Monday April 30, 2007, USA Today
Top 25 Things that Shaped the Internet
- 747 Million adults logged on in Jan, 2007
- 97 billion e-mails are sent each day
- Google had 500 million visitors in Dec, 2006
- USA: 1% broadband in 1998; 78% in 2007
- YouTube bought by Google for $1.7 billion
- Adobe's Flash player on 98% of machines
- There are 75 million blogs!!!
- 19 million people play MMOG!
- 173 million personalized pages in MySpace

Poll #1:
Raise your hands if you are a digital native (grew up with a computer at home).

Next Generation of Students

Neomillennial Learning Styles
Planning for Neomillennial Learning Styles: Implications for Investments in Technology and Faculty
Chris Dede, Harvard University, Edexuxe, 2005
- Fluency in multiple media—value all types of communication, activities, experiences, not a single best medium
- Actively seek, collect, and synthesize experiences, rather than absorb a single best source
- Active learning and collective reflection
- Non-linear and associated webs of learning
- Co-design of learning experiences for individual needs and preferences not pre-customized

Simulation: Xer
Multitasking
A characteristic of the 21st century everyday life

Tech Creates Bubble for Kids
Alejandro Gonzalez, USA TODAY, Updated 6/29/2006 10:34 AM ET
Bonk’s Addiction Q’er

1. Who has 2 or more cell phones with Internet access?
2. Who has 2 or more laptop computers with wireless connections?
3. Who is on email in the morning? At noon? Who does it at night?
4. Who suffers from nervous tension when you cannot get on email?
5. Who is on the Web right now?

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; Mozilla, Apache, Wikipedia, Linux, Mozilla/Firefox)
5. Outsourcing (Y2K)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chainring (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)
Telegraph: Flattening the world in 1860

WE-ALL-LEARN:
Ten Forces that Opened the Learning World

- Web Searching in the World of e-Books (i.e., Darwin)
- Enormous E-Learning and Blended Learning
- Availability of Open Source and Free Software (e.g., Moodle)
- Leveraged Resources and OpenCourseWare (e.g., MIT)
- Learning Object Repositories and Portals (i.e., shared content)
- Learner Participation in Open Info Communities (YouTube)
- Electronic Collaboration and Interaction (sync and async)
- Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)

Three Larger Trends of WE-ALL-LEARN

- The availability of tools and infrastructure for learning.
- The availability of free educational content and resources (OER—Open Educational Resources).
- A move towards a culture of open access to information, international collaboration, and global sharing.

The Ten Forces that Flattened the World

1. Web Searching (e.g., Google, MSN, Yahoo) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)

The Search is on!
New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources.
Chronicle of Higher Education, Andrea Foster, March 9, 2007
http://chronicle.com/free/v53/n27/27a03801.htm

The explosion of electronic information is fueling students' confusion, librarians say. In 1996 there were 10,000 scholarly databases online; now they exceed 18,000. The Web is teeming with more than 100 million sites, up from 18,000 in 1995. Google and Microsoft recently began archiving books and scholarly journals and making them available via their search engines. And two online, academic-oriented encyclopedias, Citizendum and Scholarpedia, are starting up...

Google Working on Timeline and Map Views

Read, Listen, etc. to "An International Episode" by William James

All of Darwin's and Shakespeare's Works are Online

Google and Other Search Engines
(Sergey Brin, Co-Founder)
Google to Impact Chip in Brain!
Connecting the Digital Dots: Literacy of the 21st Century
Barbara R. Jones-Kavalier and Suzanne L. Flannigan
Educause Quarterly (2006), 29(2)

"These days, new media literacy technical skills catapult traditional learning methods into orbit—traditional chalkboards and overheads with pens do not occupy the same realm as current capabilities. As an example, now teachers can do a PowerPoint presentation with streaming video, instant Internet access, and real-time audio-video interaction, and they can do it with relative speed and ease."

Ok, Million Dollar Question: What are 21st Century Skills?

If you had to give a word or phrase to describe "21st Century Skills," what would that word be?

Locate info, synthesize it,
Decision making,
Use effectively and ethically,
Communicate effectively,
Evaluate products,
Producers and consumers of visual info,
Informed critics,
Sensitive to bias and cultural differences,
Sets own goals,
Willing to make mistakes,
Comparison and contrast skills, inferencing skills,
Participate in a team, exercise leadership,
Manage technology for public good

What Students Need to Know:
21st Century Skills and ICT literacy;
Susan D. Patrick, President and CEO
North American Council for Online Learning

The future will demand people who can express themselves effectively with images, animation, sound, and video, solve real world problems that require processing and analysis of thousands of numbers, evaluate information for accuracy, reliability, and validity; and organize information into valuable knowledge, yet students are not learning these skills in school.

http://www.21stcenturyskills.org/documents/FINAL_REPORT_PD09-28-06.pdf
What Students Need to Know: 21st Century Skills and ICT literacy; Susan D. Patrick, President and CEO North American Council for Online Learning

- Information and communication skills;
- Thinking and problem-solving skills;
- Interpersonal and self-direction skills;
- Global awareness;
- Financial, economic, and business skills; and
- Civic literacy.

