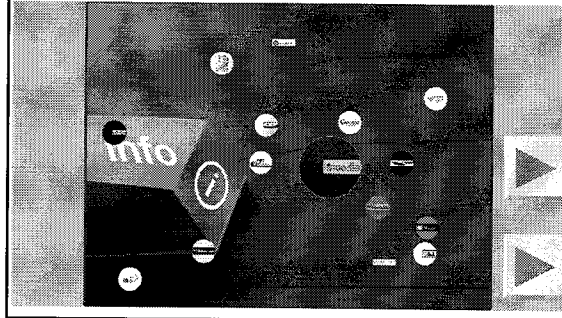## E-Learning Trends and Developments: Ten World of Learning Flatteners and Beyond

Curtis J. Bonk, Professor, Indiana University
President, SurveyShare
cjbonk@indiana.edu
http://php.indiana.edu/~cjbonk

---

http://ella.slis.indiana.edu/~aenkim/iconping.html
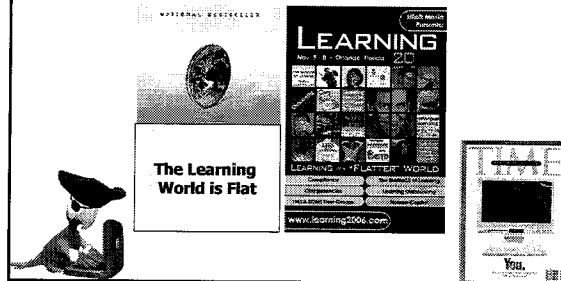

The Ten Forces that Flattened the World

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; Mosiac, 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)
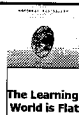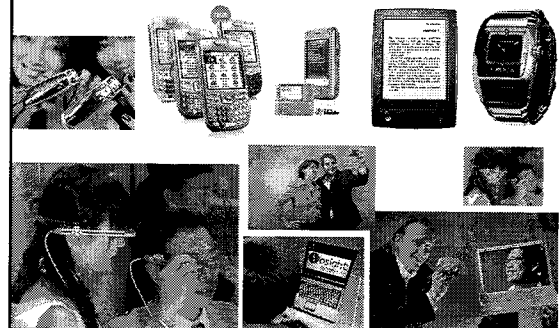

The Learning World has become Flat!

The Learning World is Flat

The Ten Forces that Flattened the Learning World

The Learning World is Flat

1. Tools for Searching/Finding Media and Information Resources
2. Availability of Quality Online and Blended Learning Environments
3. Free and Open Source Software for Learning
4. Open CourseWare
5. Online Learning Object Repositories and Portals
6. Virtual Collaboration Software
7. Online Massive Gaming, Simulations, and Virtual Worlds
8. Learning Mobility and Portability
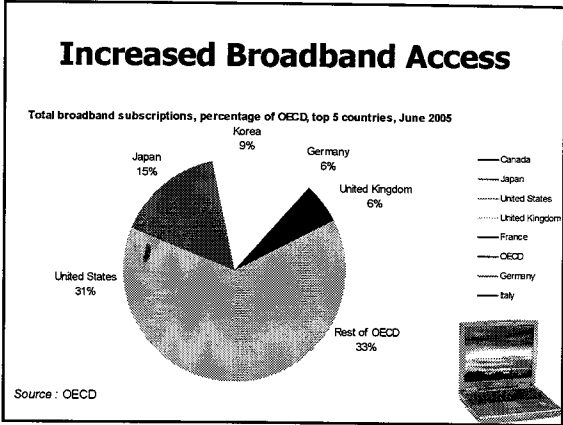9. Personalized Learning Tools
10. Open Information Communities

Ten Learning Technology Flatteners

The Ten Forces that Flattened the World

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

Increased Broadband Access

Total broadband subscriptions, percentage of OECD, top 5 countries, June 2005

Korea 9%
Japan 15%
Germany 6%
United Kingdom 6%
United States 31%
Rest of OECD 33%

- Canada
- Japan
- United States
- United Kingdom
- France
- OECD
- Germany
- Italy

Source : OECD

Singapore and Taipei
(Intel Press Release, 2006)

- 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 2008. 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.

