Blended and Mobile Learning in a Connected World: Problems and Solutions
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Will we become increasingly mobile learners?

Judy Brown
Your Learners ARE Mobile: Is Your Learning
http://www.slideshare.net/judybrown/your-learners-are-mobile-is-your-learning-15649715

Tomi Ahonen Almanac 2010
- 4.6 billion subscribers - 66% of planet
- 3.4 billion unique users - half the planet
- 1.2 billion PCs (including notebooks)
- 3 in every computer shipped today is a mobile device
- 1.13 trillion handsets sold last year
- 270 million new PCs
- More internet users on mobile than on personal computers

TwitterPeek: Restricted to Twitter.
We Are Going Mobile!

40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

India: In January, 2009, the number sky rocketed to 15.4M
Globally: 60,000 new mobile subscriptions every hour!

(per Paul Kim, Stanford, 2009); Nokia Research Lab

Social Networking Gaming
(e.g., Farmville)
For social networks, it's game on, USA Today, Jon Swartz, Thursday October 15, 2009

Mobile Learning and Blended Learning Exploding
College tech 'catching up' with students
Kathleen Gray & Robin Erb, USA TODAY, Oct 6, 2009

- At Abilene Christian (University)...about 2,800 students and 70% of the 250 professors use the Apple technology for instructional purposes.
  - Art students use app to draft sketch and send it to the teacher and other students for advice before starting the real art pieces.
  - A dance teacher takes video of the lead dancer in a production and sends them along to other students for rehearsals.

Museum of London's Streetmuseum App Puts Historic Photos in Perspective
Written by Chris Cameron, June 1, 2010
"Hundreds of images from the Museum of London's extensive collections showcase both everyday and momentous occasions in London's history, from the Great Fire of 1666 to the swinging sixties."
Text Messaging

Mobile Exercise Learning

Mobile Internet (source: Dr. Paul Kim, Stanford)

Inexpensive Laptops and Tablet Computers
OLPC, Marvell Join Forces, Announce sub-$100 Tablet by December 2010, May 27th, 2010, Mike Prospero

Will expert advice (and happiness) be a button away? (e.g., Live Happy Practitioner Directory)

"A" is for App, Anya Kamenetz, Fast Company, April 2010
Powering the device on bicycle

PocketSchool on Two Wheels

Part II. Blended Learning
1. Models and Frameworks
2. Problems and Solutions (i.e., examples)

Who is demanding fully online and blended learning?

Those in hurricanes!

Those where there are diseases and outbreaks...
Those in earthquakes!

Those affect by volcanos...

Those in blizzards and ice storms...
Snowmageddon, DC winter of 2010

Blending Online
Is the Solution!

What I will discuss...
1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Implications for blended learning

Handbook of Blended Learning
(HOBLe, Bonk & Graham, 2006)
- 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
Blended Learning Defined and Explained

Myth #1: People will know what I am saying when I say "blended learning." Myth #2: Blended is the same as "hybrid."

<table>
<thead>
<tr>
<th>Percentage of Class Time Online</th>
<th>Type of Learning</th>
<th>Typical Description</th>
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<tbody>
<tr>
<td>0%</td>
<td>Traditional</td>
<td>Course with no online technology/interaction is referred to as &quot;live&quot; or &quot;face-to-face.&quot;</td>
</tr>
<tr>
<td>1% to 29%</td>
<td>Hybrid</td>
<td>Courses which use some online technology are referred to as &quot;hybrid,&quot; whereas those with live components are referred to as &quot;face-to-face.&quot;</td>
</tr>
<tr>
<td>30% to 79%</td>
<td>Blended/Hybrid</td>
<td>Courses that are a blend of the traditional and online components. Range of the percentage of online interaction varies widely from class to class.</td>
</tr>
<tr>
<td>80% to 100%</td>
<td>Online</td>
<td>A course where the majority of the content is delivered online. Typically, some face-to-face meetings.</td>
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</table>

Myth #3: Knowing "how much" to blend is vital. Range of Blends in Pew Cases

Blending Online and F2F Instruction

Myths #4: Blended learning is easy to define. Myth #5: Blended learning is hard to define.

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

Trying to Define it is a Trap!!!
A Rebel From Another Galaxy, March 14, 2010
By Andrea Fuller

A vision for a blended virtual ecosystem

DIGITAL PROJECTOR
INTERACTIVE WHITEBOARD
TEACHER LAPTOP
STUDENT RESPONSE SYSTEM
AUDIOPHYSICAL SYSTEM

THE CHRONICLE
IT'S A TRAP
Myth #6: Blended learning works everywhere. Where is Blended Beneficial?
- 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, IBM
- 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

Myth #7: People learn more in face-to-face settings than blended or fully online ones.
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
Myth #8: Faculty can have a logical discussion with administrators about blended learning.

