

Learning for the Next Decade: The Macro and the Micro

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Technology of the 1980s



New technologies hit us everyday!



Poll #1: Who finds it hard to keep track of all the technology-related changes???



It's Nature (i.e, technology) and Nurture (i.e., pedagogy)!



Trend #1: Topical Lectures from Famous People (e.g., Big Think; Academic Earth)



**Trend #2. Shared Online Video
(e.g., TV Lesson (expert videos))**



**Trend #3. Bridges to World of Expert
and Practitioners (e.g., Watch or Listen to Online
Conferences, Expert blogs, chats, interviews)**



**Trend #4: Online Portals of Rich Data
United Nations Opens World Digital Library, Turning
the Pages from the British Library**



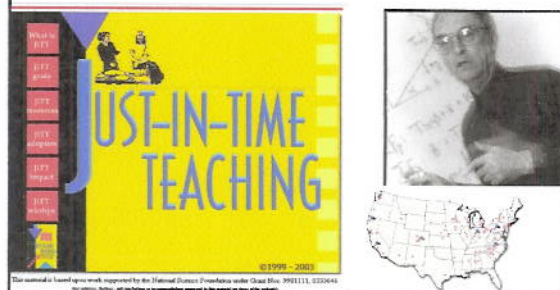
**Trend #5. Authentic Book Supplements
(e.g., Listen and Reflect on Book Author Podcasts)**



**Trend #6. Self-Paced Learning
(e.g., accounting lessons,
Podcasting Lectures)**



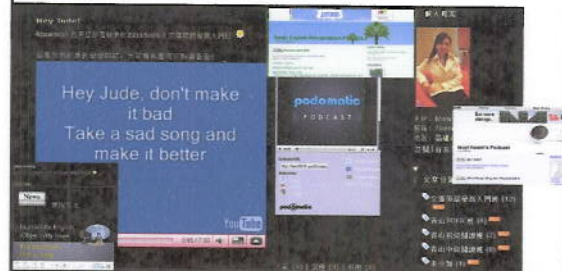
**Trend #7. Online Warm-ups Activities
Just-In-Time-Teaching (JITT)
<http://webphysics.iupui.edu/jitt/jitt.html>**



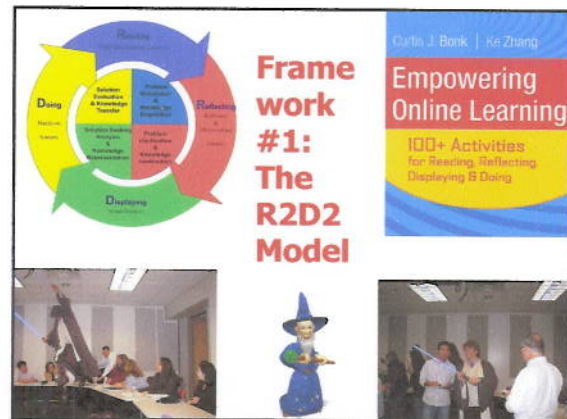
Trend #8. Online Games and Simulations (e.g., Psychology Experiments)



Trend #9. Students Producing their Own Content (e.g., podcasts for students of pronunciation class; Tzu-Su Chen, Taiwan)



Trend #10. International and Global Education and Competitions (e.g., Global Game Jams, online role play, Global Videoconferencing)



The R2D2 Method

1. **Read (Auditory and Verbal Learners)**
2. **Reflect (Reflective Learners)**
3. **Display (Visual Learners)**
4. **Do (Tactile, Kinesthetic, Exploratory Learners)**






Framework #2: TEC-VARIETY Model for Online Motivation and Retention

1. **Tone/Climate: Psych Safety, Comfort, Belonging**
2. **Encouragement, Feedback: Responsive, Supports**
3. **Curiosity: Fun, Fantasy, Control**
- ...
4. **Variety: Novelty, Intrigue, Unknowns**
5. **Autonomy: Choice: Flexibility, Opportunities**
6. **Relevance: Meaningful, Authentic, Interesting**
7. **Interactive: Collaborative, Team-Based, Community**
8. **Engagement: Effort, Involvement, Excitement**
9. **Tension: Challenge, Dissonance, Controversy**
10. **Yields Products: Goal Driven, Products, Success, Ownership**


TEC-VARIETY Model for Online Motivation and Retention

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

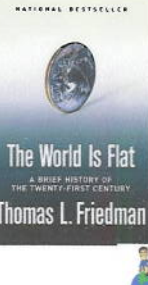




Where are you headed?