Google Print Project

Google Print project inspires fans, fear

BBC's download plans get backing, BBC News, January 31, 2007

The BBC's plans will allow viewers to download shows like Doctor Who

Programmes like Planet Earth could be available for longer

1.4m people downloaded Beethoven's symphonies from the

The Ten Forces that Flattened the World

**2. The Availability of Quality Online and Blended Learning Environments**

More than 70 Million Adults Want to Head Back to School

August 22, 2006, Yahoo News
Report: "Degrees of Opportunity" from Capella University

- **Degrees of Opportunity, a new national study of the attitudes of adult Americans toward continuing their education, indicates that more than half of American adults age 25 to 60 would like to pursue additional education -- the equivalent of more than 70 million adult Americans.**

China has seen a huge rise in internet users
BBC, January 24, 2007
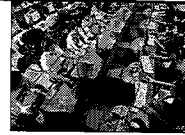
- China had 137m internet users by the end of 2006, an increase of 23% from the year before, the centre reported.
- This figure means that more than 10% of the population is now online.
- About 210 million of America's 300 million people now use the internet, according to US government figures.
- China will only surpass this number if it keeps up a 24% annual growth rate in the next two years.


Growth in Student Enrollments

Legend:
- Certificate Programs
- MS
- Public MBA
- Corporate MBA

2002-3 2003-4 2004-5 2006
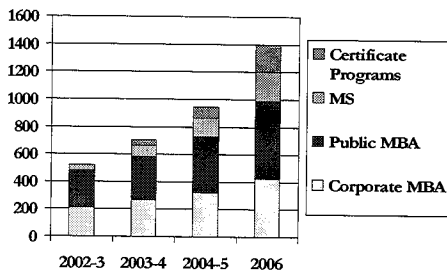
Defense Acquisition University
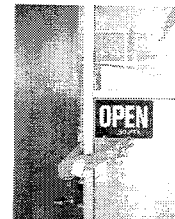### Shaping a Culture of Career-Long Learning
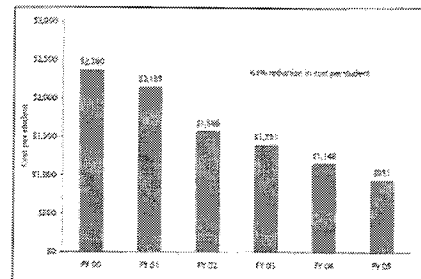
Cost Per Student

54% of participants in Taiwan regarded BL is important or very important. This is lower than China (65%), the US (68%), Korea (68%), and the UK (75%).

27. How important is blended learning for the strategic planning for training and development in your organization for the next few years?

Very Important	Important	Neutral	Not important	Not important at all
25.24	42.17	23.80	6.87	1.92
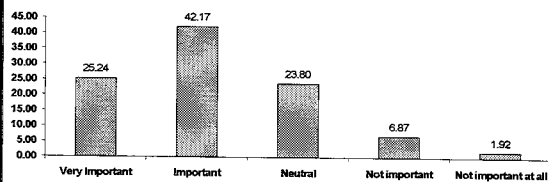
The Ten Forces that Flattened the World

3. Free and Open Source Software for Learning

The Learning World is Flat

Slide 1

The Success of Open Source:
A Subject for UC Berkeley Researcher
By Paula Murphy, TLtC Assoc. Director, Dec 2004
http://www.uctltc.org/news/2004/12/weber.php

"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.

