**Blended Learning: Situations and Solutions**  
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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

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**Chris Dede, Campus Technology, June 2006:**  
Changing the Gold Standard for Instruction  

- “Face-to-face may be best for most faculty...However, we know that many students who are silent in classroom discussions find their voice and participate actively in different flavors of mediated interaction.”

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**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)

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**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)

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**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)
• Traditional: 0% online technology
  - (all content in writing or orally)
• Web facilitated: 1 to 29% online
  - (Web syllabus or tasks supplemental)
• Blended/Hybrid: 30-79% of content is delivered online & some FTF meetings
• Online: 80+ of content is online

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

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

Instructional approaches or strategies that will be more widely used in BL during coming decade
(Bonk et al., 2006)

Range of Blends in Pew Cases

Frameworks and Models of Blended Learning...
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

AMA Special Report, Blended Learning Opportunities
Alison Rossett (2006)

1. Anchor Blend: Start FTF, then online
2. Bookend Blend: Three part: e.g., online preassessments, then FTF, and then online post assessments
3. Field Blend: Assets, resources, and choices including perhaps FTF

AMA Special Report, Effectively Implementing a Blended Learning Approach (Steven Shaw & Nicholas Ignier, 2006)

Harvey Singh (2006)
Historical Emergence of BL (Graham, 2006)

Dimensions of Blended Learning (Jay Cross, Foreword, 2006)

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

Enriching Student Experience Through BL (Bob Albrecht, ECAR, June 6, 2006, Educause)
1. Address diverse learners (low stakes quizzes)
2. Student satisfaction (more choice)
3. Reduced costs (online scoring or grading)
4. Increase capacity in facilities (e.g., UCF)
5. Convenience
6. Pedagogy
Student Satisfaction in Canada for Blended Learning (Owston, Garrison, & Cook 2006)

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. Faculty skepticism, increase workload, and reduced productivity

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 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

Models of Blending
Blending occurs at the following four levels:
- Activity Level
- Course Level
- Program Level
- Institutional Level
1. **Activity- and Course-Level Blends**

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

![Diagram of activity and course-level blends]

2. **Course-Level Blend: Using CMS to blend distance and F2F learners**

(Rogers, Graham, et al., 2003)

![Diagram of course-level blend using CMS]

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

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

![Diagram of course-level blends at Beijing Normal University]

3. **Program-level blending**

Teleconferences Online Seminar 1 Seminar 2 Mentoring

CRM Executive Technology Orientation

Strategic Financial Concepts Concepts

Business Process Reengineering

Executive Role Plays

Closed Research, Executive Presentations, CRM Qualification, CRMvia Club

2.5 Months

![Diagram of program-level blending]

*Figure 1: Avaya's ESSBa program schedule*

2. **Course-level Blends**


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

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1</td>
<td>Topic 2</td>
<td>Topic 3</td>
<td>Topic 4</td>
</tr>
<tr>
<td>Live videoconferencing</td>
<td>Live videoconferencing</td>
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<td>Live videoconferencing</td>
</tr>
</tbody>
</table>

![Diagram of course-level blends in World Bank course]

Kelley Direct Online Programs
Indiana University Kelley School of Business

**Growth in Student Enrollments at KD**

- Certificate Programs
- MS
- Public MBA
- Corporate MBA

![Diagram of growth in student enrollments at KD]

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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

(Adapted from Anony, 2006, Open University Malaysia)

The OUM

(Adapted from 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

(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 first and 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)

4. Microsoft

Framework for organizational development through training
Assess, Learn, and Apply
(Copyright Microsoft, Zib & Mosher, 2006)
**Blended Learning Form Factors**

<table>
<thead>
<tr>
<th>Live instructor-led</th>
<th>Self-paced</th>
<th>Tools for learning communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>+Traditional classroom</td>
<td>+Instructor-led classroom via e-mail</td>
<td>+Chat</td>
</tr>
<tr>
<td>+Onsite engagement</td>
<td>+Online or computer-based training (CBT)</td>
<td>+Instant messaging (IM)</td>
</tr>
<tr>
<td>+Virtual online classroom</td>
<td>+Self-study guides, manuals, texts</td>
<td>+Newsgroups and forums</td>
</tr>
<tr>
<td>+Live video via satellite or videoconferencing</td>
<td>+Online resources and databases</td>
<td>+Collaboration</td>
</tr>
</tbody>
</table>

**The IBM Four Tier Learning Model (2006)**

Blending Learning for Business Impact – IBM’s case for learning success, 2006 Handbook of Blended Learning, Nancy Lewis, VP, & Peter Orton, IBM