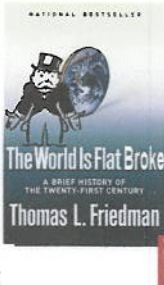


To a flat world?

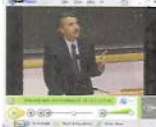

Triple Convergence: (1) new economic players, (2) playing fields, and (3) processes.



The World Is Flat
A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY
Thomas L. Friedman




The World Is Flat Broke
A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY
Thomas L. Friedman






To a shallow world?

May 24, 2010; Author Nicholas Carr, *The Web Shatters Focus, Rewires Brains*
http://www.wired.com/magazine/2010/05/ff_nicholas_carr/




To an open world?





OPENING UP EDUCATION

The Collective Advancement
of Education through Open Technology,
Open Content, and Open Knowledge



Edited by
David Hays and M.S. Vijay Kumar
Foreword by Clay A. Kopp



Old companies teach new tricks

Microsoft, Dell, Apple face up to their old age of 30

December when

Some Notable Moments in Recorded Life

- 1936: The first commercial television broadcast
- 1945: The first atomic bomb test
- 1947: The first television commercial
- 1948: The first television news broadcast
- 1949: The first television game show
- 1950: The first television quiz show
- 1951: The first television variety show
- 1952: The first television talk show
- 1953: The first television news anchor
- 1954: The first television news program
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- 2008: The first television news program
- 2009: The first television news anchor
- 2010: The first television news program

Vannevar Bush

Charles Wedemeyer, University of Wisconsin

Learning at the Back Door

REFLECTIONS ON NONTRADITIONAL LEARNING IN THE LIFESPAN

Charles A. Wedemeyer

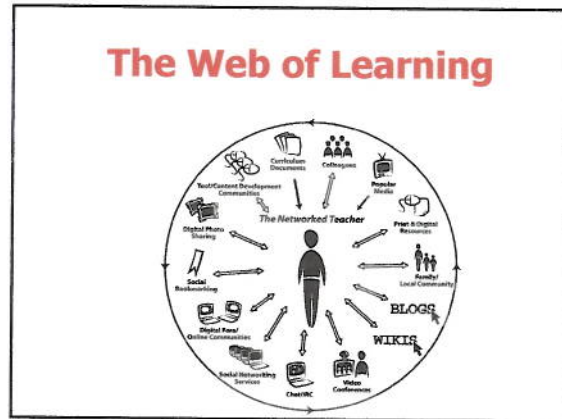
August 9, 2010, Bill Gates Predicts Technology Will Make 'Place-Based' Colleges Less Important in 5 Years

By Jeff Young, Chronicle of HE

<http://chronicle.com/article/Bill-Gates-Predicts-Technology-Will-Make-Place-Based-Colleges-Less-Important-in-5-Years/125000>

Wired Campus

Bill Gates on in-person vs. online edu.



Today we have the Web 2.0

August 2, 2010 Time spent on Facebook, Twitter, YouTube grows, USA Today, Jon Swartz

