods at their desks. They want to work, but they don't want work to be their life.





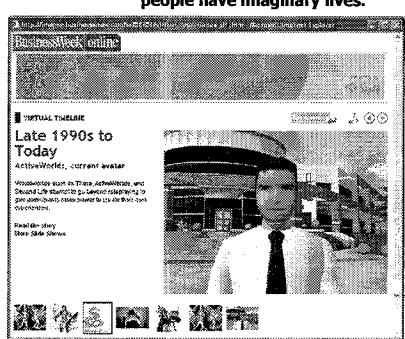
Generation Y

Defining generation

They're the first to grow up with computers, cell phones, and the Internet. They're also the first to be called "Generation Y."




Generation	Approximate Birth Dates	Approximate Age Range
Generation Z	1995-2012	13-20
Millennials	1981-1996	21-36
Generation X	1965-1980	37-52
Boomers	1946-1964	53-71

MAY 1, 2006, Business Week Online: My Virtual Life
A journey into a place in cyberspace where thousands of people have imaginary lives.



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

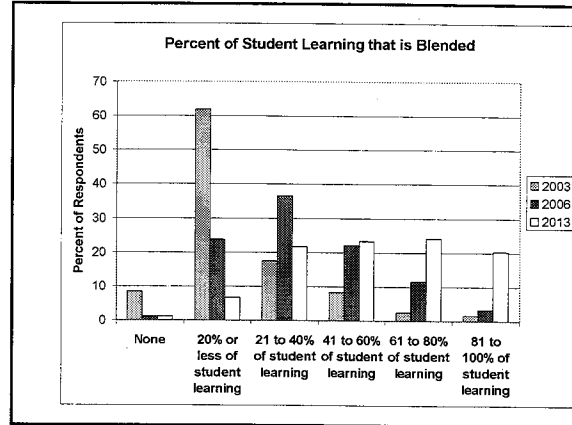




Poll #1. Have you taught, taken, or designed a blended learning course?

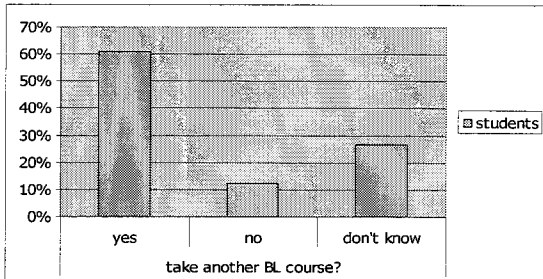
A = yes

B = no

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



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



Conclusions: Blended Learning at 8 Institutions in Canada (Owston, Garrison, & Cook 2006)

- Pragmatic advantages of BL format
- Interaction a key ingredient for success
- Online discussions can work in large classes
- Online contributions do not have to be individually graded to be meaningful
- More time and effort required—but student outcomes appeared to be better
- Faculty get to know their students better
- Institutions need clear policies and support

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.



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)

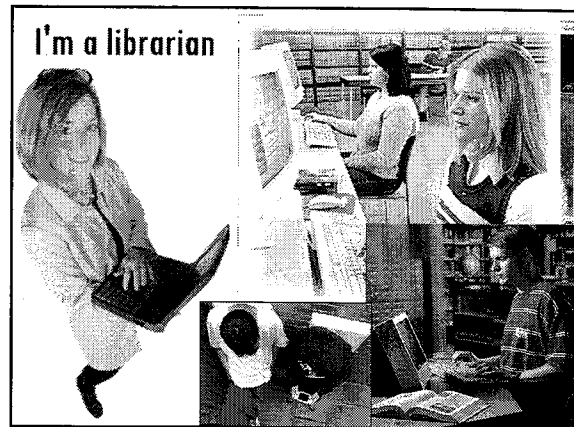
NEWS
 One of the best ways to reach education students

In the Midst of Budget Cutbacks, there are Technology Giveaways

Motorola Q265, Q267
 University of Applications and Technology of Maryland
 The school gave all students of phones or a check with the phone to have laptops in the rural areas.

