An Exploratory Research of Developing a “Learner-centered” OCW framework in perspectives of OER

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2010 AROOC
November 2, 2010
Outline of Presentation

• Development and new trend in higher education
  – from OCW to OER (Open Educational Resources)

• Fu Jen OCW

• Conceptual framework of Problem-initiated OER

• Challenges & Opportunities
• In 2001, MIT launched its OCW Initiative.
• In 2004, Taiwanese Lucifer Chu launched OOPS project gathering volunteers to translate MIT OCW materials into Chinese.
• OCW movement has drawn international attention and reached several accomplishments in Higher Education.
**Trend from OCW to OER**

OCW initiated Open Education movement, and OER extend it…

<table>
<thead>
<tr>
<th></th>
<th>Occasion</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNESCO 2002</strong></td>
<td>Forum on the Impact of OCW for Higher Education in Developing Countries</td>
<td>Initiative of “Open Educational Resources” (OER)</td>
</tr>
</tbody>
</table>
| **UNESCO 2004** | Second Global Forum on International Quality Assurance, Accreditation, and the Recognition of Qualifications                                                                                           | • Stated “Open Educational Resources champions the sharing of knowledge worldwide to increase human intellectual capacity.”  
• Definitions of OER are:  
  – Learning resources  
  – Resources to support teachers  
  – Resources to assure the quality of education and educational practices.                                                                 |
• Founded in **Beijing in 1925** by the Benedictines of St. Vincent Archabbey (Roman Catholic Church) and **re-established in 1961 in Taipei** (3 religious orders).

• Has been growing from a liberal arts college into a comprehensive university.
  – with **26,000** students and **700** full time faculty.
  – have **11** colleges, including, a medical school, a law school, a liberal arts college.

• **Launched OCW in 2008**
  – Supported by *Teaching Excellence Initiative by Ministry of Education.*
• History
  – Fu-Jen joined TOCWC & initiated OCW: November, 2008

• Initiative goal
  – Academic sharing

• Three developmental stages
  – Academic Sharing (2009~)
  – To Attract international learners (2011~)
  – Reputation promotion (2012~)
Current Situation in Fu Jen OCW

- **Platform:** Moodle
- **Types of instructors:** administrators or OTA teachers
- **Types of Courses:**

<table>
<thead>
<tr>
<th>2008-2009: 10 courses</th>
<th>2009-2010: 7-10 courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Business Ethic</td>
<td>• Research Methodology</td>
</tr>
<tr>
<td>• Methodology &amp; Philosophical</td>
<td>• Multivariate statistical analysis</td>
</tr>
<tr>
<td>Counseling</td>
<td>• Theories of mandarin instruction</td>
</tr>
<tr>
<td>• Cognitive Psychology</td>
<td>• Children &amp; Family</td>
</tr>
<tr>
<td>• Web found</td>
<td>• Culture</td>
</tr>
<tr>
<td>• Economic</td>
<td>• Aesthetics</td>
</tr>
<tr>
<td>• English literature</td>
<td>• Law…,etc.</td>
</tr>
<tr>
<td>• I/O Psychology…, etc.</td>
<td></td>
</tr>
</tbody>
</table>

22 courses available (in Chinese)

http://ocw.fju.edu.tw/
### OCW in Cone of Experience perspective

<table>
<thead>
<tr>
<th>People generally remember…</th>
<th>People are able to…</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10%</strong> of what you read</td>
<td><strong>Define</strong></td>
</tr>
<tr>
<td><strong>20%</strong> of what you hear</td>
<td><strong>Describe</strong></td>
</tr>
<tr>
<td><strong>30%</strong> of what you see</td>
<td><strong>List</strong></td>
</tr>
<tr>
<td><strong>50%</strong> of what you hear &amp; see</td>
<td><strong>Explain</strong></td>
</tr>
<tr>
<td><strong>70%</strong> of what you say &amp; write</td>
<td><strong>Demonstrate</strong></td>
</tr>
<tr>
<td><strong>90%</strong> of what you do</td>
<td><strong>Apply</strong></td>
</tr>
</tbody>
</table>

- **Most OCW**
  - Read
  - Hear
  - View Images
  - Watch Videos
  - Attend Exhibit
  - Watch Demonstrations
  - Participate in Hands-on Workshop
  - Design Collaborative Lessons
  - Simulate or model a real experience
  - Design / Perform a Presentation
  - Do the Real Thing

- **Some OCW**
  - Analyze
  - Design
  - Create
  - Evaluate

- **Few OCW**
  - Few
  - Some

- **Rare OCW (so far)**
  - Less
  - ID efforts

- **Much ID efforts**
  - Much
  - ID efforts
Instructional design efforts tradeoff in OCW/OER implementation

