Blended Learning Situations, Solutions, and Several Stunning Surprises
Curt Bonk, Professor, Indiana University
President, SurveyShare, Inc.
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/
http://SurveyShare.com

This the talk will cover:
1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Implications for blended learning

Blended Learning: Two Parts
1. Models and Frameworks
2. Problems and Solutions (i.e., examples)

Part 1. Handbook of Blended Learning (HOBLe)
- University of Phoenix, Capella University, JIU, National University
- Microsoft, IBM, Sun, Cisco, Macromedia, Oracle, WebCT
- The World Bank, the DOD in USA
- In Canada: York University and the University of Calgary
- Other universities in Japan, Korea, Malaysia, Singapore, China, NZ, South Africa, Israel, Mexico, Australia, Wales, England, USA

Poll #1. Have you taught, taken, or designed a blended learning course?
A = yes
B = no
C = not sure, I am here to find out what blended means

Poll #2. What are you???
A. Tutor, professor, trainer, instructor, lecturer, adjunct, visiting scholar
B. Director or staff in a learning center, instructional designer, etc.
C. Policy maker, government official
D. Administrator, Dean, President, etc.
E. Graduate student, informal learner
G. Other
Poll #3: Burning Blended Learning Q’s
(Pick any that interest you)
A. What does blended learning mean?
B. What is typically being blended?
C. How much to blend?
D. Why blend (advantages and disadvantages)?
E. Where is this all headed?

Blended Learning Defined and Explained

The Sloan Consortium

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)

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.”
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)

More than 70 Million Adults Want to Head Back to School
August 22, 2006, Yahoo News
Report: "Degrees of Opportunity" from Capella University

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

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

Which instructional strategies will become more widely used?

<table>
<thead>
<tr>
<th>Strategy</th>
<th>2003</th>
<th>2005</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentic cases and scenarios learning</td>
<td>41.92</td>
<td>38.35</td>
<td>29.44</td>
</tr>
<tr>
<td>Virtual team collaboration and problem solving</td>
<td>43.35</td>
<td>34.05</td>
<td>21.27</td>
</tr>
<tr>
<td>Problem-based learning</td>
<td>72.77</td>
<td>72.77</td>
<td>72.77</td>
</tr>
<tr>
<td>Coaching and mentoring</td>
<td>46.35</td>
<td>46.35</td>
<td>46.35</td>
</tr>
<tr>
<td>Guided learning</td>
<td>34.05</td>
<td>34.05</td>
<td>34.05</td>
</tr>
<tr>
<td>Simulations or gaming</td>
<td>29.44</td>
<td>29.44</td>
<td>29.44</td>
</tr>
<tr>
<td>Modeling of the solution process</td>
<td>15.18</td>
<td>15.18</td>
<td>15.18</td>
</tr>
<tr>
<td>Self-paced learning</td>
<td>10.00</td>
<td>10.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Why Blend and Advantages and Disadvantages of BL...
Why Teaching Fully Online or Blended? Three Key Reasons

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

Where is Blended Beneficial?
http://www.center.rpi.edu/PewGrant/ProjDesc.html

- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with working students
- Students spread over a distance
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive classes
- Theory classes

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

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

Fully Online and Blended Learning Advantages

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

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

Fully Online and Blended Learning Disadvantages

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

<table>
<thead>
<tr>
<th>Space</th>
<th>Computer-mediated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Online/FLP</td>
</tr>
<tr>
<td>Medium</td>
<td>面 to面 Learning Environment</td>
</tr>
<tr>
<td>High</td>
<td>Face to Face Learning Environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Asynchronous</td>
</tr>
<tr>
<td>Medium</td>
<td>Hybrid</td>
</tr>
<tr>
<td>High</td>
<td>Synchronous</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fidelity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low Fidelity</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium Fidelity</td>
</tr>
<tr>
<td>High</td>
<td>High Fidelity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humaneness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low Humaneness</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium Humaneness</td>
</tr>
<tr>
<td>High</td>
<td>High Humaneness</td>
</tr>
</tbody>
</table>

