Oops, Did You Mean to Share that? Opensource, OpenCourseware, and the Learning Objects of Tomorrow
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Phases of Technology in Education
1. Technology to enhance learning/knowledge
2. Technology to extend learning/knowledge
3. Technology to transform learning/knowledge
4. Technology to share learning/knowledge

Knowledge Sharing (Fuji Xerox, p. 9)
"Knowledge sharing is the way (social) and means (technical) by which an individual, team, organization and/or community connects and communicates, to continually create, innovate, learn and act."

Poll #1: Should e-learning courses and material be shared?
- Yes
- No
- Not sure

Most are Scared to Share!!!
Why Share?

Do You Share?
1. Who has shared music in an iPod or MP3?
2. Who has used collab software? (Google Groups, Yahoo Groups, Sharepoint)
3. Who has used online phone services such as Skype or Google Talk?
4. Who has assigned teams online?
5. Who has embedded international exchanges or expert guests?
6. Who has used MERLOT, Connexions, or Jorum?

The Ten Forces that Flattened the World
1. 11/9/89: Berlin Wall came down
2. 8/9/95: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Sourcing (Self organizing collaborative communities; Mozac, Apache, Wikipedia, Linux, Mozilla Firefox)
5. Outsourcing (Y2K)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chaining (e.g., Walmart)
8. Insourcing (UPS fixing Toshiba laptops)
9. In-forming (e.g., Google, Yahoo!, MSN Web Search)
10. The Steroids: Digital, Mobile, Personal, and Virtual (e.g., wireless, file sharing, VoIP, video camera in phone)

The Learning World has become Flat!

Telegraph: Flattening the world in 1860
How Lincoln won the Civil War
Mr. Lincoln's T-Mails: The Untold Story of How Abraham Lincoln Used the Telegraph to Win the Civil War
by Tom Wheeler; Collins, 227 pages, $24.95.
By Russ Juskalian, Special for USA TODAY
Updated 11/26/2006 5:29 PM ET

- Wheeler argues that the use of the telegraph by Lincoln and his Union generals may have provided the advantage necessary to win the war.
- The telegraph was a killer app for its use along rail lines, enabling more efficient scheduling of trains— which, in turn, increased traffic, and profits.
- With this breakthrough, telegraph lines exploded across the Northern parts of the USA. The Southern states, afraid that industrialization would change their way of life dramatically, moved far more slowly in establishing both railroads and telegraph lines.

Technologies of the 2000's

Increased Broadband Access
Total broadband subscriptions, percentage of OECD top 5 countries, June 2001

- Singapore, the island city-state in Southeast Asia, is about to complete a major new public/private project that will see large chunks of the 270 square mile city provided with Wi-Fi access by the end of 2006. The entire city, indoors and out, is due to be covered by 2015.
- In the coldest capital in Canada, the city residents of Iqaluit (pop. 6,000) enjoy free wireless from one free hotspot (with two more due soon to cover the suburbs), while Taipei, Taiwan (pop. 2.6 million) has a few more—over 4,000 hotspots that provide coverage for 90 percent of the city.

The Ten Forces that Flattened the Learning World
1. Tools for Searching and Finding Information (e.g., Google, Yahoo!)
2. Rise in Demand for Online Learning
3. Open-Source Learning: Sakai, Moodle, eduCommons
4. Collaboration (e.g., SharePoint, Groove, Word, Interserve, Breaze, Google Talk, Skype)
5. Learning Portability (Podcasting, Mobile technology)
6. Learner Empowerment and Individualization of Learning (Bloggs, Wikis, etc.)
7. Online Portals of Information
8. Online Learning Object Repositories (MERLOT, Connections, Carea, Juraen)
9. Open CourseWare (MIT OCW, Utah State, Johns Hopkins, Japan, CORE, OOPS)
10. Knowledge Brokers and Collectors
The Ten Forces that Flattened the World

1. Tools for Searching and Finding Information: (e.g., Google, Yahoo!)

Google Print Project

Google

The complete plays of Shakespeare. Now at your fingertips.