http://www.usatoday.com/tech/news/2010-08-02-networking02_ST_N.htm

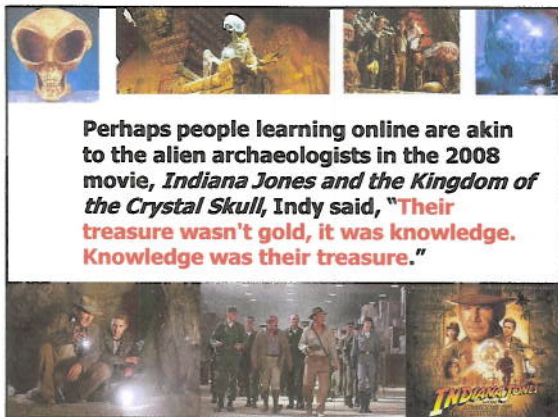
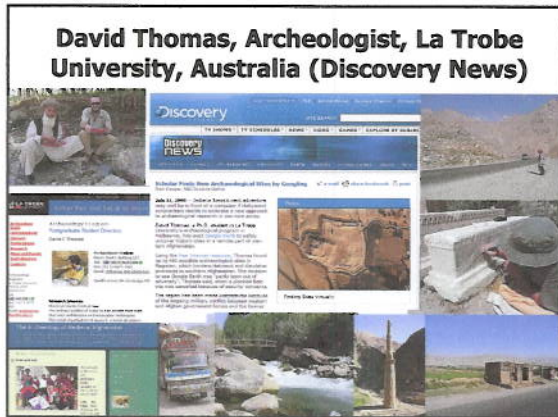
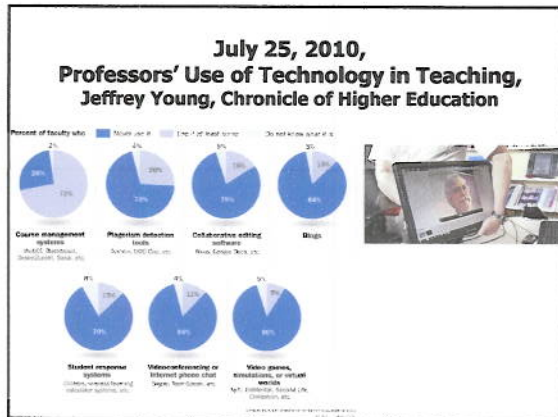
Time spent on Facebook, Twitter, YouTube grows

Social-network scope expands

Time spent online

Category	Yearly change in share of U.S. internet time for most heavily used sectors
Social networks/blogs	43.0%
Games	10.0%
E-mail	-28.0%
Portals	-19.0%
Instant messaging	-15.0%
Videos/movies	12.0%
Search	1.0%
Software/info	-0.0%
Multicategory	-7.0%
Classifieds/auctions	-2.0%

Source: Nielsen



- ### Framework #3: WE-ALL-LEARN
- #### Ten Forces that Opened the Learning World
- Web Searching in the World of e-Books (i.e., Darwin)
 - 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)

Audience Participation!

1. WE
2. ALL
3. LEARN!!!

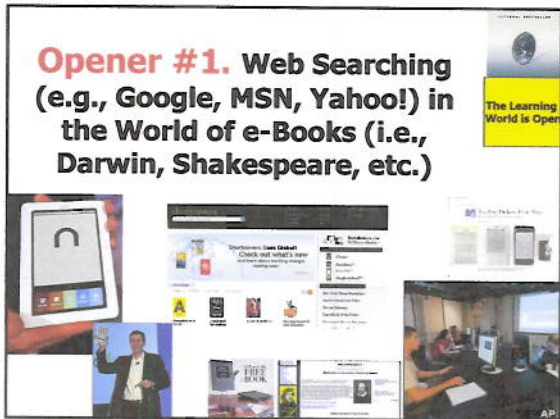


Triple Learning Technology Convergence of "WE-ALL-LEARN"

1. **Pipes:** The availability of tools and infrastructure for learning.
2. **Pages:** The availability of free educational content and resources (OER—Open Educational Resources).
3. **Participatory Learning Culture:** A move towards a culture of open access to information, international collaboration, and global sharing.



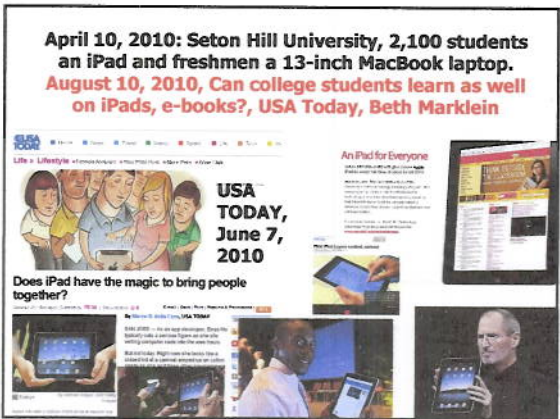
Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)



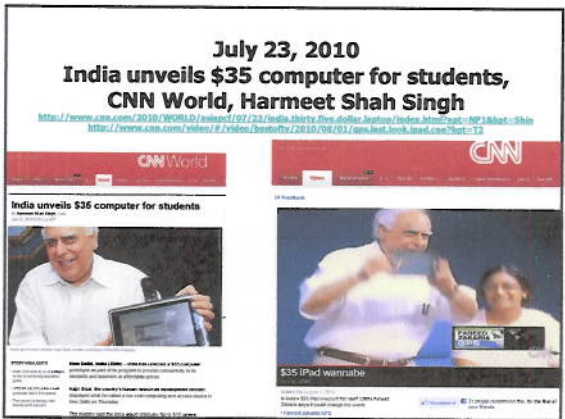
July 29, 2010 Amazon unveils 3rd-generation Kindle e-book reader, USA Today, Edward C. Baig