Teacher-centered OCW

Learner-centered OER

Less Efforts

Time

Budget

Hardware / Software

Much Efforts

Instructors

Instructional Designers

Teaching Assistants

There must be a better balance in the spectrum…
# e-Learning Trends

<table>
<thead>
<tr>
<th>Main Components</th>
<th>e-Learning 1.0</th>
<th>e-Learning 1.3</th>
<th>e-Learning 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Courseware, LMS, authoring tool</strong></td>
<td>Reference hybrids, LCMS, Discussion groups</td>
<td><strong>Wiki, Social Networking &amp; Bookmarking, Add-ins, Mash-ups</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td>Top-down, One-way</td>
<td>Top-down, collaborative</td>
<td><strong>Bottom-up, learning-driven, Peer learning</strong></td>
</tr>
<tr>
<td><strong>Development Time</strong></td>
<td>Long</td>
<td>Rapid</td>
<td>None</td>
</tr>
<tr>
<td><strong>Content Size</strong></td>
<td>None</td>
<td>Rapid</td>
<td>None</td>
</tr>
<tr>
<td><strong>Access Time</strong></td>
<td>At One Time</td>
<td>In many pieces</td>
<td><strong>When You need it</strong></td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>During work</td>
<td>Prior to work</td>
<td><strong>Search, RSS feed</strong></td>
</tr>
<tr>
<td><strong>Content Access</strong></td>
<td>LMS</td>
<td>e-Mail</td>
<td><strong>Worker</strong></td>
</tr>
<tr>
<td><strong>Driver</strong></td>
<td>Instructional Designer</td>
<td>Learner</td>
<td><strong>User</strong></td>
</tr>
<tr>
<td><strong>Content Creator</strong></td>
<td>Instructional Designer</td>
<td>SME (Subject Mater Expert)</td>
<td><strong>Food critic</strong></td>
</tr>
<tr>
<td><strong>Training’s Role</strong></td>
<td>Gourmet Chef</td>
<td>Short-order Cook</td>
<td><strong>Food critic</strong></td>
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Source: Tony Karrer(2006), e-Learning 1.0 vs. 2.0 – Help Needed: e-Learning Technology
How can the OCW learners being Motivated & learning MORE?

- Teacher profile
- Course description
- Syllabi
- Teaching notes
- Lecture audios
- Lecture videos
- Subject matter references
- Domain-critical problems raised!
ID Perspectives of Problem-initiated teaching

• Paradigm shift from teaching to learning in undergraduate education
  – Robert Barr, 1995

• Resource-based learning
  – Hambleton, 1992

• Anchored instruction
  – Cognition & Technology Group at Vanderbilt, 1990

• Problem / Project-based learning
  – Howard Barrows, 1986

• Discovery instruction
  – Jerome Bruner, 1961

• Problem solving thinking
  – John Dewey, 1933

→ Problem-initiated OER
Problem-initiated OER

- Engaging self-regulated learners in solving problems and questions, as to perform a motivated learning.

- Initiated “P’s” → practical domain problems
  - Connect to learning objectives
  - Clarify Misconception
  - Engage domain knowledge with practical problem solving

- Formative & summative “Q’s” → self-assessment questions
  - Reemphasize critical issues
General OCW

- Syllabi
- Lecture Notes
- Lecture Videos
- Lecture Audios
- References
Problem-initiated OER

Initial Critical Problems

P₁ P₂ ... Pₙ

Organized and engaged Learning Resources

Self-assessment Questions

Q₁ Q₂ ... Qₙ

OCW

Syllabi

Lecture Notes

Lecture Videos

Lecture Audios
Relevant Learning Content & Resources

Self-assessment questions

Critical Domain Problems (Issues)
### Current OCW Framework

<table>
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<tr>
<th>Course Description</th>
<th>Objectives</th>
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<td>Concept Map</td>
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<td>Disciplinary Courses framework</td>
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### P/Q-initiated OER Framework

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★ : New added components

★ : Self assessment Questions

★ : Heuristic online Resources
Q: Which of the next individual behaviors will do the most contribution to reduce the impact of global warming?

A. Utilizing public transportation
B. Fix the air conditioner temperature at 28
C. Becoming a vegetarian.
D. Remove the plugs from sockets while not using the electronic appliance.

P: What will be the impacts if global average temperature increase one degree?
Potential **authoring tools** for composing attractive P’s, Q’s and content

- **Powerpoint** *(basis)*
- **Hot potatoes** *(freeware)*
- **Wink** *(freeware)*
- **Xmind** *(freeware version)*
- Adobe Captivate
- Articulate QuizeMaker
- **and more...**
Rich Online Heuristic Resources

YouTube
TED Ideas worth spreading
Academic Earth
Common Craft
Videojug
Big Think
Howcast
Cosmo Learning

and more...
Challenges & Opportunities

Challenges

• Faculty efforts
  – Instructors and **Instructional designers**
  – Teaching assistants

• **Instructional design efforts**
  – Critical problems **identification**
  – Effective questions **design**
  – **Context** to cohere problem, questions and content knowledge.

• Domain learning resources aggregation and alignment.

Opportunities

• Much **instructional design** realized in **OER**.
• Better **performances** for self-regulated learners.
Thanks for listening

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