In Shakespeare's day, actors traveled across the state, often playing in as many as fifteen different theaters in a single year. Now, with the rise of the internet, we can access Shakespeare's works at the click of a button.

Growth of Online Learning in Secondary Schools

Enormous Learner Demand in Maryland

WebCT at Maryland (March 2005)
Open University of Israel
(overall enrollment growth)

Defense Acquisition University
Shaping a Culture of Career-Long Learning

The Ten Forces that Flattened the World

3. Open-Sourcing Learning:
Sakai, Moodle, eduCommons

Free and Open Source Software

Steven Weber, Professor of Political Science at UC Berkeley, The Success of Open Source
(published by Harvard University Press).

"Weber started out asking why a large number of programmers would be motivated to volunteer their time to a goal that does not have a direct individual financial benefit, but found that more pertinent questions should be asked."

The Success of Open Source:
A Subject for UC Berkeley Researcher
By Paula Murphy, TLIC Assoc. Director, Dec 2004

"If you are going to try to scale production systems to non-friend, non-kinship groups, you have to have some sort of governance," explains Weber. "For example, I would not put my lecture notes on the web because I feel strangely about people I don't know benefiting from my work without them giving anything in return."
Steven Weber, Professor of Political Science at UC Berkeley and author of The Success of Open Source (published by Harvard University Press).

"The trick for the open source projects is to find a way to create that reverse flow such that if I donate a piece of intellectual product to something that other people are going to use and modify, I want to somehow benefit from what they're learning -- that's the key exchange. The trick, and what people are experimenting with, are different ways to structure that exchange so it works."

Blackboard Buying and Suing
http://www.washingtonpost.com/business/20060814-100821-5993r.htm

The educational software market continues to grow, and so does the bottom line of Blackboard Inc., the D.C. provider of products for schools and universities.

The company last week announced second-quarter revenue of $43.6 million, a 32 percent jump from last year's $33 million.

Blackboard, nearly six months after acquiring its largest competitor, WebCT Inc., for $178 million, reported a net loss of $6.3 million (23 cents per diluted share) compared with earnings of $6.1 million (21 cents) a year.

Blackboard sees 32 percent growth.
By Tom B BELDER
THE WASHINGTON POST
August 11, 2006
The Ten Forces that Flattened the World

4. Collaboration (e.g., SharePoint, Groove, Word, Interwise, Breeze)

Online Groups...

Sharing in Virtual Teams (e.g., Groove, SharePoint)

Skype

The Ten Forces that Flattened the World

5. Learning Portability (Podcasting, Mobile technology)

The project aims to build peer-to-peer communications

$100 Laptop

Negrogoite says the new laptop is designed to be kid-friendly

The OLPC aims to turn the tide of urban poverty
Wireless Technology

Most (Un)Wired Schools?

Creating the Best-Free Interface

DePauw University

Hot Trend: Mobile Technology

Work away from work gets easier with technology

Vodcast for Medical Training

(e.g., "SonoSite on the small screen: The Bothell-based company uses podcasts for its ultrasound scanner training."

Dan Bates / The Herald, Sept 25, 2006
David Levesque, vice president of global learning at SonoSite in Bothell, demonstrates the company’s new podcast training for ultrasound technicians.

The Ten Forces that Flattened the World

6. Learner Empowerment and Individualization of Learning (Podcasts, Wikis, and Blogs, etc.)

Social Networking Software

- Classmates: http://www.classmates.com/
- Facebook: http://www.facebook.com/
- Friendster: http://www.friendster.com/
- Friendzy: http://www.friendzy.com/
- MySpace: http://www.myspace.com/
- Orkut: https://www.orkut.com/
- Tribes: http://www.tribe.net/
- YouTube: http://www.youtube.com/
The Ten Forces that Flattened the World

8. Online Learning Object Repositories (MERLOT, Connexions, CAREO, Jorum) and ADL’s SCORM Project

Reusable Content Objects

- Learning Objects are small or large resources that can be used to provide a learning experience. These assets can be lessons, video clips, images, or even people. The Learning Objects can represent tiny "chunks" of knowledge, or they can be whole courses.