Slide 2

Free and Open Source Software

July 28, 2006

Slide 3

OpenSource Courseware Moodle and Sakai Project

Slide 4

Open Source Tools

Slide 5

The Ten Forces that Flattened the World

The Learning World is Flat

4. Open CourseWare (MIT OCW, Utah State, Japan, CORE, OOPS)

Slide 6

Open CourseWare
Tufts OpenCourseWare Project

Tufts OpenCourseWare

IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005

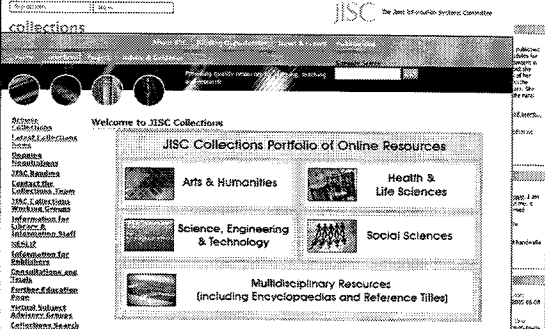## The Ten Forces that Flattened the World

5. Online Learning Object Repositories and Portals (shared content)
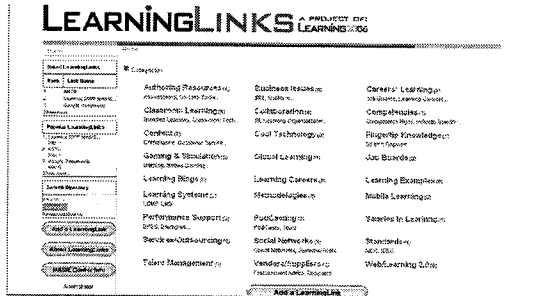
Learning Object Repositories

Portals for Corporate Training
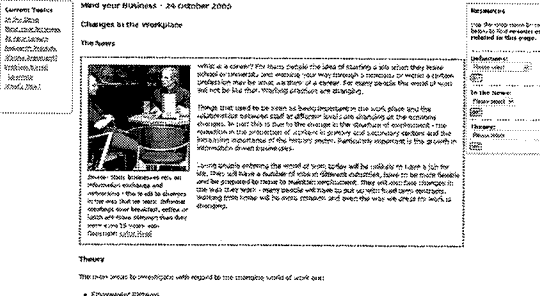
Community of Learners: Medical and Business Cases Online (cases community)
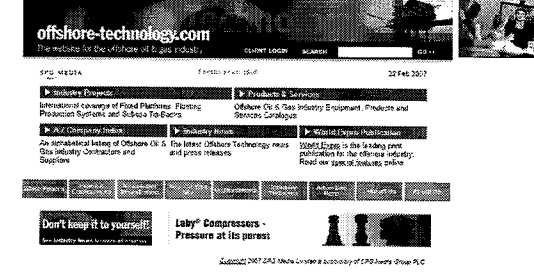
Free Portals on Oil and Gas Industry

The Ten Forces that Flattened the World

6. Virtual Collaboration Software (async and sync)

Hexagon Learning

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

Online Groups Tools

The Ten Forces that Flattened the World

7. Online Massive Gaming, Simulations, and Virtual Worlds

Real-Life Learning Situations

The Learning World is Flat

The king of alter egos is surprisingly humble guy
Posted 2/4/2007 11:29 PM ET
Kevin Maney, USA TODAY

The king of alter egos is surprisingly humble guy, 2/4/2007, Kevin Maney, USA TODAY

Charles & Rebecca Nesson, Harvard Law School

- Businesses started experimenting. Sun has been holding press conferences in Second Life. Starwood Hotels set up a virtual version of a concept hotel called Aloft, asking Second Life residents to tour the hotel and give feedback. Harvard's law school built a virtual campus.
- IBM is using Second Life as a way to hold meetings — avatars around a conference table — with people in different parts of the world.

