Blended Learning Situations, Solutions, and Several Stunning Surprises

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

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

Charles needs to support his family! So buy the book!
Poll #1. Have you taught, taken, or designed a blended learning course?
A = yes
B = no
C = not sure, I am here to find out what blended means

Poll #2: Burning Blended Learning Q's
(Pick any that interest you)
A. What does blended learning mean?
B. What is typically being blended?
C. How much to blend?
D. Why blend (advantages and disadvantages)?
E. Where is this all headed?

Chris Dede, Campus Technology, June 2006: Changing the Gold Standard for Instruction
• "There is a widespread misconception that, for everyone, face-to-face is the "gold standard" in education, and that any kind of mediated interaction is second best. But we know from research, that's not true."


Blended Learning Defined and Explained

Future Directions of Blended Learning
(Bonk, Kim, & Zeng, 2006, Chapter 39)
1. Blending Delivery Media

"Blended learning means the combination of a wide range of learning media (instructor led, web based courseware, simulations, job aids, webinars, documents) into a total training program designed to solve a specific business problem.” (Bersin & Associates, 2003, p. 3)

2. Blending Instructional Methods

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

3. Blending Online and F2F Instruction

"Blended learning refers to events that combine aspects of online and face-to-face instruction” (Rooney, 2003, p. 26; Ward & LaBranche, 2003, p. 22)

Who is demanding fully online and blended learning?

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

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

Where is Blended Beneficial?
http://www.center.rpi.edu/PewGrant/ProjDesc.html
- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with working students
- Students spread over a distance
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive classes
- Theory classes

Examples of Blended Learning, Margaret Driscoll, e-Learning, March 2002
- Put assessments/reviews online
- Follow-up in community of practice
- Put reference materials on Web
- Deliver pre-work online
- Provide office hours online
- Use mentoring/coaching tool
- Access experts live online
- Use e-mail and instant messaging

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

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

Frameworks and Models of Blended Learning...
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
(Osagide & 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
technology course in China.


<table>
<thead>
<tr>
<th>Year</th>
<th>Number of College Students (million)</th>
<th>Annual Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>3.409</td>
<td>7.4</td>
</tr>
<tr>
<td>1999</td>
<td>4.134</td>
<td>21.27</td>
</tr>
<tr>
<td>2000</td>
<td>5.581</td>
<td>34.32</td>
</tr>
<tr>
<td>2001</td>
<td>7.193</td>
<td>29.33</td>
</tr>
<tr>
<td>2002</td>
<td>9.014</td>
<td>25.43</td>
</tr>
<tr>
<td>2003</td>
<td>11.736</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Note: Following is blended learning
Source: Based on data from the National Statistics Bureau, excluding graduate students. Available at http://www.stats.gov.cn/tjbj/ndsj/index_4.htm

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### 3. Program-level Blending

HOBLe handbook has lots of examples of program-level blends

- Prescriptive blends:
  - Programs where the nature of the blend is the same for all participants
  - Online MBA at Indiana University—two 1 week residencies

- Choice blends:
  - Programs where the nature of the blend is chosen by the student
  - (e.g., Ross & Gage WebCT chapter in HOBLe) talk about trend in degree programs to allow the students to select a mix of online or F2F courses)

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### Kelley Direct Online MBA (IU)

![Graph showing Kelley Direct Online MBA (IU) from 2003-2006]

- Certificate Programs
- MS
- Public MBA
- Corporate MBA

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### AMA Special Report, Effectively Implementing a Blended Learning Approach

(Steven Shaw & Nicholas Ignieri, 2006)

![Graph showing AMA Special Report]

Source: American Management Association, AMA at Work

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### 4. Blended Learning Form Factors

*Copyright Microsoft, Zibb & Mosher, 2006; Handbook of Blended Learning Environments*

#### Live instructor-led
- Traditional classroom
- Onsite engagement
- Virtual online classroom
- Live video via satellite or videoconferencing
- Online coaching/mentoring

#### Self-paced learning
- Instructor-led classroom via e-mail
- Online or computer-based training (CBT)
- Self-study guides, manuals, texts
- Online resources and databases

