

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



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."



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)



The Sloan Consortium
 (2003). *Sizing the Opportunity: The Quality and Extent of Online Education in the U.S., 2002 and 2003*
http://www.sloan-c.org/resources/sizing_opportunity.pdf

- **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**

Frameworks and Models of Blended Learning...

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)

Percent of Student Learning that is Blended

| Learning Category | 2003 (%) | 2006 (%) | 2013 (%) |
|---------------------------------|----------|----------|----------|
| None | 10 | 5 | 2 |
| 20% or less of student learning | 65 | 25 | 15 |
| 21 to 40% of student learning | 18 | 38 | 22 |
| 41 to 60% of student learning | 8 | 22 | 25 |
| 61 to 80% of student learning | 5 | 12 | 25 |
| 81 to 100% of student learning | 2 | 5 | 15 |

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

Which strategies will become more widely used in BL? (US, UK, Korea, Taiwan)

| Strategy | Percentage (%) |
|-----------------|----------------|
| Socratic | 3 |
| Debate | 4 |
| Lecturing | 5 |
| Discuss | 6 |
| Explore | 7 |
| Model | 8 |
| Guided | 9 |
| Sims | 10 |
| Virtual teams | 10 |
| Self-paced | 10 |
| PEL | 11 |
| Coaching | 13 |
| Authentic cases | 15 |

Range of Blends in Pew Cases

Face-to-Face Learning Environment ← → Computer-mediated Learning Environment

2/3-1/3 blend even blend 1/3-2/3 blend

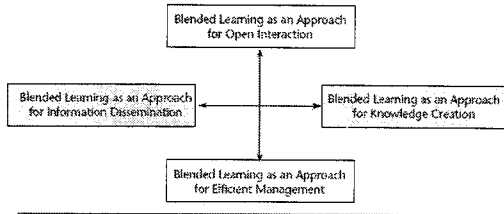
KEY

- Technology enhanced
- ▲ Reduced F2F contact time
- Entirely Distributed
- △ Optional F2F sessions

Source: Graham, C. R., & Allen, S. (2005). Blended learning: An emerging trend in education. In C. Howard & J. V. Boettcher & L. Justice & K. D. Schank & P. L. Rogers & G. A. Berg (Eds.), *Encyclopedia of Distance Learning* (pp. 172-179). Hershey, PA: Idea Group Inc.

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

FIGURE 19.1. A FRAMEWORK FOR ANALYSIS OF INSTRUCTIONAL APPROACHES TO 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)



Table 1. What Might Go in the Blend

| | |
|--|--|
| Live face-to-face (formal) <ul style="list-style-type: none"> • Instructor-led classroom (FTF) • Workshops • Coaching, mentoring • On-the-job (OTJ) training • Work-based problems | Live face-to-face (informal) <ul style="list-style-type: none"> • Collegial relationships • Work teams • Apprenticeships |
| Virtual collaboration/synchronous <ul style="list-style-type: none"> • Live e-learning classes • E-coaching, e-mentoring • Instant messaging, SMS | Virtual collaboration/asynchronous <ul style="list-style-type: none"> • Email • Online communities and discussion boards • Listservs • Blogs, wikis, podcasts |
| Self-paced learning (print, CD/DVD, electronic, wireless) <ul style="list-style-type: none"> • Online modules • Online resource links • Simulations and scenarios • Assessments and self-assessments • Workbooks, readings | Performance support <ul style="list-style-type: none"> • Online help systems • Prior job aids • Online knowledge databases • Documentation • Performance support tools |

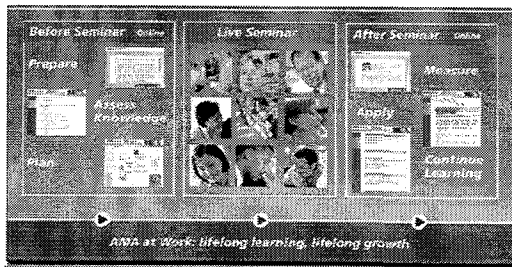
Adapted from Rossett, Douglas, & Frazer, 2005, [a]

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 Igneri, 2006)



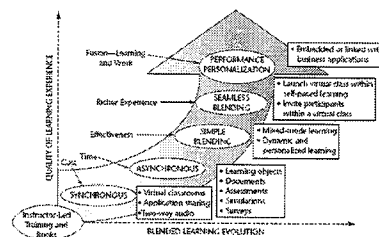
Source American Management Association, AMA at Work

Harvey Singh (2006)