Newsmaker: IBM's virtual pioneer
Second Life is much more than a chat room--it "changes everything," says IBM's Irving Wladawsky-Berger.
By Stephen Shankland, CNET News.com, December 18, 2006

- A view of IBM's theater in *Second Life*. The virtual structure can hold up to 200 people for company meetings, or client gatherings.
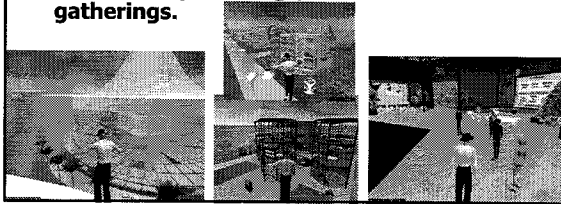
The *Second Life* avatar of IBM's chief executive and chairman, Sam Palmisano, standing outside the Forbidden City, a space in the virtual world created by IBM with the Chinese government...announcing $100 million in investment in two years to IBM employees in Beijing and *Second Life; Nov 13, 2006*

IBM's chief steps into 'Second Life' for incubator launch

Reporters and well-wishers gather inside *Second Life* on Dell Island just prior to the start of the company's press conference announcing its entry into the virtual world, CNEW, News.com, Nov. 14, 2006

- Visitors to Dell Island can sit down at one of several drafting tables to configure their XPS 1710 notebooks. The notebooks can be purchased for use within an avatar's second life; Dell eventually wants to let residents purchase real PCs for their first lives.

Massive Multiplayer Online Gaming (MMOG)

Serious Games?

One reason why gaming has not taken a larger role in workplace training and education is because of the cost to construct research and develop modules.
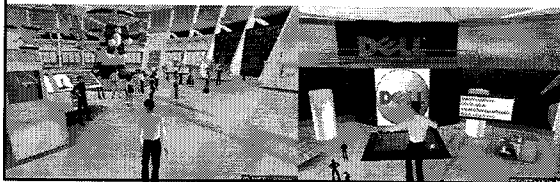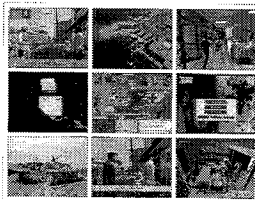

Serious Gaming:
The Trainer's
New Best Friend

The Ten Forces that Flattened the World
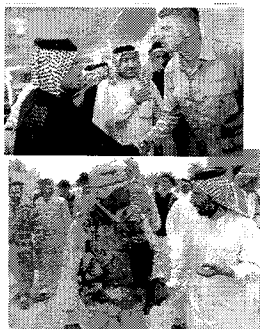
The Learning World is Flat

8. Learning Mobility and Portability (low cost wireless devices, podcasts)

Audacity

The Free, Cross-Platform Sound Editor

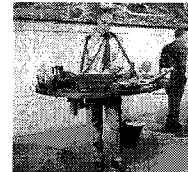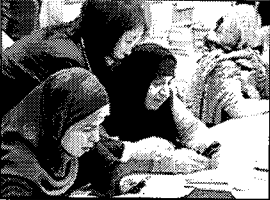**Students at the Mennonite Centre for Newcomers are testing mobile learning - downloading an English grammar lesson, then answering a series of multiple choice, or true or false questions.**
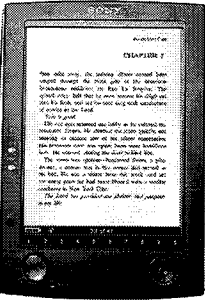**Friday, February 9, 2007, CBC News**

CBCnews CANADA | EDMONTON

Story Tools: E-MAIL | PRINT | Text Size: S M L XL | REPORT TYPO | SEND YOUR FEEDBACK

Text-message course helping newcomers learn English

Last Updated: Friday, February 9, 2007 12:49 AM MT
CBC News

A pen and paper aren't necessary in an Edmonton classroom where students are learning English with a tool — text messages on their cellphones.