#### Tools for learning communities
- Chat
- Instant messaging (IM)
- Newsgroups and forums
- Collaboration

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### 4. The IBM Four Tier Learning Model (2006)

Blending Learning for Business Impact – IBM’s case for learning success

![Graph showing IBM Four Tier Learning Model]

Nancy Lewis, VP, & Peter Orton, IBM
4. Specific Learning Elements
An Learning Ecology from Sun Microsystems (Wenger & Ferguson, 2006)

Studying
- Blended activities
- Field work
- Problem solving
- Anytime/Anywhere
- Self-paced
- Demonstration

Teaching
- Authentication
- Collaboration
- Feedback
- Conceptual Focus
- F2F
- Exercise
- Synchronous/Asynchronous
- Experimentation
- Reflection
- Support
- Video

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
(Albar Kaur & Ansary Ahmed, 2006, Open U Malaysia)

Univ of Central Florida
Figure 14.1: Withdrawal rates for face-to-face, mixed model, and fully online classes (N = 18,284)

Sample Blended Training at the OUM
Additional Blended Training in Malaysia

The OUM
(Atbar 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

Learning Examples at the Open University of Malaysia
- A learner in the remote areas of Sabah and Sarawak in East Malaysia may depend on specially designed print materials and attend the virtual classes.
- A learner in the towns of Sabah and Sarawak in East Malaysia may use the specially designed print materials as guides, per textbooks, and other digital resources, as well as materials for self-directed learning and the face-to-face classes, with pilots 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 once or twice a week, usually to do lab tasks.

Growth of the OUM

<table>
<thead>
<tr>
<th>Enrollment Growth at the OUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>35000</td>
</tr>
<tr>
<td>20000</td>
</tr>
<tr>
<td>5000</td>
</tr>
</tbody>
</table>

Year (2001 to 2005)

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

Example 2: University of Phoenix
- Completely online courses
- Residential F2F courses
- Blended Courses
  - Local Model = 5 week courses with first and last week F2F
  - Distance Model = 5 week courses with half first and half last week F2F (the last meeting of one course is coordinated to be back-to-back with the first meeting of the next 5 week course)
Shaq joins University of Phoenix grad

A. Enabling Blends
National University
Department of Teacher Education
(Reynolds & Greiner, 2006)

- 12,000 Enrolled Students
- Since 2004 More than 50% of Candidates Enrolling as Online rather than On-site
  - They will take a majority of classes online
- Each Candidate Takes 7 Credential Classes
- Each Class Contains 2 Field-based Exp.
- 500 Classes/Yr. & 20 Students/Class =
- 20,000 Field-based Experiences/Year

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

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

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.
C. Transforming Blends
(Kirkley & Kirkley; HOBLe, 2006)

- Corporate/Military Training
  - Workplace learning (integrating learning into workflow)
  - Performance support and knowledge management using mobile technologies
  - Mixed-reality environments combining the virtual and real Reality Virtuality Training Continuum

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

Ron Oliver, Edith Cowan University (the top e-learning research in the world)

What can we say about blended learning then???

- It is everywhere!!!!!!!!
- Resistance is futile!!!!!!!
Best BL Model 99 Second Stretch Break!!!

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

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

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

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

• Students miss class to attend a conference or event or a personal problem arises. Or students asks to watch the class a second time.

Problem Situation #3: Facilities and Time

• Limited facilities or rooms for teaching. Or students cannot make it to class every week or are working class full time.

Problem Situation #4: Web Supplemental Activities

• Fail to finish class discussion or other activity in time. Or desire to integrate the Web more in your face-to-face instruction or outside of class. Want to provide course resources and activities for students to explore.
Blended Solution #6. Course Portal: e.g., courses on the Civil War

Blended Solution #6. Course Portal: e.g., English Literature

Blended Solution #6. Course Portal: e.g., business cases

Blended Solution #6. Course Portal: e.g., self study in biology; the Encyclopedia of the Species

Blended Solution #7: Warm-ups Online
Just-In-Time-Teaching (JiTT)
http://webphysics.iupui.edu/jittjitt.html

Blended Solution #8. Referenceware and Terminology Exercises Online (puzzles, games, etc.)
Problem Situation #5: Student Learning Control

- Want to give students more control and ownership over their own learning. Want to foster student generative learning or being authors of their own knowledge.