Claude Ostyn, Click2Learn

A. MERLOT

MERLOT

MERLOT is a collection of high-quality, interactive online learning materials, courses, tools, and projects.

MERLOT People Metrics (Gerald Hanley, October, 2005)

<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>Birthyear</th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>706</td>
<td>3,852</td>
<td>5,010</td>
</tr>
<tr>
<td>Faculty</td>
<td>2,864</td>
<td>11,563</td>
<td>14,754</td>
</tr>
<tr>
<td>Staff</td>
<td>736</td>
<td>2,522</td>
<td>3,122</td>
</tr>
<tr>
<td>Administrators</td>
<td>-</td>
<td>280</td>
<td>746</td>
</tr>
<tr>
<td>Librarians</td>
<td>-</td>
<td>145</td>
<td>280</td>
</tr>
<tr>
<td>Other</td>
<td>421</td>
<td>1,867</td>
<td>2,341</td>
</tr>
<tr>
<td>TOTAL # of Members</td>
<td>4,727</td>
<td>20,030</td>
<td>26,253</td>
</tr>
</tbody>
</table>

MERLOT Collection Metrics (Gerald Hanley, October, 2005)

<table>
<thead>
<tr>
<th>Metrics</th>
<th>CSU 1999</th>
<th>Birthyear 2001</th>
<th>Last Year 2004</th>
<th>This Year 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Materials (# created per year)</td>
<td>2,732*</td>
<td>5,421</td>
<td>9,806</td>
<td>12,274</td>
</tr>
<tr>
<td>&quot;Persistence&quot; of Materials</td>
<td>N/A</td>
<td>N/A</td>
<td>97.3%</td>
<td>98.2%</td>
</tr>
<tr>
<td># of People who contributed materials</td>
<td>N/A</td>
<td>408* (7.5%)</td>
<td>1,423</td>
<td>1,831</td>
</tr>
<tr>
<td>Average # of materials added per contributor</td>
<td>N/A</td>
<td>9.3*</td>
<td>6.9</td>
<td>6.6</td>
</tr>
</tbody>
</table>

* = estimated
B. Connexions (Rice University)
http://cnx.rice.edu/

http://cnx.rice.edu:8080/stats
Sept 2005 had "14.4 million hits representing about 1 million page views by about 430,000 folks from 157 countries." growing at a rate of about 1 million hits per month.

Connections Growth

>3500 modules (3-5 pages)
>180 courses (October 2006)
multiple languages
engineering, computer science, nanotech, physics, statistics, math, history, music, bio-diversity, botany, bio-info, IP, BRIT, UNESCO, UN, Sigma Xi, ... from authors worldwide

Usage September 2006
17 million hits
1.2m page views
520k unique users from 157 countries

C. Textbook Revolution

D. JORUM (from UK)

JORUM Overview

- "JORUM is a JISC-funded collaborative venture in UK Higher and Further Education to collect and share learning and teaching materials, allowing their reuse and repurposing, and standing as a national statement of the importance of creating interoperable, sustainable materials."
Per David Wiley, Utah State University (October 2005)

"The first thing you should know is that there are many more schools than just MIT doing OCW now, including Johns Hopkins (ocw.jhsphs.edu), Tufts (ocw.tufts.edu), Utah State University (ocw.usu.edu), and Foothill-DeAnza in California (sophia.fhda.edu).