Electronic Books
(e.g., The Sony Reader)

INFORMATION TECHNOLOGY

Even With Improved Screens, e-Book Devices Not Ready for College

---

Skype: Online Phone Calls

A20 THE CHRONICLE OF HIGHER EDUCATION · DECEMBER 8, 2006

Jan 26, 2007,
The Skype roadmap: Trial and error By Tim Weber
Business editor, BBC News website, Davos

- **More than 171m users have registered with Skype so far, and 200,000 new users are signing up every day - although he refuses to be drawn on the number of active users.**
- **Still, at any given time more than 8 million people are "online" and using Skype**

BBC NEWS

News Front Page

CNN.com

WORLD BUSINESS

digitalbiz
Apple drops a bombshell with iPhone

The iPhone unveiled – a voip phone from Linksys

February 13, 2007, USA Today

VoIP's transformation from high-tech toy to utility accelerating

VoIP's popularity
The number of subscribers and revenue, its Internet phone service are expected to soar.

Subscribers (in millions)   22.3

Revenue (in billions) $7.6

Consumers finally get a grip on VoIP

DePauw University

Accessible Technology

The project aims to build peer-to-peer communications

The CM1: Taking technology to the developing world
A revolution in a laptop
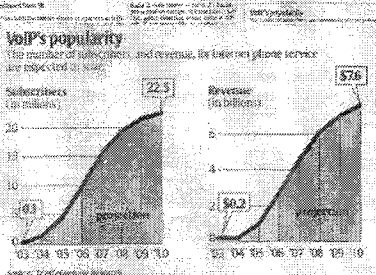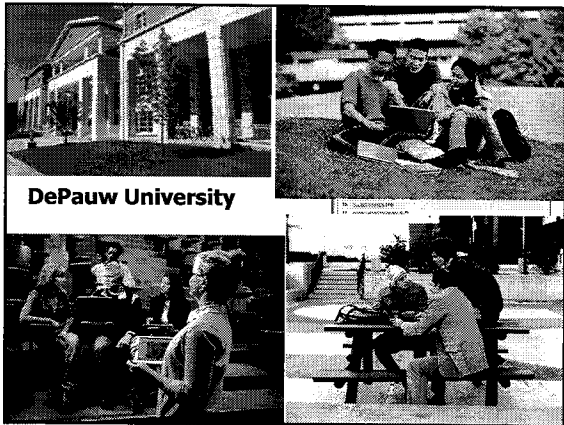*By Greg Norman*
Sunday 13 August 2006, 18:49
Makka Time, 15:49 GMT

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

OLPC aims to turn the tide of urban poverty

Brandon Hall, Chief Learning Officer Magazine, July 2006

"Podcasts provide a way to distribute an audio or video episode via the Internet for playback at any time on any MP3 device or PC. Podcasts allow training in the form of event capture, new product information, sales tips, orientation, etc. to be delivered on a just-in-time, just-enough basis to anyone anywhere."

Vodcast for Medical Training
(e.g., "SonoSite on the small screen: The Bothell-based company uses podcasts for its ultrasound scanner training," *By Eric Fetters, Herald Writer, Everett, WA, Sept 25, 2006)*

Podcasts in Business
(Combined video, audio, text files)
Learning **TRENDS** by Elliott Masie - September 18,

Podcast Questions

1. Who has listened to a podcast?
2. Who listens to a certain podcast on a regular basis?
3. Who has created a podcast?
4. Who has created a vodcast?
5. Who thinks podcasting is simply more talking heads?

Art and History Exhibits

CNN.com

TECHNOLOGY

Modern media meets Colonial Williamsburg

WILLIAMSBURG, Virginia (AP) — Thomas Jefferson isn't about to start listening to an iPod, with telltale earbud wires dangling from beneath his three-cornered hat as he walks the streets of Colonial Williamsburg.

But people far from the restored 18th-century capital of Virginia can use their portable audio players to hear costumed interpreter Bill Barker talk about portraying Jefferson or, in honor of the Fourth of July holiday, read the Declaration of Independence.

