The OCWC’s Next Frontier—Learning Ecosystems
The OCW Movement Has Achieved Lift Off

- 200 institutional members in the OCWC
- Over 8,200 courses posted
- Over 130 Million Creative Commons licenses issued
Empowering Minds

Visitors by Role

- Self learners: 50%
- Students: 30%
- Educators: 15%
- Other: 5%

Unlocking Knowledge, Empowering Minds
Progress from OCWC Members

Growth By Region (Not Counting Pending Applications)

- Africa
- C&S. America
- N. America
- E. Asia
- C&W. Asia
- Australia
- Europe

Month
### Traffic by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Visits Since 10/1/03</th>
<th>Visits %</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>19,586,175</td>
<td>41.8</td>
</tr>
<tr>
<td>East Asia/Pacific</td>
<td>9,818,810</td>
<td>21.0</td>
</tr>
<tr>
<td>Europe/Central Asia</td>
<td>8,470,908</td>
<td>18.1</td>
</tr>
<tr>
<td>South Asia</td>
<td>3,917,728</td>
<td>8.4</td>
</tr>
<tr>
<td>MENA</td>
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<td>4.9</td>
</tr>
<tr>
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<td>2,076,902</td>
<td>4.4</td>
</tr>
<tr>
<td>Sub-Sah. Africa</td>
<td>661,193</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>TOTAL VISITS</strong></td>
<td><strong>46,829,057</strong></td>
<td></td>
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- North America: 41.8%
- East Asia/Pacific: 21.0%
- Europe/Central Asia: 18.1%
- South Asia: 8.4%
- MENA: 4.9%
- Latin America/Caribbean: 4.4%
- Sub-Sah. Africa: 1.4%
Empowering Minds
Traffic by Region

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Mirror sites — Approx. 209 around the globe
### Traffic by Country – Feb 09

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<thead>
<tr>
<th>Country</th>
<th>Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>537,249</td>
</tr>
<tr>
<td>India</td>
<td>112,261</td>
</tr>
<tr>
<td>China</td>
<td>95,417</td>
</tr>
<tr>
<td>South Korea</td>
<td>59,246</td>
</tr>
<tr>
<td>Canada</td>
<td>39,063</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>35,506</td>
</tr>
<tr>
<td>Iran</td>
<td>29,685</td>
</tr>
<tr>
<td>Brazil</td>
<td>24,341</td>
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<tr>
<td>Germany</td>
<td>21,851</td>
</tr>
<tr>
<td>Pakistan</td>
<td>17,755</td>
</tr>
<tr>
<td>France</td>
<td>17,301</td>
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<tr>
<td>Turkey</td>
<td>15,823</td>
</tr>
<tr>
<td>Italy</td>
<td>12,130</td>
</tr>
<tr>
<td>Japan</td>
<td>11,703</td>
</tr>
<tr>
<td>Australia</td>
<td>11,369</td>
</tr>
<tr>
<td>Spain</td>
<td>10,896</td>
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<tr>
<td>Egypt</td>
<td>10,079</td>
</tr>
<tr>
<td>Mexico</td>
<td>9,764</td>
</tr>
<tr>
<td>Singapore</td>
<td>9,045</td>
</tr>
<tr>
<td>Romania</td>
<td>9,040</td>
</tr>
</tbody>
</table>
NATIONAL REPOSITORY OF ONLINE COURSES

- Supported by Hewlett Foundation
- The focus of NROC is general education subjects: such as algebra, biology, and U.S. History
- Courses include presentational materials, problem sets, assessments, and all necessary teaching materials
# NROC Usage Stats

<table>
<thead>
<tr>
<th>Year</th>
<th>Students</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 – 2007</td>
<td>5,676</td>
<td>80</td>
</tr>
<tr>
<td>2007 – 2008</td>
<td>68,083+</td>
<td>1,709+</td>
</tr>
<tr>
<td>2008 – 2009</td>
<td>293,314</td>
<td>5,455</td>
</tr>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009- 2010</td>
<td>1,818,611</td>
<td>15,736</td>
</tr>
<tr>
<td>Projected</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Knowledge Hub: Indexing Open Educational Resources

Knowledge Hub (KHUB) is a public, multilingual hub that allows you to discover selected Open Educational Resources (OERs) using metadata built by experts, faceted searching and social networking tools to help teachers and students find the best resources for their educational needs.

Recently adopted resources
- Diccionario estadístico
- Managers and Managing in the 21st Century
- What impact Can Ethis Have?