Per David Wiley, Utah State University (October 2005)

"When you consider the schools participating in consortia in South America, China, Japan, France, Utah, and other regions, the number of universities involved with opencourseware in some manner reaches well into the hundreds. As of today there are currently 45 publicly accessible OCWs in the world in a number of languages."
Per David Wiley, Utah State University (October 2005)

"This is a message that should probably get out, also - not only is this movement worldwide and gaining momentum every day, it is also becoming a key part of international strategy to achieve equitable access to education for people everywhere."

Tufts OpenCourseWare Project

University of Notre Dame

Japan OCW Alliance

Vietnam Fulbright Economics OCW
John Dehlin  
Utah State University  
"If you think about the tangible, practical, human value some of these courses could have in the world, particularly the 3rd world...it can get quite exciting (to me at least)."

SHELLEY HENSEN, CENTER FOR OPEN AND SUSTAINABLE LEARNING (COSL), UTAH STATE UNIVERSITY  

CORE (China Open Resources for Education), OCW Mirror Site, China  

THE BIGGEST OCW LOCALIZATION VOLUNTEER GROUP IN THE WORLD  

OOPSI: OpenSource OpenCourseware Prototype System  
The Foundation of Fantasy Culture and Arts
What's their Beliefs?
(Chu, May 28, 2006)
- Collective Minds is better than a single genius translator.
- Perfect Translation doesn't exist.
- 863 Volunteer translators
  1,037 courses adopted
  490 courses near completion
  (up 170 since Nov)
- 80 courses already finished (up 20 since Nov)

The Ten Forces that Flattened the World
10. Knowledge Brokers

Consortia, Networks, and Brokers of Knowledge (and Collections, David Wiley)

What can you do in a flat learning world?
- Consider Copyright Options
- Publish in Open Source Journals
- Attend Open Source Conferences
Creative Commons

Terry Anderson, Athabasca University
(October 2005)

"Our Creative Commons licensed book Theory and Practice of Online Learning has been downloaded over 55,000 times (full text) and more by individual chapters. Parts have been translated into 6 languages and we are nearly sold out the 500 copies we printed at $50 a pop. So it is quite a success story."


Open Source Journal

Conference at Utah State, Sept 2005
Summit in Arizona, December, 2004

Comparison of Sharing Sites:
MERLOT, Connexions, CAREO, OCW, CDRE, OOPS
Grace Lin, Univ of Houston, 2005

- Goals: Link people, share knowledge, access resources, searchable database
- Funding: fully, partial, none
- Audience: higher education, students, teachers
- Content contributors: faculty, volunteers

Comparison of Sharing Sites:
MERLOT, Connexions, CAREO, OCW, CORE, OOPS
Grace Lin, Univ of Houston, 2005

- Role in knowledge sharing: producers, consumers
- Distinguishing features: creativity, structure, faculty community, rigorous review process
- (Different Affiliations, accomplishments, license, language(s), mission, etc.)
Sharing Questions (today)

- For what purpose will people share?
- Who will continue to maintain or update such sites?
- Will these "share" sites bridge the digital divide?
- How will copyright issues be addressed?
- What happens when one did not mean to share his or her course contents or ideas, or, at least, not as widely?

Sharing Questions (future)

- How will such learning objects of today be viewed in 100 or 200 years?
- What new technologies will emerge and be used for knowledge sharing?
- Will online sharing become expected of all faculty members around the planet?
- If so, how will that change the face of higher education?
- What collaborations are possible between corporate world and OOPS, OCW, MERLOT, etc.?

Poll #2: So who is still too scared to share???

Quote Continued...
A Final Quote:
It's a long, long road...
With many a winding turn.
That leads us to who knows where?...

It's a long, long road
From which there is no return
While we're on the way to there
Why not share

(The Hollies, 1969; He Ain't Heavy, He's My Brother; B. Scott - B. Russell)

It's Over...

Poll: Ok, then, who wants more???
A. Yes
B. No
C. Not sure

Ok...it is the end...or is it?