The world's largest living history museum long has used modern media to share its stories with audiences far beyond its 301-acre historic area, dating back to before World War II when it produced an educational film for schools.

U-M School of Dentistry & Apple Computer in Partnership iTunes Music Store to Help Provide Information Access 24/7

- It started with a simple question. First-year dental student Jared Van Ittersum wanted to know why all the lectures he attended weren't available electronically. Now University of Michigan School of Dentistry and Apple Computer Inc. are collaborating on a project that uses iTunes technology for academics. (audio of large lecture classes thru RSS)

University of Michigan School of Dentistry

Webcasts: WorldBridges Goals

What is Worldbridges?
- Worldbridges is a network of individuals and organizations that use live, interactive webcasting and other new media technologies to help people connect, learn, & collaborate.
  (Webheads, Koreabridge, Worldbridges Tibet, EdTechTalk, etc.)

Goals & Values
- Our primary goal is to foster understanding and cooperation amongst the citizens of the world. We value civility and respect, open source collaboration, fair distribution of income, and a sense of world identity.

Language Learning
(ChinesePod—learn Mandarin)

Learn Mandarin on Your Terms

Podcast Archive

中级 74 Chinese Tea

Jenny Zhu

Educational Applications

1. Recordings of lectures (Coursecasting)
2. Supplemental textbook or entire book
3. Student projects
4. Interviews
5. Language lessons
6. Oral reports
7. K-12 classroom interactions
8. Downloadable library of resources
9. Recordings of performances

The Ten Forces that Flattened the World

The Learning World is Flat

9. **Personalized Learning Tools (Blogs, MySpace, Flickr, RSS, etc.)**

join the DISCUSSION

Blogging (75,000 new blogs each day, USA Today, March 27, 2006)

Quarter	Blog Population
Q1 2000	29,500
Q2 2000	66,100
Q3 2000	115,000
Q4 2000	197,000
Q1 2001	352,000
Q2 2001	628,000
Q3 2001	951,000
Q4 2001	1,200,000
Q1 2002	1,570,000
Q2 2002	2,140,000
Q3 2002	2,570,000
Q4 2002	3,070,000
Q1 2003	3,730,000
Q2 2003	4,680,000
Q3 2003	5,760,000
Q4 2003	7,300,000
Q1 2004	9,620,000
Q2 2004	12,600,000
Q3 2004	16,200,000
Q4 2004	21,000,000
Q1 2005	31,600,000
Q2 2005	37,600,000
Q3 2005	45,200,000
Q4 2005	53,400,000

Hosted Blog Growth

Growth Rate

- —
- 606%
- 126%
- 131%
- 105%

Brandon Hall, Chief Learning Officer Magazine, July 2006

"A blog is a Web journal containing dated entries on a given topic or scheme. They can include search, feedback from readers and links to other sites. They can be written by one person or a group. Blogs can be used to share a viewpoint, enable collaborative discussion, present new product ideas, or explain ongoing news or changes."

Scholars who Blog, Chronicle of Higher Ed, (Glenn Reynolds, instapundit.com; Stephen's Web, www.downes.ca)

Not Just an American Phenomemon

canada.com

Tuesday • October 10 • 2006

China says number of blogs tops 34 million with 55 million regular readers

Canadian Press

Tuesday, September 26, 2006

BEIJING (AP) - The number of blogs in China has topped 34 million, more than 30 times as many as the country had four years ago, news reports said Tuesday.

Some 17.5 million people in China consider themselves Web log writers, while 55 million regularly read them, newspapers and the Xinhua News Agency said, citing a report by the government's China Internet Network Information Centre.

Web logs are hugely popular in China, where the government controls all media and the Internet offers most people the only public forum for expressing opinions. Most blogs deal with pop culture, travel, family matters and other nonpolitical subjects.