April 10, 2010: Seton Hill University, 2,100 students an iPad and freshmen a 13-inch MacBook laptop. August 10, 2010, Can college students learn as well on iPads, e-books?, USA Today, Beth Marklein



July 23, 2010 India unveils \$35 computer for students, CNN World, Harmeet Shah Singh



Opener #2. E-Learning and Blended Learning

The Learning World is Open

OPRAH.COM
OPRAH'S Book Club
NEW EARTH WEB EVENT
More in the Classroom
Possibility Plan

Letter from Bill Gates about online learning (January, 2010)

<http://www.gatesfoundation.org/annual-letter/2010/Pages/education-learning-online.aspx>

BILL & MELINDA GATES Foundation
ALL LIVES HAVE EQUAL VALUE
2010 Annual Letter from Bill Gates: Online Learning

Salmon Khan (Khan Academy) (videos on math, bio, trig, chemistry, money and banking, economics, statistics, etc.; <http://www.khanacademy.org/>)

KHAN ACADEMY
The Khan Academy
Salman Khan: Math master of Internet

Adora Svitak, age 12, World's Youngest Teacher

Adora Svitak
TED

North Carolina, The enrollment figures are based on half-credit enrollments, and assumes an average growth of 50% per year (actual has been 79%). (per Dr. Bryan Setser, Executive Director, North Carolina Virtual Public School Learn and Earn Online, July 6, 2010)

NCVPS Predicted Growth

Academic Year	Half-Credit Enrollments
2006-07	~10,000
2007-08	~15,000
2008-09	~20,000
2009-10	~25,000
2010-11	~30,000
2011-12	~35,000
2012-13	~40,000
2013-14	~45,000
2014-15	~60,000

Actual Enrollment
Projected Enrollment at 50% Growth Rate

North Carolina Virtual Public School

Capella Tower 225 South Sixth Street, Minneapolis Formerly, the "Halo"

Capella Tower
225 South Sixth Street, Minneapolis
Formerly, the "Halo"

U. of California System Proposing Online Ed
 Chronicle of HE, May 14, 2010, Josh Keller and Marc Perry
"The university plans to spend about \$250,000 on each course. It hopes to raise the money from external sources like foundations or major donors."

iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART) is a FREE 2-year online graduate program for middle school science and mathematics teachers in Texas, University of Houston
<http://www.coe.uh.edu/mycpe/CUIN/math/iSMART%20 flyer4.pdf>
<http://www.coe.uh.edu/mycpe/CUIN/math/iSMART.cfm>

You see the big picture. You find the connections. Make it official - become iSMART.

Jen Chauvot and Mimi Lee, Univ of Houston

TOTAL AND ONLINE ENROLLMENT IN DEGREE-GRANTING POSTSECONDARY INSTITUTIONS - FALL 2002 THROUGH FALL 2008

Year	Total Enrollment	Annual Growth Rate Total Enrollment	Students Taking at Least One Online Course	Annual Growth Rate Online Enrollment	Online Enrollment as a Percent of Total Enrollment
Fall 2002	16,611,710	NA	1,602,970	NA	9.6%
Fall 2003	16,931,481	1.8%	1,971,397	23.0%	11.7%
Fall 2004	17,272,043	2.1%	2,329,783	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	9.7%	19.6%
Fall 2007	17,975,830	1.2%	3,938,311	12.9%	21.9%
Fall 2008	18,199,920	1.2%	4,406,353	16.9%	25.3%

Open U of Malaysia, March 25, 2010

Year	Enrollment
Year 2001	783
Year 2002	7622
Year 2003	16986
Year 2004	20986
Year 2006	35996
Year 2007	83248
Year 2008	104489
Year 2009	75425
Year 2010	83409
Year 2010	91223

U.S. DEPARTMENT OF EDUCATION
 Evaluation of Evidence-Based Practices in Online Learning
 A Meta-Analysis and Review of Online Learning Studies

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

The Learning World is Open

INFORMATION TECHNOLOGY
 One-Year Blackboard Will Do the Trick to Assist Learning

Blackboard
 Revolutionizing Learning

Moodle (35+ million users (930,000 registered) in 213 countries, nearly 50,000 sites, 3.5+ million courses, June 27, 2010)

Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from MIT, Utah State, CORE, OOPS)

The Learning World is Open

Open Yale

MIT OPEN COURSEWARE
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Exc. Traditional Textbooks

We Revise Open Textbooks!