From: The Partnership for 21st Century; www.21stCenturySkills.org
Report: are they really ready to work (2006).
http://www.21stcenturyskills.org/documents/FINAL_REPORT_PDF9-29-06.pdf

Digital Literacy
(Bonk, June 2, 2007)

- Digital literacy is the ability to browse, locate, filter, synthesize across, and eventually use information appearing in multiple formats and in a wide range of sources that can lead to communication of what one discovered as well as the production of still additional information. (Paul Gilster (1997), Digital Literacy.)

New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources. Chronicle of Higher Education, Andrea Foster, March 9, 2007

- Among the most well known is the ICT Literacy Assessment, which was developed and is administered by the Educational Testing Service, a nonprofit group based in Princeton, N.J. "ICT" stands for "information and communication technology." The 75-minute test, offered at two levels, measures students' ability in seven areas, including organizing, evaluating, and communicating with electronic data.

Digital Literacy
(Bonk, June 2, 2007)

- Digital literacy is not only technology related knowledge, skills, and competencies, but also the critical and creative thinking skills as well as ability to engage in collaborative teams to find and solve problems in a technologically reliant society or environment.

New Forms of Digital Literacy
(new tests from ETS)

Technology for Tracking Eye Movements
The Ten Forces that Flattened the World

2. Enormous E-Learning and Blended Learning

Technology in K-12

Education Week, March 27, 2007

Growth of Online Learning in Secondary Schools

Julie Young, FLVS

University of Central Florida
Access, Quality, and Efficiency through Online Learning
Academic Year 2006-2007

The Open Univ Malaysia
(Almar Khan, 2005, Ed Media)

- Started August 2001: approx. 800 students
- Total students (2005): approx. 33,000
- Total full-time academic staff: 60
- Total part-time academic staff (tutors): approx. 3,000
- 33 Learning Centres (7 Regional Centres)
- Pedagogical approach: Blended Learning

Enrollment Growth of the UOM
The Ten Forces that Flattened the World

3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle)

2. Moodle

The Sakai Project

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 the MIT open courses?
7. Who has used Wikipedia?
Most are Scared to Share!!!

Tufts OpenCourseWare Project

Vietnam Fulbright Economics OCW

Open Source Courseware

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."

Opensource Opencourseware Prototype System  
(OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei

H"

|
What’s their Beliefs? (Chu, Jan 1, 2007)

- Collective Minds is better than a single genius translator.
- Perfect Translation doesn’t exist.
- 2,012 Volunteer translators
  - 1,125 courses adopted
  - 639 courses near completion (level 1)
- 126 courses already finished

The Ten Forces that Flattened the World

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

Many Portals of Contents (e.g., Museum of Online Museums)

Free Video Lectures

Alive and Online
From amoebas to zebras, every living thing will get its own Web site, thanks to the new Encyclopedia of Life.

By Brian Brinker
Newsweek
Updated: 6:54 p.m. ET May 9, 2007

Yeti Crab: This recently discovered species already has its own sample page at eol.org

Free Government Resources!
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."


Pubcasts!
NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee http://www.scivee.tv/

A. MERLOT.org

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

C. Global Education and Learning Community (GELC)
(Kirkpatrick, Dec 22, 2006, CNN Money)

- The Global Education and Learning Community (GELC) aims to bring the principles of open source to education. Scott McNealy, former CEO of Sun Microsystems, is working to create a free universal curriculum from Kindergarten to 12th grade in every major subject. Any educator/researcher can contribute and it will be in any language.