Yahoo News
Love me, love my blog," as Netorati couple-surf
BY SARA LEDWITH Thu Aug 3, 8:30 AM ET

- Nick Currie and his girlfriend Shizu Yuasa (R) surf the internet over breakfast in Tokyo in this handout photo. As the Internet evolves -- with its webcams, iPods, Instant Messaging, broadband, wi-fi and weblogs -- its image as a relationship-wrecker is changing. Now a sociable habit is emerging among the Netorati: couple-surfing. (Nick Currie/Handout/Reuters)

- **"For my birthday, he upgraded my RAM and I thought it was incredibly romantic,"** writes Jess.

Blogs at Work

Warning: Your clever little blog could get you fired

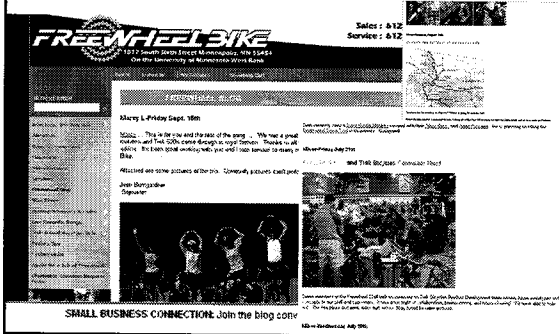Employers catch on to workers' Web logs, and s

---

11

Blogging Questions

1. Who has a blog? Any for a specific class?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
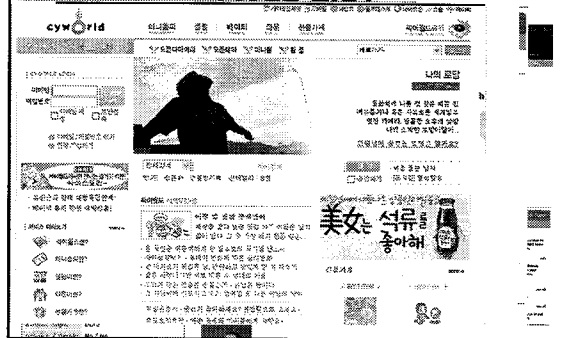5. Who thinks it is an utter waste of time to blog?

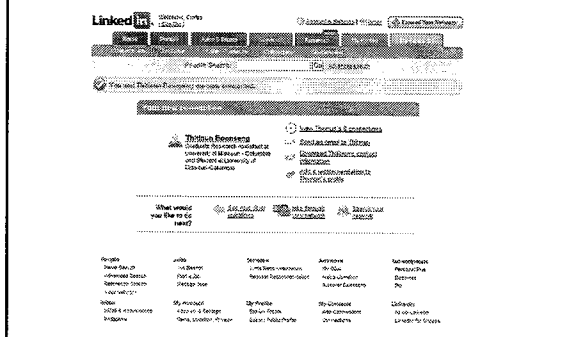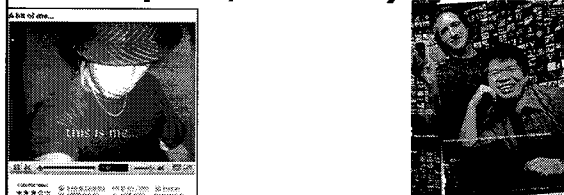## Adventure Blogging (Ben Saunders, Mark Fennell)
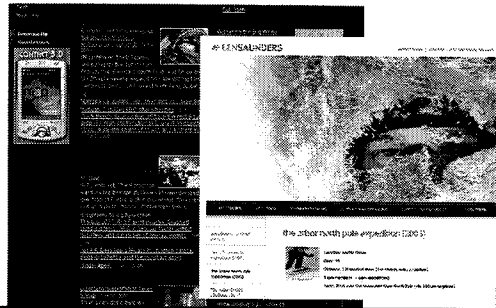
Business Blogs