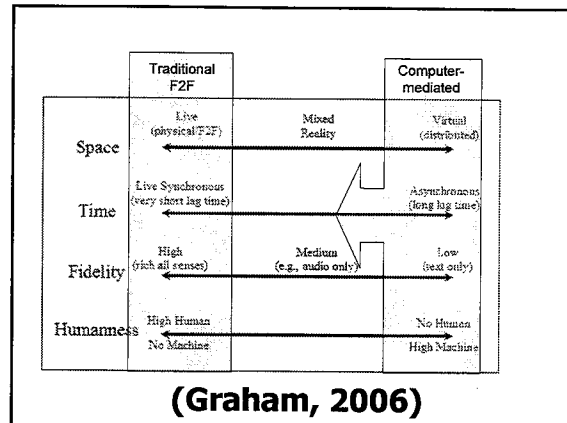
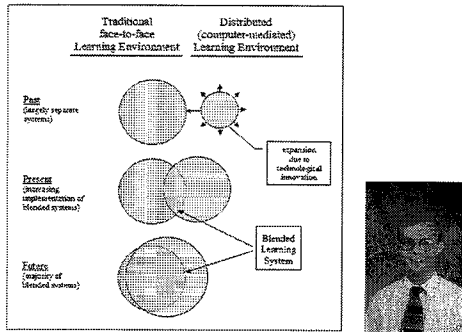
Blending Learning and Work

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



Historical Emergence of BL (Graham, 2006)



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

FIGURE F.1. DIMENSIONS OF THE BLENDED LEARNING STEW.

| | |
|-------------------|-------------------|
| fleeting know-how | Lasting knowledge |
| Individual | Community |
| Generic | Proprietary |
| Training | Knowledge sharing |
| Text | Visual |
| Self-directed | Guided navigation |
| Content focus | Experience focus |
| Exploring | Participating |
| Push | Pull |
| Personalized | One-size-fits-all |
| Skills | Values |
| Information | Transformation |
| Formal | Informal |

A small portrait of a man is visible on the right side of the table.

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

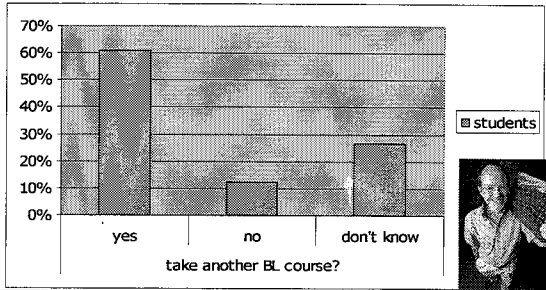
Blended Learning Advantages

- 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**
- A small image of a person standing in front of a screen is visible at the bottom right of the list.

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**
- A small portrait of a man is visible at the bottom right of the list.

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>

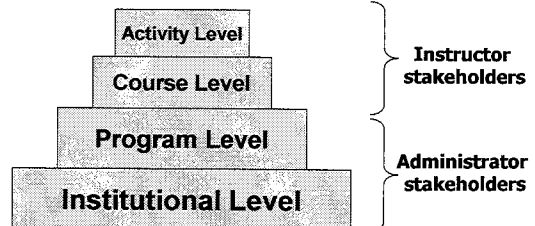
- Large Classes (spanish, intro psych, algebra, elementary statistics, biology)
- Classes with working students
- Students spread over a distance
- Classes with certification
- Classes with need for standardization
- New requirements for a profession
- Writing intensive classes
- Theory classes

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

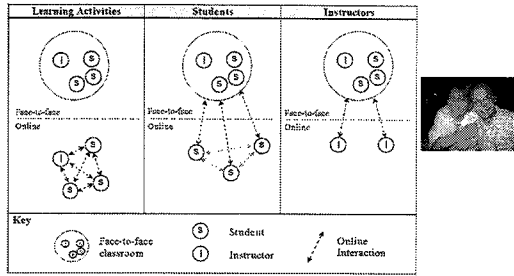
Models of Blending

Blending occurs at the following four levels:

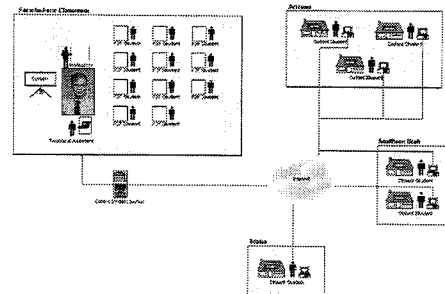


1. Activity- and Course-Level Blends

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 technology course in China.

The timeline diagram shows a sequence of activities over 7.3 weeks. It includes learning instruction, audio coding, data compress, JPEG compress, dynamic video compression, group reports, XML, and a final week for exams. A legend indicates '2' for F2F Lecture and a shaded box for E-learning activity.

