Toward the Learning Paradigm
with Curricular Redesign Grants

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"This is fabulous, relevant, and meaningful work...

The only problem is:
No one who needs it is going to read it."

...said their Keynote Speaker holding up the 500+ page proceedings

Linda Roberts
Director, Office of Educational Technology
U.S. Department of Education
Huh?

Do we work with Educational Researchers?

Do they work with us?
Two Worlds of Educational...

Research and Development

Educational Researcher

Instructional Technologist
Our students (already) grew up digital

Higher ed is shaped by market forces

Learners are / should be at the center

- Computer / internet is not ‘technology’
- Expect 24 / 7 Information Access
- Learn thru lurking, trying & experiencing
- Consumer / Producer boundaries blurred
- Zero tolerance for delays
- Multitasking is the norm
- Nonlinear thinking is the norm
- Straight to the Source
- The term ‘virtual’ a joke
- Prefer self-service over personal service
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Learners are / should be at the center.

- Endowment Woes & State Budget Cuts
- Students are Customers
- ROI - Return on Investment
- Accountability & Compliance
- Accreditation Focused on Learning
- Anytime / Anywhere
- Cost Effectiveness
- Competition in Global Environment
- 24 / 7 Access and Support
- Economic Shifts & Returning Students
- Supply & Demand Models for Higher Ed
Our students (already) grew up digital.

Higher ed is shaped by market forces.

Learners are / should be at the center.

- Constructivism
- Scaffolding
- Novice to Expert
- Contextualization
- Formative Assessment
- Immediate Feedback
- Collaboration
- Cooperation
- Learning Styles
- Learning Strategies
- Experiential Learning
- Meta-cognition
- Engagement
- Prior Knowledge
- Motivation
- Multi-sensory
- Adaptability
- Case-based
- PBL
- Learn by Doing
- Immersion
- Inquiry
Excuse me, you know where the intersection of Research & Everyday Practice is?
From our Nice Corner Lot…

- How can we *absorb* the findings of educational research?
- How can we *contribute* to the findings of educational research?

How do we *keep moving* toward the learning paradigm?
Setting the Framework…


Evidence of a Shift

- Concerns about learning outcomes
- understanding of how people learn
- learner-centered technology
Critical Approaches to the Learning Paradigm

- Institutional Change
- Foundational Force of CMS
- Transformational Experiences for Faculty
- Assessment & Evaluation
- Learner-Centered Design & Practices
Toward the Learning Paradigm with Curricular Redesign Grants

- Toward the Learning Paradigm
- with Curricular Redesign Grants
- You Are Here!

Institutional Change

Assessment & Evaluation

Foundation Force of Blackboard

Transformational Experiences for Faculty

Learner-Centered Design & Practices
At the Intersection of Research & Everyday Practice?

Foundational Force of Blackboard

You Are Here!
**Foundational FORCE of BLACKBOARD**

- Scaleable Technology for the Masses
- Drove IT Units to Consider Learning/Teaching as a core university function.
- Mostly Fosters *Teaching Efficiency*
  Somewhat Fosters *Learning Effectiveness*
- Created a “Learning Technology Middle Class”
- CMS Spurred Visions of LMS
What we have learned

- Incentive must out-weigh risk
- Performance & access issues still need work.

**AND...**

- Blackboard is still an administrative tool (a CMS instead of an LMS)
- The tool is easier to grasp than the model.
Building upon the Foundation

- Groundswell to move beyond basic CMS
- Eventually toward Learning Mgt. System
- Incremental steps with Bb Building Blocks
  - Purchase through 3rd party providers
  - Building our own tools and services
Building our own tools & Services

- Labor-saving tool
  - Email filter tool
- Customized interface & tool suite
- Special Capabilities
  - Brownstone & Comenius quiz & problem solving tools

...but, a real and significant LMS is still a ways off.
But even at its most bare bones foundation ...

- Blackboard has rendered transformational experiences for:
  - Faculty
  - TAs
  - Students
  - IT Unit(s)
  - Academic Departments
  - University Administration
At the Intersection of Research & Everyday Practice?

Foundational Force of Blackboard

You Are Here!