**Models of Blending**

Blending occurs at the following four levels:

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

Instructor stakeholders

Administrator stakeholders

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1. **Activity- and Course-Level Blends**

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

![Diagram showing blended learning systems]

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

![Diagram showing course-level blend]

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3. **Program-level blending**

(blend same for all participants) Kelley Direct Online MBA (IU)

![Graph showing enrollment numbers]

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4. **Institutional Blend**

(e.g., The Open U Malaysia) (Abtar Kaur, 2006)

- Started August 2001: approx. 800 students
- Total students (2008): approx. 33,000
- Total students (2010): over 85,000
- 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

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**Categories of Blends**

<table>
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<th></th>
<th>A. Enabling Blends</th>
<th>B. Enhancing Blends</th>
<th>C. Transforming Blends</th>
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<tbody>
<tr>
<td></td>
<td>Enabling blends primarily focus on addressing issues of access and convenience; provide similar learning experiences.</td>
<td>Enhancing blends allow for incremental changes to the pedagogy; additional or supplementary online resources.</td>
<td>Transforming blends are blends that allow for a radical transformation of the pedagogy and learner construction of knowledge.</td>
</tr>
</tbody>
</table>
Myth #9: There is a best model of blended.
AMA Special Report, Effectively Implementing a Blended Learning Approach
(Steven Shaw & Nicholas Ignieri, 2006)

Institutional-level Blending
(Brian Linquist, 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)

The IBM Four Tier Learning Model
Blending Learning for Business Impact – IBM’s case for learning success, Lewis & Orton, 2006

Myth #10: If you read the enough research you will be able to know the impact of blended learning.
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 4711, Avaya, Microsoft
   - Higher Ed: PEW Grants

Part II: 13 Fully Online and Blended Learning Problems and 43 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.

Blended Solution #2. Webcast Specific Instructor Lectures
(Tegrity, Echo360, Mediasite, etc.)

Blended Solution #3. Post Courses in YouTube and iTunes

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.
Blended Solution #4.
Alternating FTF and Online Classes
- Freshman English at BYU: Students are required to meet F2F once a week instead of three times a week. Same in a multimedia class at Beijing Normal University (BNU).

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 #5.
Using Open Access Journals
(e.g., PLOS, JIOI, IRRODL)

Blended Solution #6. United Nations World Digital Library
http://www.wdl.org/en/

Blended Solution #7.
Online Portal Explorations

Blended Solution #8. Shared Online Video (e.g., the Khan Academy; videos on math, bio, trig, chemistry, money and banking, economics, statistics, 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.

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 #13. Online Accounting Lessons
(e.g., Lyryx; https://lifel.lyryx.co)

Blended Solution #14. Listen and Reflect on Book Author Podcasts

Blended Solution #15. Pubcasts!
(videos of scientific papers and science)
NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee.

Blended Solution #16. Online Cases (e.g., Mark Braun, IU)

Blended Solution #17. Real World Problems (PBL online)
(e.g., Real-time Business Cases)

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 #18. Global Teams Solving Cases

Blended Solution #19. Mock Tour Packages (e.g., Univ of Illinois and Korea Tourism classes)

Blended Solution #20. Online Role Play (Tulane University, Exercise for Renewable Energy, Freeman Sch. of Business, roles include power traders, electric utility analyst, independent power producers & utility dispatchers)

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 #21. Expert Video Reflections and Scaffolds online (E-Reading First Ohio)

Blended Solution #22. Watch or Listen to Online Conferences
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 #23. Create an Online Community (e.g., in Ning, Google Groups, or Yahoo Groups)

Blended Solution #24. Cross-Institutional Wikibook Project (e.g., IU and the University of Houston)

Blended Solution #25. Global Videoconferencing

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. Simulations and Virtual Worlds Online (e.g., OpenSimulator)
Blended Solution #27. World Trends and Indices (e.g. Worldmapper)

Blended Solution #28. Anchored Instruction Discussions (TED, YouTube, YouTube EDU, CNN, BBC, TeacherTube, CurrentTV)

Blended Solution #29. Virtual Tours and Timelines (i.e., HyperHistory; http://smile.mit.edu/timeline/)

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 #30. Online Psychology Experiments

Blended Solution #31. Tour a Museum (e.g., British Museum, Smithsonian, Louvre)
Blended Solution #32. Concept Mapping and Timeline Tools (e.g., VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

Blended Solution #33. Reuse Blog Posts, Chat Transcripts, Interviews, Online Presentations

Blended Solution #34. Educational Simulations

Blended Solution #35. Podcasts for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

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 #36. Podcasting Medical Lectures (School of Dentistry, University of Michigan)
Blended Solution #37: Podcast Paper Reflections

Blended Solution #38: Teaching with Twitter. Announcements and following people (e.g., microblogging)

Blended Solution #39: Free Podcast Shows; Language Learning (e.g., ChinesePod)

Blended Solution #40. Podcasts, Audio Portals, etc. (e.g., Basic Acoustics of Musical Instruments; Univ. of New South Wales)

Blended Solution #41. Indexing Sounds in Cities with Google Maps

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 #42. Video Course
Intros (examples from Northern Virginia Community College and IU online MBA program)

Blended Solution #43. Class
Synchronous Sessions and Archives
(Breeze/Adobe Connect Pro, Elluminate, WebEx, Dim Dim)

Trends, 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.

Again, this talk covered...
1. Definitions of blended learning
2. Advantages and disadvantages
3. Models of blended learning
4. Examples of blended learning
5. Predictions for blended learning
6. Challenges for blended learning

How many ideas did you get from this talk?
1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2... just 2!
4. Do I hear 3?
5. 4-5.
6. 5-10.

Questions and Comments
Note: Bonk papers and talks at: http://www.publicationshare.com/
http://www.trainingshare.com/