See: Huang Ronghui, H. & Yueliang Z. (2006). 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 read (pg. 5, 6) | Small group discussion | Apply model to real case | Self-paced work to reinforce learning |
| Print or Web | Facilitator: online | Print, F2F or e-discussions | Web, CD-ROM, print |
| Via Videoconferencing | | | |
| Topic 1 Introduce analytical model | Topic 2 Consistent in group work, new concepts | Topic 3 Groups present, instructor clarifies & summarizes | Topic 4 Units from self-paced to analytical model |



3. Program-level blending

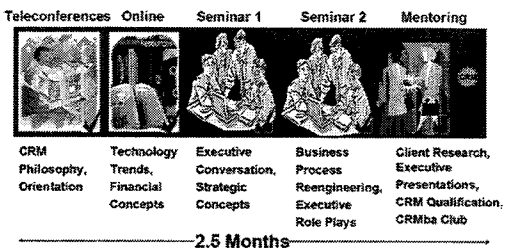


Figure 1: Avaya's ESSBa program schedule



Kelley Direct Online Programs

Indiana University Kelley School of Business

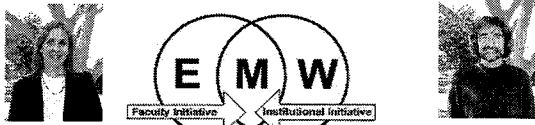
Growth in Student Enrollments at KD

The stacked bar chart shows enrollment growth from 2002-3 to 2004-5. The categories are Certificate Programs, MS, Public MBA, and Corporate MBA. Total enrollment grows from approximately 500 in 2002-3 to over 900 in 2004-5.

4. Institutional-level Blending

Example 1: University of Central Florida

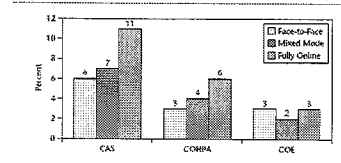
- E courses are technology enhanced courses
- M courses are blended courses with reduced seat time
- W courses are web courses (completely online)



See: Dziuban, C., Hartman, J., Juge, F., Moskal, P., & Sorg, S. (2006). 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.

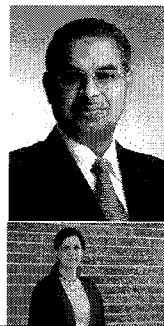
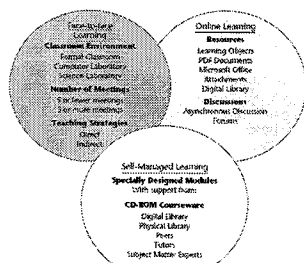
4. Institutional-level Blending (Dziuban, Hartman, Juge, Moskal, & Sorg, 2006)

FIGURE 14.3. WITHDRAWAL RATES FOR FACE-TO-FACE, MIXED-MODE, AND FULLY ONLINE CLASSES (N = 18,284).



4. Institutional-level Blending (Abtar Kaur & Ansary Ahmed, 2006, Open U Malaysia)

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



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 (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)



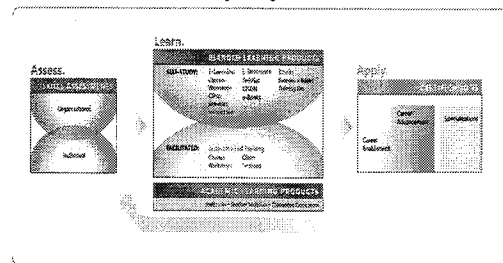
4. Microsoft

Framework for organizational development through training

Assess, Learn, and Apply



(Copyright Microsoft, Ziob & Mosher, 2006)

Microsoft Products and Services for Lifelong Learning



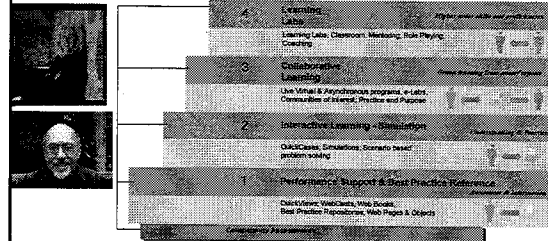
Blended Learning Form Factors

(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  |

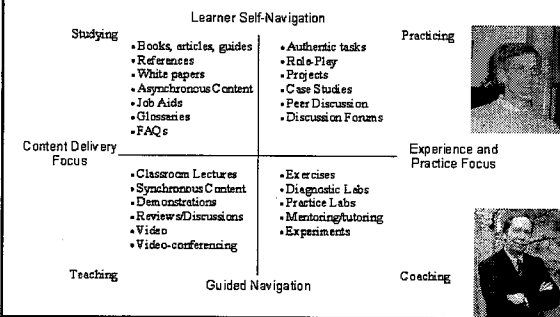
The IBM Four Tier Learning Model (2006)

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



Specific Learning Elements

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



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.)

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**