Gateway M275 tablet PC,
 Winona State University
 The school will provide the tablet computers to full-time students who do not have laptops from previous programs.

BlackBerry 7510 PDA,
 University of Maryland
 The school has begun handing out the wireless personal digital assistants to faculty and more than 200 full-time graduate students in the Smith School of Business.



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)**

Synchronous Conferencing

Working Definition (Graham, 2006)

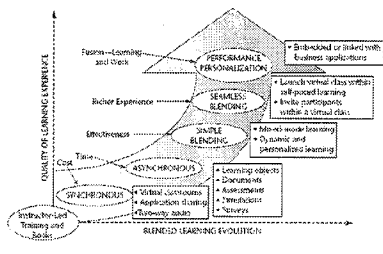
Definition:
Blended learning systems combine face-to-face instruction with computer-mediated instruction.

Harvey Singh (2006)

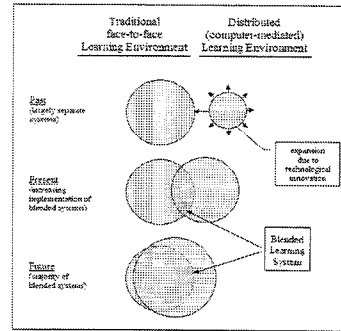
Blended Learning and Work

477

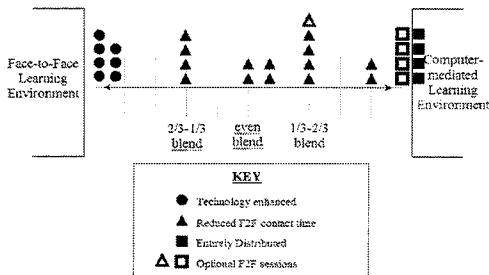
FIGURE 34.1. PAST, PRESENT, AND FUTURE OF BLENDED LEARNING.



Historical Emergence of BL (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.

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

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**

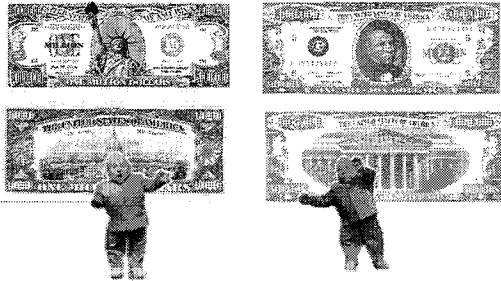


Blended Learning Disadvantages

- 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



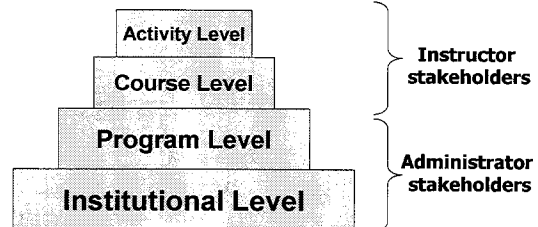
Examples of Blended Learning, Margaret Driscoll, e-Learning, March 2002

- 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



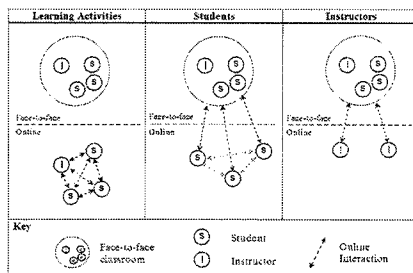
Models of Blending

Blending occurs at the following four levels:

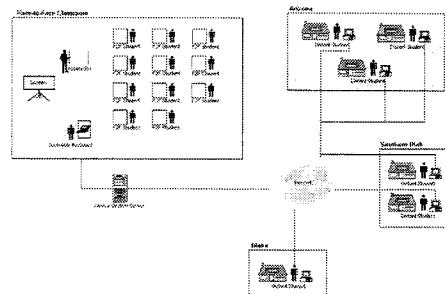


1. Activity- and Course-Level Blends

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



2. Course-Level Blend: Using CMS to blend distance and F2F learners (Rogers, Graham, et al., 2003)



2. Course-level blends: Beijing Normal University (2006)

Alternating F2F and e-learning activities in a multimedia course in China.