Transformational Experiences for Faculty
Requirements for Transformational Experiences

- Sufficient opportunities to experiment & reflect
- Iterative engagement in development cycles
- No one-size-fits-all experience for all faculty
- Flexible and redundant approaches
- Appreciation for different faculty needs
Strategy for Transformation - 1998

- Pioneers
- Early Adopters
- Project Grants
- Workshops & Bb
- HelpDesk Newsletter
- Late Adopters
- Free Scratch Paper (i.e. newsletter)
- Not
Strategy for Transformation - 2000

- Pioneers
- Joint Proposals on external grants
- Early Adopters
- Project Grants
- Late Adopters
- Events, Workshops, Bb, e-bulletin
- Not
- Joint Proposals on external grants
- e-bulletin
Strategy for Transformation - 2003

- Early Adopters
- Pioneers
- Project Grants
- Productive Partnerships
- Late Adopters
- Workshops, Bb, Events & e-bulletin
- Not.
- e-bulletin

Productive Partnerships

USC Center for Scholarly Technology

NLII '03
Expanding our Services

- Meeting the training needs of multiple faculty levels
  - Target the faculty at different levels of adoption
  - Target whole departments with different needs
  - Vary workshop forms & formats

- Providing consistent services to all levels
  - Distinguished Speaker Series
  - Faculty Showcases
  - Teaching & Learning Forums
  - Technology Open Houses
  - Teaching & Learning with Technology Conference
Expanding Our Granting Programs

- JumpStart: Get Faculty Started
- BarnRaising: Get Faculty Together
Expanding Our Granting Programs

JumpStart

Terms

- Available to single faculty or TA
- Focus on pedagogical design
- $1,000 - $10,000 for development and services
- Requires departmental head commitment & recognition

BarnRaising
Expanding Our Granting Programs

JumpStart

BarnRaising

Project Tracks

- Develop a Module / Tool
- Re-appropriate an Existing Module / Tool
- Upgrade an Existing Module / Tool
- Support Student Projects (Multimedia)
- Distribute a Course using Blackboard
Expanding Our Granting Programs

**JumpStart**

- Available to 3-5 faculty or TA
- Focus on pedagogical design
- $1,000 - $10,000 per faculty for development and services
- Requires departmental head commitment & recognition

**BarnRaising**
Expanding Our Granting Programs

- **JumpStart**
- **BarnRaising**

**Project Tracks**
- Develop a Set of Modules / Tools
- Distribute a Course or Program using Blackboard
Six Strategies for Faculty Transformational Experiences

Support Fruitful Authorship

- Provide development team and project management.

Focus on Quality Teaching/Learning

- Promote sound pedagogy and instructional design at every phase.

Make Technology Transparent

- Design data flow & interface based on faculty design of content & features.

Broker Faculty Ties: Inter & Intra Departmental

- Introduce faculty to other faculty based on instructional needs.

Create Formal Recognition

- Formalize project accomplishments & expenditures and encourage publications.

Entice Others Through Example

- Showcase & feature faculty work as laudable example for future project proposals.
Toward the Learning Paradigm

Foundational Force of Blackboard

Transformational Experiences for Faculty

Learner-Centered Design & Practices

You Are Here!
Learner-Centered Design

- Masses of learning science findings distilled down to five key “first” instructional principles

- ...and another five makes ten first principles of instructional design

- Seven principles of “good practice”

- First things first: Being explicit in the grant design and process
Five PRINCIPLES of INSTRUCTION*

Instruction must:

1. be presented in a real-world context.
2. activate students prior knowledge & experience.
3. demonstrate what is to be learned.
4. provide opportunities to apply what is learned.
5. promote integration of new knowledge back into the student’s real-world context.

Instruction must:

6. organize content around themes.

7. provide multiple cases to promote generalization.

8. provide early exposure to expert approaches.

9. gradually increase the challenge of activities.

10. encourage frequent self-assessment.
Principles of Good Practice *

Good Practice:

1. encourages student to faculty contact.
2. encourages cooperation among students.
3. encourages active learning.
4. gives prompt feedback.
5. emphasizes time on task.
6. communicates high expectations.
7. respects diverse talents and ways of learning.