(Graham, 2006)

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

Range of Blends in Pew Cases

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

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

Models of Blending

Blending occurs at the following four levels:

- Activity Level
- Course Level
- Program Level
- Institutional Level

Instructor stakeholders

Administrator stakeholders

1. Activity- and Course-Level Blends
Blended learning systems: Definitions and directions (Ogutheorpe & Graham, 2003)

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

3. Program-level blending

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)

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

Example 2: University of Phoenix
- Completely online courses
- Residential F2F courses
- Blended Courses
  - \textit{Local Model} = 5 week courses with first and last week F2F
  - \textit{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)

A. Enabling Blends
- Many of the for-profit institutions like \textit{Capella, Jones International University}, and \textit{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.
- \textit{National University} has a teacher preparation program geared towards access and flexibility.

B. Enhancing Blends
(UNiv of Waikato, New Zealand, 2006)

\textit{University of Waikato, New Zealand}
- Model for enhancing F2F courses includes:
  - \textit{Fully online} - students can complete qualifications without coming onto the campus
  - \textit{Mostly online} - there is a mix of online and some on-campus work in the qualification
  - \textit{Somewhat online} - there is an online component for on-campus students
  - \textit{Supported online} - courses are taught in the traditional lecture/tutorial mode, supported by material provided through the online learning relevant university schools' document management systems

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

Categories of Blends

<table>
<thead>
<tr>
<th>A. Enabling Blends</th>
<th>Enabling blends primarily focus on addressing issues of access and convenience; provide similar learning experiences.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Enhancing Blends</td>
<td>Enhancing blends allow for incremental changes to the pedagogy; additional or supplementary online resources.</td>
</tr>
<tr>
<td>C. Transforming Blends</td>
<td>Transforming blends are blends that allow for a radical transformation of the pedagogy and learner construction of knowledge.</td>
</tr>
</tbody>
</table>
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-Virtually Training Continuum

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

What can we say about blended learning then???

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

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

Problem Situation #1:
Brief FTF Experiences
- Face-to-face (FTF) experiences are brief, one-week journeys. Need to build self-confidence, create social supports, teams, camaraderie, etc.

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

[Image of a one billion dollar bill]
Solution #1+. Sample Activities for Brief Meetings
1. Assign web buddies, email pals, critical friends based on interests, confidence, location, etc.
2. Ice breakers—paired introductions, corners.
3. Solve case in team competitions with awards.
4. Test technology in a lab.
5. Assign teams and exchange info for small teams using text messaging.
6. Library (digital and physical) scavenger hunt.
7. Do a podcast documenting the meeting.
8. Have everyone create a blog on the experience.
9. Open an e-portfolio for each student
10. Brainstorm how might use technology in program.

Problem Situation #2: Student Absenteeism
• Students miss class to attend a conference or event or a personal problem arises. Or students asks to watch the class a second time.

Solution #2. Video Streamed Lectures and Expert Commenting

Blended Solution #3. Webcast Lectures (slides synched)

Problem Situation #3: Facilities and Time
• Limited facilities or rooms for teaching. Or students cannot make it to class every week or are working full time.

Solution #4. Divide Online and Class Experiences: English Classes Online

• Freshman English at BYU: Students are required to meet F2F once a week instead of three times a week. Online modules provide writing instruction and teaching assistants use online and F2F contact to provide feedback and guidance on writing (Waddoups et al., 2003).
Blended Solution #5.
CPA Exam Review (June 14, 2003) and Web Videos in Accounting (July, 2003)
• Texas A&M University–Corpus Christi combines CPA courseware with bi-monthly class meetings to prep for CPA Exam, (study text, proficiency questions, electronic flashcards and practice exams, scheduled assignments, goals, online grading, progress reports, tailored discussion groups, and personalized assistance from leading professors at the nation's top accounting schools.)