See: Huang Ronghui, H. & Yueliang Z. (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 designs*. San Francisco, CA: Pfeiffer Publishing.

2. Course-level Blends Jagannathan, S. (2006).

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

Session 1	Session 2	Session 3	Session 4
Background readings & lecture Peer for Web	Small group discussion Facilitation online	Apply model to real class Panel, F2F, and e-activities	Self-paced work to reinforce learning Web, CD-ROM, print
↓ Via Videoconferencing ↓			
Topic 1 Introduce analytical model	Topic 2 Comment on group work, new concepts	Topic 3 Groups present, instructor facilitates & summarizes	Topic 4 Links from self-paced to analytical model

Program-level blending

Teleconferences	Online	Seminar 1	Seminar 2	Mentoring
CRM Philosophy, Orientation	Technology Trends, Financial Concepts	Executive Conversation, Strategic Concepts	Business Process Reengineering, Executive Rote Plays	Client Research, Executive Presentations, CRM Qualification, CRMba Club
----- 2.5 Months -----				

Figure 1: Avaya's ESSBa program schedule

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: Chikani, S., Hansen, J., Auer, P., Mosler, P., & Borg, 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 designs*. San Francisco, CA: Pfeiffer Publishing.

4. Institutional-level Blending

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

Face-to-Face Learning: Classroom Environment (Virtual Classroom, Computer Laboratory, Science Laboratory), Number of Meetings (Face-to-face, for marketing), Teaching Strategies (Direct, Indirect).

Online Learning: Resources (Learning Objects, PDF Documents, Microsoft Office, Attachments, Digital Library), Discussion, Decision, Forums.

Self-Managed Learning: Specially Designed Modules (Video support tools), CD-ROM Courseware, Digital Library, Physical Library, Peer, Tutors, Subject Matter Experts.

The OUM

(Abtar Kaur, 2005, Ed Media)

- Started August 2001 : approx. 800 students
- Total students (2005): approx. 33,000
- Total full-time academic staff : 60
- Total part-time academic staff (tutors) : approx 3,000
- 33 Learning Centres (7 Regional Centres)
- Pedagogical approach : Blended Learning

4. Institutional-level Blending

- A learner in the remote areas of Sabah and Sarawak in East Malaysia may depend entirely on the specially designed print module and attend three out of the five assigned face-to-face classes.
- A learner in the towns of Sabah and Sarawak in East Malaysia may use the specially designed print module as a guide, use textbooks and online digital resources as core study materials for self-managed learning, attend all five face-to-face classes, meet with peers for small-group discussions, and actively participate in online discussion forums.
- A learner in Kuala Lumpur City in West Malaysia may depend entirely on online resources (such as digital books, journal articles, and related links) and online discussions but also attend classes two out of five times, mainly to sit for the tests.

4. Institutional-level Blending (Brian Linqvist, 2006)

Example 2: University of Phoenix

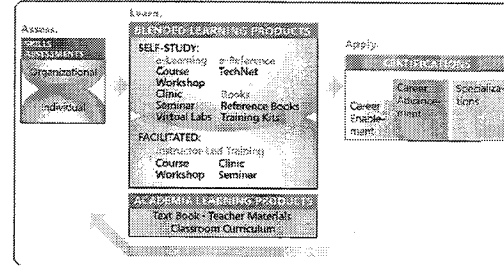
- **Completely online courses**
- **Residential F2F courses**
- **Blended Courses**
 - **Local Model** = 5 week courses with first and last week F2F
 - **Distance Model** = 5 week courses with half first and half last week F2F (the last meeting of one course is coordinated to be back-to-back with the first meeting of the next 5 week course)

Blended Learning Form Factors (copyright Microsoft, Ziob & Mosher, 2006; 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

FIGURE 7.2 ASSESS, LEARN, AND APPLY.