D. Google School Resources such as Google Docs and Spreadsheets, an open alternative to Microsoft's Word and Excel

Google enrolls teachers in online software crusade

Dec 3, 2006, USA Today
Michael Liedtke, Associated Press
Google enrolls teachers to spread work online software crusade

Palo Alto High School journalism teacher Esther Wojcicki helps student Allison Wyndham at a computer during journalism class in Palo Alto, Calif. Wojcicki is helping Google bring its online suite of software applications to classrooms across the country
E. National Repository for Online Courses (NROC) Commons

The Ten Forces that Flattened the World
6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)

Slashdot and Digg (all about user powered content. Everything is submitted and voted on by the Digg community. Share, discover, bookmark, and promote stuff) http://digg.com/
USA TODAY, Oct 24, 2007, Traffic rose about 330% to 5.6 million visitors in Sept, from 1.3 prior Sept,
The Ten Forces that Flattened the World
7. Electronic Collaboration and Interaction (synchronous and asynchronous)

Skype, Google Talk, Chinesepod, LiveMocha, VoiceThread, YackPack, Dotsub, Mixzer, Chinswing, and many other Collaborative Language Learning

Online Mentoring in Rural China
(1k More project in China; http://www.1kg.org/)

http://en.wikibooks.org/wiki/Main_Page

http://uncyclopedia.org/wiki/Main_Page

Sharing in Virtual Teams
(e.g., Collanos, Groove, SharePoint)
The Ten Forces that Flattened the World

8. Alternate Reality Learning
   (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)

9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)
Students click on learning
New school laptops help Jonas Salk pupils up their grades
By Chelsea Phua - Bee Staff Writer
Published 12:00 am PDT Thursday, April 5, 2007
Story appeared in ARDEN CARMICHAEL section, Page G1

Amy, 13, writes her news script.
Ivan, 12, records his news report.

Trevo, 12, Adriano, 12, and Oseeno, 13, listen back to the report they have recorded on an iPod.

Lambeth CLC technician
George Beinfeld edits the students' work.

New York Times reporter Andrew Revkin continues doing compelling multimedia work. He's now not only shooting photos and recording audio -- he's moved on to video and blogging.

In his latest trip, Andrew C. Revkin headed north to chronicle the shifts on Greenland and researchers' efforts to understand them. He periodically posted dispatches in a blog-like diary and also shot video himself.

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.

The software increases detail around face and fingers
The team is working on ways to get the software on to handsets

Video compression helps deaf people signing across low bandwidth networks to chat with friends!
(BBC: 2/27/07)

$100 Laptop
The project aims to build peer-to-peer communication
Negroponte says the new laptop is designed to be kid-friendly

The CM1: Taking technology to the developing world
A revelation in a laptop
By Greg Norman
Sunday 13 August 2006, 16:40
Helsinki Time, 15:40 GMT

CEPC aims to turn the tide of urban poverty
OLPC in Nigeria: School Galadima
One Laptop Per Child foundation (OLPC) provided School Galadima in March 2007 with an XO laptop for each child in Primary 4, 5 and 6 and also for each member of the staff.

The Age of Wireless

The Ten Forces that Flattened the World

10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)

Poll #2:
Should kids be allowed to bring mobile phones, MP3 players (iPods) to school?

iPod's More Popular than Beer?
Entice Students with Technology Giveaways

One of Michelle Tanner's deaf students at Gerald Wright Elementary holds an iPod and watches a video of her signing the week's vocabulary words. The iPods were purchased with a grant from Qwest. Classrooms go high-tech. By Erin Stewart, Deseret Morning News, March 6, 2007

World Bridges and EdTechTalk

Language Learning (ChinesePod—learn Mandarin)

Jenny Zhu

JapanesePod, Arabic online, etc.

Online Photo Albums, e.g., FLICKR (Inc. Magazine, December 2006)
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/

Facebook used to be just for the young (e.g., my son's Facebook account)

Facebook’s Mark Zuckerberg, at his office in Palo Alto, Calif., is in no hurry to sell the popular social networking site. (23 years old)

Facebook could be worth as much as $6 billion today...He expects privately held Facebook to post a profit of about $30 million on revenue of $140 million this year, and register a $70 million profit on revenue of $335 million in 2008. He predicts $6 billion in revenue by 2016.

Combining Web 2.0 and Technology Trends (Ten Examples)

1. Flat Schools and Flat Classroom Projects!!!
8. Cluster Maps (who is reading your blog or using your product): Blog of Will Richardson, famous K-12 blogger (left) and Learning Theories Book of Michael Orey, Univ of Georgia (right)

9. Vlogging (Video Blogging)
   e.g., Andy Calvin's Waste of Bandwidth
   Michael L. Wesch, Kansas State, The Machine is Using Us

10. Video, Transcript, and Audio File:
    Watch, Listen, and Read

Sharing Questions (today)
- For what purpose will people share?
- Who will continue to maintain or update such sites?
- Will online sharing become expected of all faculty members around the planet?
- 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?
- How will such learning objects of today be viewed in 100 or 200 years?

It's Over...
Poll: Ok, then, who wants more???
A. Yes
B. No
C. Not sure
Learning is Now Flat/Open!!!
The End!!!