Open Educational Resources (OER) Post Courses in YouTube and iTunes (e.g., Berkeley)

The image shows a screenshot of the Berkeley Open Educational Resources website. The page features a navigation bar with 'Home', 'About', 'Courses', and 'Help'. Below the navigation, there are several video thumbnails and course listings. The Berkeley logo is prominently displayed at the top left.

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

The Biggest OCW Localization Volunteer Group in the World

The image shows a screenshot of the OOPS website. The page features a navigation bar with 'Home', 'About', 'Courses', and 'Help'. Below the navigation, there are several video thumbnails and course listings. The OOPS logo is prominently displayed at the top left.

National Repository for Online Courses (NROC) Commons

The image shows a screenshot of the NROC Commons website. The page features a navigation bar with 'Home', 'About', 'Courses', and 'Help'. Below the navigation, there are several video thumbnails and course listings. The NROC Commons logo is prominently displayed at the top left.

Nixty, Peer2Peer University and University of the People (free!)

Neeru Paharia is behind Peer2Peer University, Fast Company, September 2009, How Web-Savvy Edupunks Are Transforming American Higher Education

The image shows a screenshot of the Nixty website. The page features a navigation bar with 'Home', 'About', 'Courses', and 'Help'. Below the navigation, there are several video thumbnails and course listings. The Nixty logo is prominently displayed at the top left.

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

A Single Group Helps Trigger an Online-Publishing Explosion

The Public Knowledge Project, a nonprofit group, estimates that the online-publishing software it offers free has given rise to more than 5,000 open-access academic journals around the world. Below is their geographic distribution by continent as of last month.

The image shows a world map with color-coded regions representing the geographic distribution of open-access academic journals. The map is divided into North America, South America, Europe, Africa, and Asia. The map is titled 'The Learning World is Open'.

How about rich video portals?

Most of the Websites below did not exist 5 or 10 years ago.

1. BBC News Video and Audio
2. CNN.com Video
3. MSNBC.com
4. Google Video, Yahoo Video
5. Current TV
6. Fora TV
7. MIT World
8. YouTube, YouTube Edu
9. TeacherTube
10. Link TV, Explore, Global Pulse, Latin Pulse
11. Howcast, Big Think, WonderHowTo, Explo.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doFlick, the Research Channel, iVideosong

The image shows logos for various video portals: Google, YouTube, Howcast, and BookTV. The YouTube logo includes the tagline 'Broadcast Yourself'.

How TED Connects the Idea-Hungry Elite, Fast Company, Anya Kamenetz, September 1, 2010
<http://www.fastcompany.com/magazine/148/how-ted-became-the-new-harvard.html>



More Shared Online Video: Academic Earth, TV Lesson, and Fora TV



**Ida (a transitional species)
 47-Million-Year-Old Darwinius Masillae Fossil
 the Missing Link? (wowOwow, May 20, 2009)**



Human Brain Dissected Today in a Live Webcast, Chronicle of Higher Education, December 02, 2009, 01:00 PM ET
http://chronicle.com/blogPost/Human-Brain-Dissected-Today-in/200537aid-pm&utm_source=pm&utm_medium=en



The Carlyle Letters Exploring Victorian World Through Letters and The Diary of Samuel Pepys (Great Plague, Great Fire, Charles Dickens, Erasmus Darwin, Mary Wollstonecraft Shelley, Robert Browning, John Stuart Mill, Ralph Waldo Emerson, Elizabeth Barrett Browning, and Alfred Tennyson)



Sharing Repositories and Referatories
MERLOT.org: 78,472 members, 21,690 Inrg materials, Jan 3, 2010
Connexions: Dec 2009, 1.6m unique users, 4 million page views, 72 million hits, More than 1m users, 200 countries
National Repository of Online Course, OER Commons



Opener #6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)

The Learning World is Open

John Dewey, Seymour Papert, John Seely Brown, Ivan Illich, Stephen Heppell, Henry Jenkins

Shared Online Video (e.g., YouTube and the Royal Channel)