First things first: Grant Proposals

Explicit signage:

- **Feb 20:** Faculty project showcase and orientation
  Introduction to First Principles of good design & practice

- **Feb 20 - March 14:** Pre-proposal consultation
  Integrate First Principles into initial grant ideas & plans

- **March 14:** Proposals due
  Submissions must address First Principles in curricular project plan

- **March 14 - April 7:** Proposals reviewed
  Criteria based on First Principles

- **April 7 - May 5:** Project requirements
  First Principles highlighted in project features & course syllabus
Toward the Learning Paradigm

Foundational Force of Blackboard

Transformational Experiences for Faculty

You Are Here!

Assessment & Evaluation

Learner-Centered Design & Practices
Funny thing about people & self-evaluation...
Some candid reflections are easy...

I can’t draw.

I can’t sing.

I’m a horrible cook.
But two you never seem to hear...

I’m a bad driver.

I’m NOT a very good teacher.
Confessional of an Instructional Technologist...

Are students REALLY learning what we intend for them to learn?

What EXACTLY did you intend for them to learn?
Some Options for Two Separate Worlds...

- Merge Efforts to:
  - Assess Learning Outcomes
  - Evaluate Programs
  - Analyze Impact
Some Options for Two Separate Worlds...

- Merge Efforts to:
  - Assess Learning Outcomes
  - Evaluate Programs
  - Analyze Impact

- Or Not.
Why Assess Learning Outcomes?

For Faculty:
- Find out what students have learned (or not)
- Find out how effectively it was taught (or not)
- Determine what curricular, pedagogical or assessment changes are needed
- Strategically align learning goals with such changes
Why Assess Learning Outcomes?

- For Departments / Programs:
  - Track student learning across multiple sections
  - Track student understanding through program lifecycle
  - Determine what curricular, pedagogical or assessment changes are needed
  - Strategically align learning goals with such changes
Why Assess Learning Outcomes?

For University Administration & Support:

- Align IT support & faculty development services with academic needs
- Demonstrate accountability to external reviewers
For Example... (Assessing Learning Outcomes)

- Partnership with USC Schools of Education & Engineering
- External grant from Mellon Foundation
- Compare traditional vs. technology enhanced methods of teaching

- Measured:
  - Cost
  - Effectiveness (learning outcomes)
  - Various demographic & academic variables
A humble contribution to field of Educational Research...

- Participation in two Mellon sponsored international forums on cost-effectiveness
- 8 other conference papers in Asia, North American, Europe
- Publishing in wide array of academic disciplines

Other Motives

- Spurring local recognition of assessment efforts through external recognition
Preliminary Results

- Costs: technology enhanced model cost no more than traditional model

- Effectiveness: most potential predictors did not predict, except GPA

- Some indication that technology enhanced approach helped performance (students with lower GPA)
Why Evaluate Programs?

- Find effect on learning outcomes
- Determine cost effectiveness (ROI)
- Identify patterns of use & motivation
- Determine impact on faculty / student practices
- Track diffusion of e-learning innovation
- Identify changing needs for support
- Find changes in time allocation (students & faculty)
- Determine which technologies are more suited for different
  - academic disciplines
  - learning styles
  - Student & faculty practices
Use & Impact of Blackboard

- Partnership with USC Annenberg School of Communication with External Grant

- Conducted Formal Research on Use and Impact of Blackboard at USC

- Study Methods included:
  - Statistical data from Bb and Student Services
  - Online faculty/TA survey
  - Focus Groups
A Humble Contribution to the Field of Educational Research

Publications Include:

  • Pauline Hope Cheong, Namkee Park & William H. Dutton

- 2002: Social and Institutional Factors Shaping e-Learning in Higher Education: Case Study of a University-wide Course Management System
  • William H. Dutton, Pauline Hope Cheong, Namkee Park

And what exactly is there to say...
Measuring the Force

- Faculty Motivations
- Changes of Time Allocation
- Use of Multiple Media
- Perceived Helpfulness
- Patterns of Use
- Constraints on e-Learning Innovation
## About Faculty Motivation