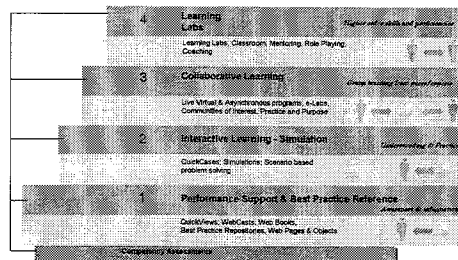
Microsoft Products and Services for Lifelong Learning



Blended Learning Scenario (copyright Microsoft, Ziob & Mosher, 2006; 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 (2006) Blending Learning for Business Impact – IBM's case for learning success, In press, Handbook of Blended Learning, Nancy Lewis, Vice President, On Demand Learning

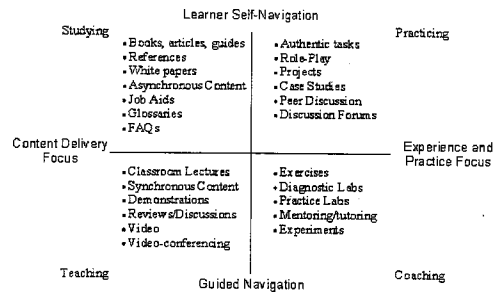


Specific Learning Elements An Learning Ecology from Sun Microsystems (Wenger & Ferguson, 2006)

TABLE 6.1. LEARNING ELEMENTS.

- Classroom (instructional) content
- Self-paced Web content
- Self-study guides
- Certification
- Practice tests
- Remote labs
- E-mentoring
- Asynchronous discussion forums
- Documentation
- Procedural job aids
- Guided lab activities
- Learning management system
- Transfer of information (recorded audio and slide presentations)
- Webcasts
- Video
- Performance support

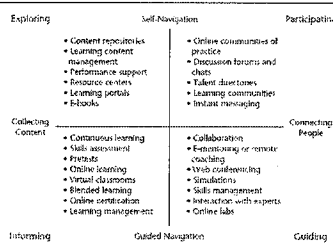
Specific Learning Elements An Learning Ecology from Sun Microsystems (Wenger & Ferguson, 2006)



Specific Knowledge Services An Learning Ecology from Sun Microsystems (Wenger & Ferguson, 2006)

A Learning Ecology Model for Blended Learning 89

FIGURE 6.6. SPECIFIC KNOWLEDGE SERVICES.



Design Criteria (instructional strategies from all quadrants) (Wenger & Ferguson, 2006)

- **It is a collaborative activity.**
- **Uses authentic problem scenarios.**
- **Mentored by experts.**
- **Work on project teams.**
- **Activity supported by:**
 - Reference materials.
 - Procedure guides.
 - Async content.

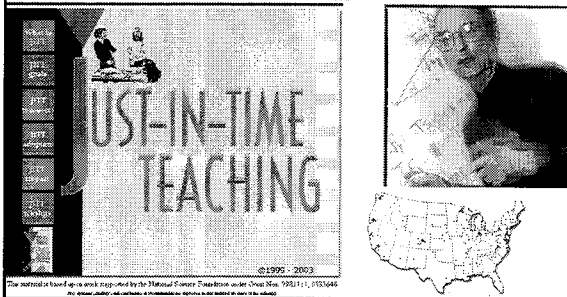
Categories of Blends

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.
- Many international education and training programs are also focused on providing access (e.g., **World Bank**, **Mexico's Red Escolar program**, etc.)

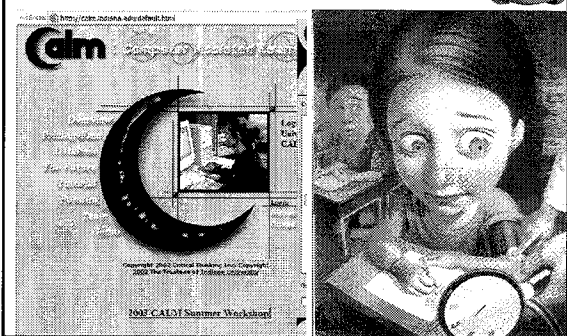
**Blended Solution #6:
Just-In-Time-Teaching (JiTT)**
<http://webphysics.iupui.edu/jitt/jitt.html>