TravelinEdMan (YouTube)
<http://www.youtube.com/user/TravelinEdMan>

Participatory E-Books

Scribd: Documents on Web
<http://www.scribd.com/>; 50 million unique visitors per month, 10's of millions of documents, April 2010

Opener #7. Electronic Collaboration and Interaction (synchronous & asynchronous)

The Learning World is Open



August 5, 2010, Remaking the College Campus, Bridget McCrea, Campus Technology

June 2010, 7 Tips for Building Collaborative Learning Spaces, Campus Technology, Matt Villano

CAMPUS TECHNOLOGY

7 TIPS FOR BUILDING COLLABORATIVE LEARNING SPACES


Yonsei University, Seoul, Korea

Synchronous Conferencing Presentations

The Next Generation of Videoconferencing Chronicle of HE, October 21, 2009

October 21, 2009

The Next Generation of Videoconferencing




Footage courtesy of USC Institute for Creative Technologies

Members at the University of Southern California and the University of North Carolina are creating new tools that may soon let people attend videoconferencing sessions.

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

The Learning World is Open



The Learning World is Open

CIVILIZATION

Second Life (business, law, education, English, medicine)



Opener #9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)

The Learning World is Open



The Learning World is Open

We Are Going Mobile!

40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

India: In January, 2009, the number sky rocketed to 15.4M
Globally: 60,000 new mobile subscriptions every hour!!!

(per Paul Kim, Stanford, 2009); Nokia Research Lab
http://news.yahoo.com/s/afp/20090300/ba_afp/Indiaconomytelecom



June 9, 2010

Force is with new GPS units



TwitterPeek: Restricted to Twitter.

WikiReader: Updating can be a pain.

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

The Learning World is Open

September 30, 2009
the Samsung DualView TL225

July 21, 2010 vs. Sept 28, 2009 Status update: Facebook logs 500 million members, USA TODAY, Kristin McGrath

Platform	User Count
Facebook.com	92.2 million
MySpace.com	64.2 million
Twitter.com	20.8 million
Diigo.com	17.4 million
Chatterbox.com	15.8 million
Bebo.com	12.1 million
MyLife.com	11.4 million
Windows Live Profile	10.2 million

Teaching With Twitter

Chronicle of HE, Jeffrey Young, November 22, 2009
Sugato Chakravarty, a professor of consumer sciences and retailing at Purdue University, has welcomed Twitter into the lecture hall, even though the service lets students engage in back-channel discussions. The questions submitted via Hotseat for the professor and guest speakers are projected for all the students to see.

Social Networking Gaming (e.g., Farmville)

For social networks, it's game on, USA Today, Jon Swartz, Thursday October 15, 2009

August 10, 2010

Flipboard pretties up social-media updates
Facebook statuses and tweets feed into magazinelike format in free app for iPad
Jefferson Graham, USA TODAY

http://www.usatoday.com/printedition/money/20100811/flipboard11_start.htm

Some Papers Are Uploaded to Bangalore to Be Graded, Chronicle of Higher Education, April 4, 2010, Audrey Williams June

Lori Whisenant, who teaches business law and ethics at the U. of Houston, has outsourced the grading of students' papers to a private company.

Predictions

1. Five Billion "Have-Nots" Have at It!
2. Emergence of Lifelong Super E-Mentors/Coaches
3. Quarter-Century Learning Clubs
4. Terabyte Learning Access Points
5. The Veneration of Learning
6. Personalization+ Portfolios
7. The Selection of Global Learning Partners
8. The Shared Learning Era
9. Teaching-Learning Perpetuities
10. Teachers, Teachers
11. The Rise of the Super Blends
12. Self-Determined Humans
13. Free Learning Zones
14. Authentic Learning Amalgamations
15. Alexandrian Aristotles

Decisions for this Open Ed World?

- **Technology and Admin Folks:**
 - What do to about OER, open sources, E-books, mobile, etc.?
- **Instructor decisions:**
 - Act as Concierge, Counselor, Course facilitator, Credit manager?
- **Students decisions:**
 - Should I attend traditional university or create your own degree path?
 - How to report use of OER on resumes?

- This book is an attempt to reveal a wide range of learning options in front of you while also offering you a framework to make sense of them. As the Grail Knight said in the 1989 movie, *Indiana Jones and the Last Crusade*, "choose wisely." If you do, WE-ALL-LEARN. The world is now open to you!

Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Book: <http://worldisopen.com/>

The World is Open.
 What happens then?

WE

ALL

LEARN!!!