<table>
<thead>
<tr>
<th>Motivations</th>
<th>Very Important + Important (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase communication among students</td>
<td>77</td>
</tr>
<tr>
<td>Ease of use</td>
<td>74</td>
</tr>
<tr>
<td>Save time</td>
<td>68</td>
</tr>
<tr>
<td>Help students learn to use online resources</td>
<td>61</td>
</tr>
<tr>
<td>Learn more about online course development</td>
<td>48</td>
</tr>
<tr>
<td>Keep up with technical change</td>
<td>47</td>
</tr>
<tr>
<td>Respond to students’ request or interest</td>
<td>45</td>
</tr>
<tr>
<td>Comply with school or departmental policy</td>
<td>19</td>
</tr>
</tbody>
</table>
# About Change in Time Allocation

<table>
<thead>
<tr>
<th>Time Spent</th>
<th>Increased (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being online</td>
<td>54</td>
</tr>
<tr>
<td>Communicating with students</td>
<td>43</td>
</tr>
<tr>
<td>Sending and receiving email</td>
<td>42</td>
</tr>
<tr>
<td>Preparing for classes</td>
<td>38</td>
</tr>
<tr>
<td>Working from home</td>
<td>36</td>
</tr>
<tr>
<td>Working in your office</td>
<td>22</td>
</tr>
<tr>
<td>Working with teaching assistants</td>
<td>18</td>
</tr>
<tr>
<td>Working with course builders</td>
<td>16</td>
</tr>
<tr>
<td>Evaluating students’ work</td>
<td>14</td>
</tr>
<tr>
<td>Working in a computer lab</td>
<td>14</td>
</tr>
<tr>
<td>Working one-on-one with students</td>
<td>12</td>
</tr>
<tr>
<td>Preparing library reserve materials</td>
<td>10</td>
</tr>
<tr>
<td>Reading professional journals</td>
<td>9</td>
</tr>
<tr>
<td>Doing library research</td>
<td>7</td>
</tr>
</tbody>
</table>
## About Use of Multiple Media

<table>
<thead>
<tr>
<th>Media</th>
<th>Never</th>
<th>Seldom</th>
<th>Often</th>
<th>Regularly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>4</td>
<td>10</td>
<td>20</td>
<td>66</td>
</tr>
<tr>
<td>Computer presentations (e.g. PowerPoint)</td>
<td>7</td>
<td>20</td>
<td>23</td>
<td>50</td>
</tr>
<tr>
<td>White/chalkboard</td>
<td>12</td>
<td>19</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>Internet/Web</td>
<td>17</td>
<td>18</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>14</td>
<td>37</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Videotape</td>
<td>21</td>
<td>40</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Simulation/gaming</td>
<td>52</td>
<td>25</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Groupware/collaboration software</td>
<td>73</td>
<td>21</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Flipcharts</td>
<td>75</td>
<td>20</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>35mm Slides</td>
<td>77</td>
<td>17</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Audio conferencing</td>
<td>85</td>
<td>12</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Video conferencing</td>
<td>86</td>
<td>11</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
About Perceived Helpfulness
And for What? ... patterns of use

ONE-MANY
Type 1. eCopier: use of courseware to replace the copy machine.
Type 2. ePublishing: creating electronic content for students.
Type 3. eSlide: replacing the 35 mm projector.

MANY-MANY
Type 4. eProject: facilitate team projects outside of the class.
Type 5. eTeam: student initiated virtual study group.
Type 6. eClassroom: use for distance and distributed learning.
Constraints on e-Learning Innovation

- Technical limitations
- No new educational paradigm
- Strong and risk-averse culture
- Traditions of academic freedom
- Legal-institutional factors
In Anticipation...

- USC accreditation review in 2008
- Self assessment study by 2005

Notable WASC Criteria include:

Criterion 4:7
Ongoing inquiry of processes & practices of teaching & learning

Results applied to design of curricula, pedagogy, & evaluation

Criterion 3:4
Maintain supported faculty development activities aligned with learning and teaching goals.
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Institutional Change

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  - TAs
  - Students
  - IT Unit(s)
  - Academic Departments
  - University Administration
New Campus Units & Partnerships

- New central unit under provost: Center for Distance Learning
- New information services strategic plan
- New teaching and learning effectiveness
- New partnership between:
  - Center for Scholarly Technology (us)
  - Center for Excellence in Teaching
  - Center for Distance Learning
- New integrated sub-committees
  - Distance Learning Curricular Committee (DLCC)
  Criteria & Standards Development
Thanks for your interest.

Learn more at:

http://www.usc.edu/cst