Blended Solution #9. Digital Movie Making

Problem Situation #6: Preparedness for the Profession

- Students are not prepared for their professions when they graduate. Or want to better apprentice students into their chosen profession. What to provide opportunities to work with practitioners, experts, mentors, and coaches in authentic learning environment.

Blended Solution #10. Student Vlogging (Video Blogs)

Problem Situation #7: Collaborative Skill Deficit

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

Blended Solution 11. Community of Learners: Medical and Business Cases Online (cases community)
http://optionstraining.org/login
Problem Situation #8: Student Reflections and Connections

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

Blended Solution #15. Learner-Self Interactions and Reflections

Blended Solution #16. Workplace and Field Reflections
1. Instructor provides reflection or prompt for job-related or field observations
2. Reflect on job setting or observe in field
3. Record notes on Web and reflect on concepts from chapter
4. Respond to peers
5. Instructor summarizes posts

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

Blended Solution #18. Asynchronous Discussion of Weekly Topics
Problem Situation #9: Learning Community

- There is a preference for creating an online learning community in order to increase student learning and retention in the program. Such a community might be in a single class or across a series of classes.

Blended Solution #19: Teacher Professional Development in Technology Integration (the TICKIT Program)
(Bonk, Ehmke, & Yamagata-Lynch, in press, AACE Journal)
http://www.iub.edu/~tickit

TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology

Problem Situation #10: Need to Visualize Content

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

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

- Studying Earth Science? Earthquakes in the Last Week uses Google Maps with data provided by the U.S. Geological Survey to show earthquakes of magnitude 2.5 or greater in the past seven days. Suggested activities: Study patterns, then correlate them with plate tectonics and faults. Click the map markers for further information regarding the specific quake.

Blended Solution #21. Use Google Maps Mashups in K-12 Educ
By Jeffrey Bransburg, May 15, 2006
http://www.techlearning.com/story/storyArticle.html?articleID=187002846
Blended Solution #24. Assign a YouTube Videos to Watch and Reflect on

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

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

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.

Blended Solution #27. Educational Simulations (HEALING GAMES: Computer simulations don’t have to be violent -- they can give peace a chance; Scott Duke Harris May 21, 2006, San Fran Chronicle)

Blended Solution #27. Educational Simulations (Medical Traumas from TD Magazine, August 2006)

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

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

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Blended Solution #27. Educational Simulations (Business Meetings)

Blended Solution #27. Educational Simulations (Intel IT Manager Game)

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

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

Blended Solution #29. Cascaded Scenario, Virtual Crime Scene
Arjuna Multimedia, Bloomington, IN)
Blended Solution #30. Videoconferencing with Hearing Impaired Students Online
- College students tutoring high schools on their homework
- Instructors observing how teacher education students are doing in field placements (practice presentation and communication skills)
- Interpret speaker via Web cam

Problem Situation #12: Preference for Auditory Learning
- The content is heavily verbal or words. Or students have a preference to listen to a lecture or hear an instructor deliver a lecture.

Blended Solution #31. Basic Acoustics of Musical Instruments
2005 MERLOT Classics Award

Problem Situation #13: Lack of Instructor Presence
- Students need to see or hear from the instructor. They need a sense that the instructor is supporting their learning. They prefer face-to-face but are willing to try online.

Blended Solution #32. Art and History Exhibits

Blended Solution #33. Instructor Presentation in Synchronous Sessions (Breeze, Eluminate, WebEx, etc.)
Blended Solution #34. Peer Critique in Breeze
(Table of Benefits of Peer Critique; Park & Bank, in review)
- Providing immediate feedback
- Increasing interactions among participants
- Encouraging to exchange multiple perspectives
- Enhancing dynamic interactions
- Promoting passive to become active
- Strengthening social presence allowing to exchange of emotional supports
- Apply skills just learned
- Exchange constructive feedback on each other’s projects

Blended Solution #35. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)

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