**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.

**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

**Specific Learning Elements**

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

**Content Delivery Focus**
- Classroom Lecture
- Scenarios/Context
- Directed Discoveries
- Video
- Video-conferencing

**Delivery Focus**
- Guided Navigation
- Coaching

**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.)
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 mode, supported by material provided through the online learning or relevant university schools' document management systems

B. Enhancing Blends
(Univ of Glamorgan, Wales, 2006)

Continuum of e-Learning

<table>
<thead>
<tr>
<th>Basic ICT usage</th>
<th>E-enhanced</th>
<th>E-focused</th>
<th>E-intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eg. PowerPoint presentations</td>
<td>Access to online resources</td>
<td>Use of IT for enhancements</td>
<td>Discussion boards, online assessment tools, innovative learning environments</td>
</tr>
<tr>
<td>Whole modules delivered and moderated online</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. Transforming Blends
(Kirkley & Kirkley; Oliver, Herrington, & Reeves, 

What can we say about blended learning then???

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

12 Blended Learning Problems and 30 Solutions
Problem Situation #1: Student Absenteeism

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

Blended Solution #1.
Video Streaming Course Sessions (e.g., BobWeb)

<table>
<thead>
<tr>
<th>Course</th>
<th>Section</th>
<th>Date</th>
<th>Format</th>
<th>Time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENJO-3</td>
<td>556</td>
<td>08/01</td>
<td>Live</td>
<td>0900</td>
<td>45 min</td>
</tr>
<tr>
<td>ENJO-3</td>
<td>556</td>
<td>08/02</td>
<td>Live</td>
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</tbody>
</table>

Streamed Class Sessions for 556

Blended Solution #2.
Divide Online and Class Experiences: English Classes

- 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).

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. Post Foreign Language Practice Exercises Online
(Grammar Practice on Spanish (Pew course))

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

Blended Solution #4. Instructor Portal: e.g., self study in anatomy

Blended Solution #5: Warm-ups Online Just-In-Time-Teaching (JiTT)
http://webphysics.iupui.edu/jitt/jitt.html

Blended Solution #6. Online Practice Tests (e.g., Calm Chemistry)

Blended Solution #7. Online Role Play, Surveys, Discussions, etc.

- Enroll famous people in your course
- Students assume voice of that person for one

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 #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.
WikiBook Creation and Collaboration

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

Blended Solution #12.
Videoconferencing Expert Lectures and Online Conferences
Blended Solution #13.
E-Reading First Ohio (video-based scaffolding from expert instructors)

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

Blended Solution #15.
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 #16.
Learner-Self Interactions and Reflections
Blended Solution #17: Workplace and Field Reflections, Job Interviews
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 #18: Teacher Professional Development in Technology Integration (the TICKIT Program)
(Bonk, Ehman, & Yamagata-Lynch, in press, AACE Journal)
http://www.lab2u.com/~tckit

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 #19: 3-D Visualization & Laboratory Software

Blended Solution #20: Interactive Online New Stories & Cases
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 #22. Business Classes (Univ of Glamorgan in Wales & Univ of Calgary)

Blended Solution #23. Educational Simulations, Scenarios, and Manipulations

Blended Solution #24. Real World Problems (PBL online): Real-time Cases

Blended Solution #25. Video Scenario Learning (Option 6, Arjuna Multimedia, Bloomington, IN)
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 #26. Basic Acoustics of Musical Instruments
- Auguste-Georges
- You can simulate an environment that would lead to better understanding of the subject matter.
- Sensory elements (You have to see the face of a musical instrument and the correct position to make the right pitch.)
- The model of a sound. How good is it? How does it affect the body? What's the shape of the sound?
- Video footage or audio tracks can help you understand the basic of music.

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 #27: Podcasting and Coursecasting
- Adam Curry: www.dailysourcecode.com
- Recordings of lectures (Coursecasting)
- Textbook text
- Student projects
- Interviews
- Language lessons
- Oral reports
- K-12 classroom interactions
- Downloadable library
- Recordings of performances

Blended Solution #28: Language Learning
- (ChinesePod—learn Mandarin)

Blended Solution #29: Video Streamed Lectures and Expert Commenting
- Video lectures and expert commentary can enhance the learning experience.
Implications and Challenges for Blended Learning in Higher Education

- Faculty and students are more mobile.
- Student expectations rise.
- Greater self-determined learning.
- More corporate university partnerships.
- Courses increasingly modular.
- Less predefined schedules.
- Scheduling much more complex.

The End...Remember

Any questions, comments, or concerns?
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http://www.trainingshare.com/