**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.**

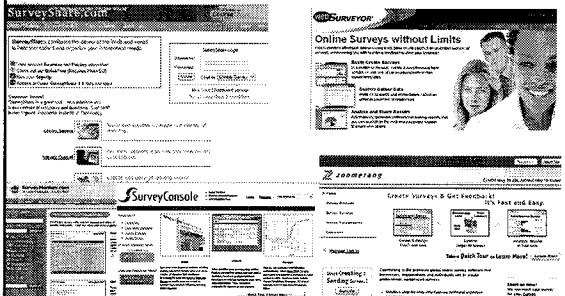
Blended Solution #7. Online Practice Tests (e.g., Calm Chemistry)



Blended Solution #8. Use of Weblogs (especially English writing class)

1. **Instructor or Tutor blog:** resources, information, space to chat
2. **Learner blog:** reflections, sharing links and pics, fosters ownership of learning
3. **Partner blog:** work on team projects or activities
4. **Class blog:** international exchanges, projects, PBL
5. **Revision:** review and explode sentences from previous posts, add details
6. **Nutshell:** summarize themes or comments across blogs
7. **Blog on blog:** reflections on feelings, confusions, and experiences with blogs

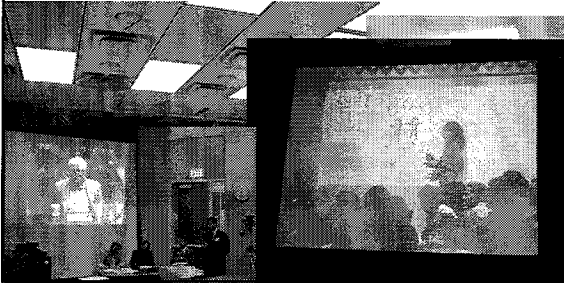
**Blended Solution #9.
Survey Research and Market Analysis (e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyKey)**



**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 #10. Videoconferencing Expert Lectures and Online Conferences

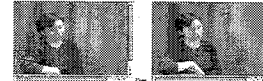


Blended Solution #11. Virtual Psychiatric Interview (Trinity College, Dublin)

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 iteration 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.

Blended Solution #12. 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 & pool results

Connections to
Real Life Learning

To learn about the appropriate uses of credit, Activity 5.1 requires you to interview a bank manager or a financial planner.



Click on Sarah to see how to contact your interview.

Offline Activities

Conducting Your Interview

1. Develop a list of questions to ask your expert. Write them down. Ask your expert to answer them. Write down the answers. Share your questions and answers with your class. Write down the answers to the questions that you were asked. Write down the questions that you were asked.

Blended Solution #13. Virtual Surgery



John Robertson MP
Aberfeldy, Glasgow

Online-Surgery

The Online Surgery allows you to ask questions to John, or to make a comment about the course.

You can record your replies to be used by a friend, peer or teacher.

Each question is allocated an individual reference number which allows you to track your progress.

There are 10 mandatory fields but if you require a longer response enter your name and email in the field.

© 2004-2005 by University of Aberdeen

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 #15. Online Editing, Gallery Tours

Home | About Us | Contact Us | Help | Privacy Policy | Terms of Service

Video editing made easy! It's never been so easy. See how! [Click here to see our video editing software.](#)

Wondershare PDFElement

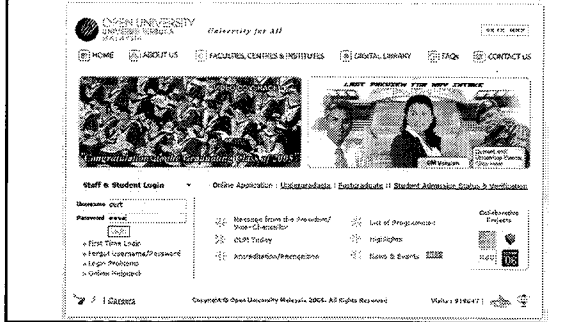
the free service for group communication

Share Files | Share Documents | Share Photos | Share Videos | Share Audio | Share Images