Problem Situation #4:
Web Supplemental Activities
• Fail to finish class discussion or other activity in time. Or desire to integrate the Web more in your face-to-face instruction or outside of class. Want to provide course resources and activities for students to explore.

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

Solution #6. Online Resource Libraries

Solution #7. Referenceware and Terminology Exercises Online (puzzles, games, etc.)
"putting all our eggs in one basket"

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

Trunk & Shoulder Muscles
Studying a Specific Anatomy

You have lost.
"putting all our eggs in one basket"
Solution #9: Warm-ups Online
Just-In-Time-Teaching (JITT)
http://webphysics.iupui.edu/jitt/jitt.html

Problem Situation #5:
Student Learning Control
• Want to give students more control and ownership over their own learning. Want to foster student generative learning or being authors of their own knowledge.

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

Problem Situation #6:
Preparedness for the Profession
• Students are not prepared for their professions when they graduate. Or want to better apprentice students into their chosen profession. What to provide opportunities to work with practitioners, experts, mentors, and coaches in authentic learning environment.

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

Solution #12. Reuse Chat Transcripts

11
Solution #13. Video Observations (e.g., Virtual Psychiatric Interview, Trinity College, Dublin)

Solution #14. E-Reading First Ohio (video-based scaffolding from expert instructors)

Problem Situation #7: Collaborative Skill Deficit

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

Solution #15. Cross-Class Collab (Indiana Univ and Open U of Malaysia)

Solution #16. Online Groups...

Solution #17. Team Meetings in Skype
Problem Situation #8: Student Reflections and Connections

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

Solution #18. Learner-Self Interactions and Reflections

Blended Solution #20. Workplace and Field Reflections

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


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

Problem Situation #9: Learning Community

- There is a preference for creating an online learning community in order to increase student learning and retention in the program. Such a community might be in a single class or across a series of classes.
Solution #22. Community of Learners: Medical and Business Cases Online (cases community) http://optionstraining.org/login

Solution #24. Community of Practice: Online Professional Development

Blended Solution #23: Teacher Professional Development in Technology Integration (the TICKIT Program) (Bonk, Ehman, & Yamagata-Lynch, in press, AACE Journal) http://www.iub.edu/~tickit

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

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 #26. 3-D Visualization & Laboratory Software
Solution #27. Anchored Instruction: News Content Videos (CTGV, 1990?)

Solution #28. Use Google Maps Mashups in K-12 Education
By Jeffrey Branchburg, May 15, 2006
http://www.techlearning.com/showArticle.jhtml?articleID=187002746

Solution #29. Concept Mapping Tools

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

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

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

Solution #32. Virtual Timelines
Solution #33. Virtual Reality/Worlds
First Course in a Virtual World (Second Life)
Wednesday, August 30, 2006
Harvard Law School (Charles & Rebecca Hosson)
Chronicle of Higher Ed (open to the public)

Problem Situation #11: Need for Hands-On Learning

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

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

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

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

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

Supercharging the case method, making it more realistic and engaging.

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

Solution #37. Videoconferencing with Hearing Impaired Students Online

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

Problem Situation #13: Lack of Instructor Presence

- Students need to see or hear from the instructor. They need a sense that the instructor is supporting their learning. They prefer face-to-face but are willing to try online.
Solution #43. Instructor Presentation in Synchronous Sessions (Breeze, Elluminate, WebEx, etc.)

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

10 Predictions for Blended Learning


Implications and Challenges for Blended Learning

1. Faculty and students are more mobile.
2. Students more choices.
3. Student expectations rise.
6. Courses increasingly modular.
7. Less predefined schedules.
8. When teaching less clear; when learning less clear.

The End...Remember

Questions???

Sample HOBle chapters at: http://www.publicationshare.com/
Archived talks at: http://www.trainingshare.com/