Recently added resources
- Readiness for the Networked World: A Guide for Developing Countries
- Introduction to System Dynamics
- Petroleum Industry

Top rated
- "Digital Library Ciudad Seva"
- Mathematics Games - Algebra Games - Graphing Games
- The story of stuff

Favorites from all users
- The Entity Relationship (ER) Model
- cells alive
- Ultra Mobile: It Lets Me be Me!

Recent News
- School of the Future World Summit 2008: What's Possible?, December (Washington, USA)
- World Economic Forum: Summit on the Global Agenda 2008, November (Dubai, United Arab Emirates)
- 2008 Open Education Conference, September (Utah, USA)
To be effective, OCW must be “localized” and sometimes translated for another audience
- Translation and localization requires local capacity, including technology, trained human resources, funding

Local capacity must be linked to the institutional infrastructure to satisfy the needs of the local audience
- Must utilize local delivery systems and resources to support the expanded use of the material

It is clear that the simple existence of free and open material is necessary but not sufficient for wide scale adoption and use
The Issue of Discoverability

- OCW-in has not lifted off
  - Production side
    - Uneven production of metadata for search
    - Development for producer’s context
  - Search side
    - Crawlers (Google Advanced Search) don’t have mechanism for rankings
    - MIT’s offerings sometimes crowd out others
    - Aggregators don’t crawl, so are reliant on producer-side feeds
    - Knowledge of where and how to search still essential for obtaining and using results of search
The Issue of Discoverability

- OCW-in has not lifted off
  - Consumption side
    - File formats present use difficulties
    - Efficiency requires tight alignment of searcher (librarian) and integrator (professor, instructor).
    - Need to demonstrate ROI to institutionalize consumption of OCW/OER (better, faster, etc.)
The Next Frontier
Formation of Learning Ecosystems
The Deficit in Higher Education

Enrollments in Developing Countries Burgeoning

- China and India have doubled enrollments over the past 10 years.
- There are many developing countries with APRs less than 10%.
- Malaysia plans to raise its APR of 39% to 50% by 2010.
- Trinidad and Tobago aims for an APR of 60% by 2015 (up from 11.9% in 2007).
- In India, where each 1% increase in APR means one million more students plans to go from 10% to 15% by 2012.
The Iron Triangle

ACCESS

QUALITY

COST
The Next OCW Frontier—National Policy

So, how do we break through the Iron Triangle?

- With the formation of national policy to embrace OCW on the institutional level in developing countries
In Vietnam, the government has adopted an OCW strategy that is central to accomplishing its higher education goals.
The Case of Vietnam

- Improving teaching methods
- Updating curricula
- Standardizing of teaching materials
The Case of Vietnam

- Developed sample course materials
- Built a robust infrastructure
- Adopted Rice Connexions software
- Developed 24 sample courses
- Created an alliance of 28 leading institutions
- Developed 1100 learning modules and 217 courses from existing OCW
The Case of Vietnam

- Students in Vietnam could not use MIT OCW
  - Different educational backgrounds of Vietnam students
  - English skills not good enough
  - Teaching and learning methods of Vietnamese faculty and students are different
  - Syllabi and reference materials were not available
The Case of Vietnam

- Teaching and learning methods of Vietnamese faculty and students are different
The Case of Vietnam

Next Steps

- Content Development and evaluation
- Community building
- System Maintenance and development
- Integration of all elements into a force for needed change
A New Concept
The Learning Ecosystem
The Learning Ecosystem

Critical Elements

- An external sponsor or “introducer” (and, usually, patron) of the OCW, willing to be flexible and respectful of the local situation
- An internal institutional sponsor of OCW, usually sanctioned, if not supported by, government
- Established and working connections between the institutional sponsor and a broad array of potential users
  - Frequently expressed in the form of regional or national consortia of higher education institutions
The development of at least one center for actually localizing, translating OCW and with the capability of producing original material for entry into the world-wide corpus of OCW

- Technology, trained staff, space, equipment

A preliminary set of pilot projects selected for their high impact and ability to demonstrate “proof of concept” to the region
The Learning Ecosystem

Capabilities

- **Curriculum capabilities**
  - Can rely on subject matter experts for gap analysis and coherency
    - integration of materials from various sources and contexts
  - Uses instructional design methodology

- **Technical capabilities**
  - Can flexibly export/import courseware
  - Handles or transfers common formats
The Learning Ecosystem

Capabilities

- Localization capabilities
  - Adapts to region/country/locale
    - Style of instruction
    - Applications to locale
  - Translation capabilities

- Online course production capabilities
  - Adapts to online environment
  - Focus on needs of online learner
    - Understands social learning as complement to content
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