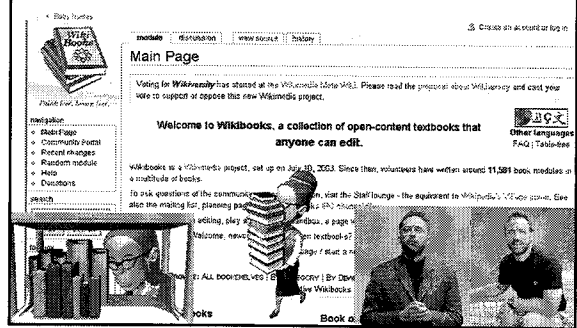
Wondershare PDFElement is a powerful PDF software that can help you to create, edit, convert, and share PDF files. It is a free service for group communication.

Wondershare PDFElement is a powerful PDF software that can help you to create, edit, convert, and share PDF files. It is a free service for group communication.

Blended Solution #16. Cross-Class Collab (Indiana Univ and Open U of Malaysia)



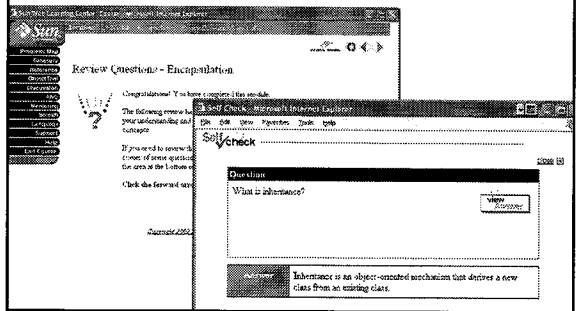
Blended Solution #17. Wikibook Creation and Collaboration



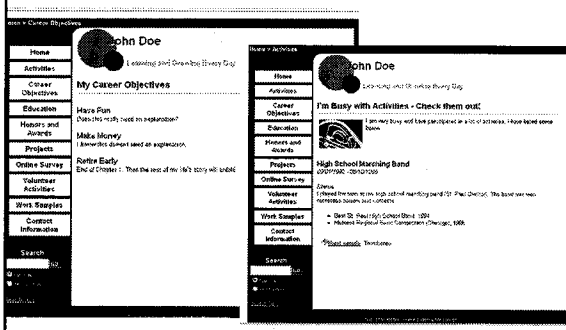
Problem Situation #7: Student Reflections and Connections

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

Blended Solution #18. Learner-Self Interactions and Reflections

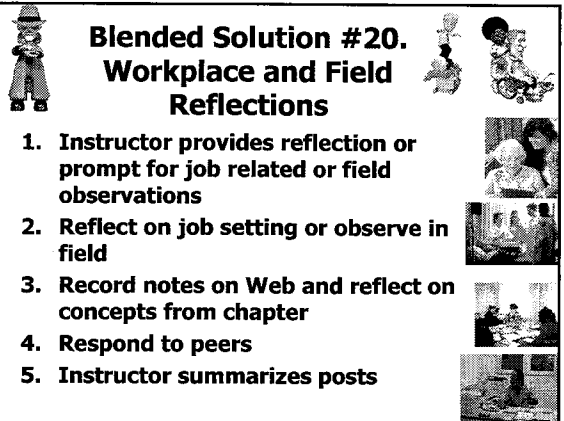


#19. Electronic Portfolios



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



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 #22: Teacher Professional Development in Technology Integration (the TICKIT Program)

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

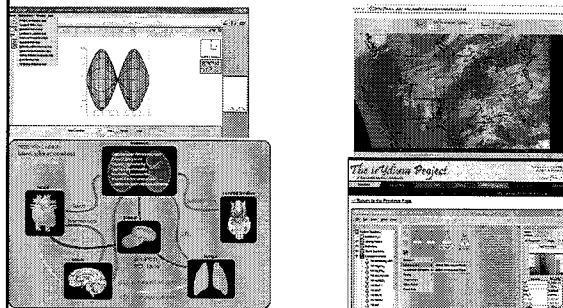


TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology

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 #23. 3-D Visualization & Laboratory Software



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 #24. Business Classes (Univ of Glamorgan in Wales & Univ of Calgary)