Social Networking Software (Web 2.0)

Corporate Social Networking

The Ten Forces that Flattened the World
10. Open Information Communities (e.g., Wikipedia, YouTube)

Six ed-tech trends to watch in 2007
Gregg W. Downey, Editor,
eSchool News, December 22, 2006

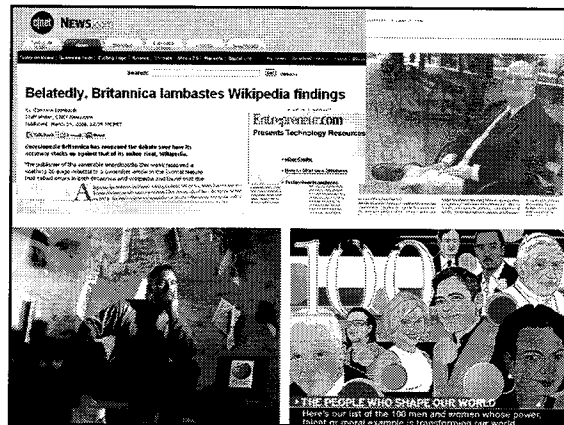**Trend No. 1: The leveling power of the World Wide Web**

- **No longer need you be a major motion picture studio to create a box-office smash. You don't need a radio station to be a popular disc jockey. You don't need a television network to create a video that can be seen literally by millions.**

YouTube co-founders Chad Hurley and Steven Chen

The Me Channel
A personal-video broadcasting system from SplashCast brings new meaning to the term "reality TV," Wade Roush, Feb 9, 2007

- Using SplashCast, indi video channels and fil music, or photos or w elsewhere on the Wek lover Ken Beare, shov operas such as Monte wanted to be on TV... may have what you n shows and broadcast on the Web. (On dema

---

Belatedly. Britannica lambastes Wikipedia findings

Folksonomy
(Bruns & Humphreys, 2005; Wikipedia, 2007)

- "Folksonomy" is an internet-based collaborative environment and information retrieval methodology created from within the user community. It consists of open-ended labels that categorize content such as Web pages, online photographs, and Web links. A folksonomy is most notably contrasted from a taxonomy in that the authors of the labeling system are often the main users (and sometimes originators) of the content to which the labels are applied.

Mass collaboration could change the way companies operate, USA Today
Kevin Maney, Dec 27, 2006

- **Desperate for ways to find new places to drill, Goldcorp (a Canadian gold-ming company) did the unthinkable for a mining company: It posted all its proprietary data on the Internet and let anyone interpret it for possible drilling targets. Prize money was promised.**
- **Within weeks, submissions poured in. People around the world found drilling targets Goldcorp never thought of. The process shaved years off exploration and shot Goldcorp from $100 million in revenue to $9 billion.**

A Million Penguins

- Back in November, Meredith wrote a post on *We Are Smarter Than Me*, an anticipated Pearson publication that is a collaborative effort of thousands of authors registered on WeAreSmarter.org. Today, Penguin UK launched a similar effort - its first wiki novel *A Million Penguins*.
- Using MediaWiki technology, anyone who registers on www.amillionpenguins.com is able to edit and/or add onto this web-based tale for the next 5 weeks. Already, there are 500 posts (some by return users), four chapters, and an interlude.

Sample Book (Learning Theories) http://en.wikibooks.org/wiki/Main_Page

Wiki Questions

1. Who regularly reads Wikipedia articles just for fun?
2. Who regularly reads Wikibooks?
3. Who seeks Wikipedia for content?
4. Who has edited or written new articles on Wikipedia or Wikibooks?
5. Who thinks it is ok for college students to cite from Wikipedia?

The Ten Forces that Flattened the World

Other Open Educational Resource Issues: Copyright, Consortia, Knowledge Brokers, Conferences, Journals.

Open Source and Open Educational Resources Conferences

The Learnig World is really flat!