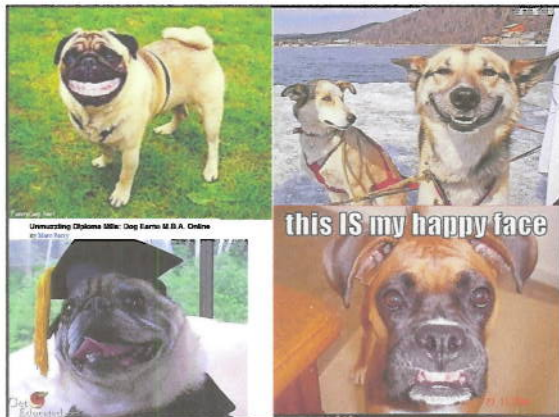**I am Not Content:**
The Future of Education Must Come Today

Curtis J. Bonk, Professor, Indiana University
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/





this IS my happy face

**We Are Going Global Mobile!**
(Paul Kim, 2010)

IN SERVICE
COMMITTED

**June 2010**
Clay Shirky, NYU: How cognitive surplus will change the world, TED
http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world.html

COGNITIVE SURPLUS

HERE COMES EVERYBODY

CLAY SHIRKY

**September 2011**
Meta-Analysis Update: Blended and Fully Online Still Best!

Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies

U.S. Department of Education
Office of Planning, Evaluation, and Policy Development
Policy and Program Studies Service

Prepared by
Barbara Means
Yukie Toyama
Robert Murphy
Marianne Bakia
Karla Jones
Center for Technology in Learning

**December 15, 2010**
Mark Zuckerberg, Time Magazine,
Person of the Year

**January 14, 2011**
South African teens get virtual mentoring from all over
the world, By Danielle Berger, CNN, January 14, 2011
http://www.cnn.com/2011/LIVING/01/13/cnnheroes.stokes/index.html?hpt=T2

**February 16, 2011**
How Bill Gates' Favorite Teacher Wants to
Disrupt Education, *Gregory Ferenstein*, Fast Company

**April 27, 2011**
Moodle (41+ million users in 211 countries,
54,000 sites, 4.4+ million courses)

**April 29, 2011**
Shared Online Video (e.g., YouTube
and the Royal Channel)

**May 9, 2011**
Defense Acquisition University, Training Courses:
Reaching the Workforce

|  | FY00 | FY01 | FY02 | FY03 | FY04 | FY05 | FY06 | FY07 | FY08 | FY09 | FY10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Classroom | 28,859 | 25,489 | 24,368 | 28,192 | 29,684 | 34,587 | 35,697 | 33,191 | 35,861 | 39,568 | 45,864 |
| Web | 13,380 | 21,031 | 36,117 | 43,649 | 58,290 | 75,079 | 77,582 | 90,600 | 118,391 | 154,389 | 192,968 |
| Total | 42,239 | 46,520 | 60,485 | 71,841 | 87,974 | 109,666 | 113,279 | 123,791 | 154,252 | 193,967 | 238,832 |

As of 30 Sep 10

**May 9, 2011**
**Defense Acquisition University (DAU) Training Courses**

Going the Distance

624,854 FY10 Graduates
26% increase over FY09 (494,568)

| Module Type | Count |
|---|---|
| Business | 16 |
| Contracting | 61 |
| Engineering & Technology | 40 |
| Gov't Purchase Card | 4 |
| International | 6 |
| Logistics | 28 |
| Acquisition Management & Program Management | 33 |
| Requirements | 2 |
| Standard Procurement System | 48 |
| Harvard Business Modules | 7 |

**May 15,2011**
**The Quiet Revolution in Open Learning, Kevin Carey, The Chronicle of HE**
http://chronicle.com/article/The-Quiet-Revolution-in-Open/127545/

**But I am not Content!!!**

**Let's Reflect Back 10 Years...**

2001: a space odyssey

2001 a space odyssey

**Virtual Tactical Operations Center (VTOC)**

**Shovelware**

Wii

SHOVELWARE

## Ten Years Later...

2011

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



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### September 15, 2010
**Study: Online learning might be less effective for some, eSchool News, Dennis Carter**



Classroom students scored 84.5 percent on the first exam in the economics course, and online students scored 83.3 percent.

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### January 23, 2011
**As the Web Goes Mobile, Colleges Fail to Keep Up, Chronicle of Higher Ed, Josh Keller**
http://chronicle.com/article/Colleges-Search-for-Their/126016/



"I used it to sign up for classes. I used it to check e-mails," says Laura Patterson, a junior at Nevada State College, about her iPhone. "I used it all the time, for everything." More than 40 percent of all college students, like Nevada State's Laura Patterson, used mobile devices to get on the Internet every day last year, compared with 10 percent in 2008.

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### February 27, 2011
**Actually Going to Class, for a Specific Course?** How 20th-Century. New learning technologies prompt a rethinking of traditional course structure, Chronicle of HE, Jeffrey R. Young



"There's not really much need for teachers anymore," since so much material is online, says Dekunle Somade, a senior at the U. of Maryland at College Park.

---

### March 13, 2011
**iPads Could Hinder Teaching, Professors Say,** Chronicle of HE, Ben Wieder



At Pepperdine U. Timothy Lucas, an assistant professor of mathematics, shows a class how to use iPads for calculus. Linda Johnson, an assistant professor of biology at Chatham U., for her plant-physiology

## Nature AND Nurture: Technology



## Eight Learning Technology Trends of the Past Year...
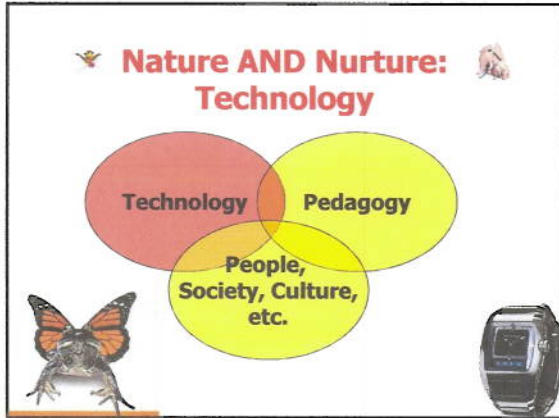


## #1. Tablet Computers Hit (iPad)

**April 10, 2010:** Seton Hill Univ, 2,100 students an iPad and freshmen a 13-inch MacBook laptop

**Feb 1, 2011:** An Android Tablet Made Just for School, David Zax, Fast Company



## #2. Pocket Dictionaries and Digital Textbook Projects (Korea), Sept. 21, 2010:

What South Korean Schoolchildren Can Teach Colleges About E-Textbooks; By Jeff Young, Chronicle of HE. Korea E-Learning Week, Coex, Seoul, Sept. 16-17, 2010



## #3. Video Conferencing/Webcaming

**December 20, 2010:** Skype for iPhone adds two-way video calling, CNet Reviews



## #4. Social Networking Gaming

**December 24, 2010:** *CityVille* 16.8 million daily users, *FarmVille's* 16.4 million. *CityVille* 61.7 million monthly users, *FarmVille* 56.8 million users. Mashable.

"CityVille" Is Now Bigger than "FarmVille"

**#5. E-Book Readers**
January 28, 2011: Amazon: Kindle Books Finally Eclipse Paperbacks, Doug Aamoth
March 2, 2011: Why Amazon would be smart to give away the Kindle, March 4, 2011, CNN Tech, Amy Gahran

Whether a surge in e-book sales can be sustained and what effect it could have on traditional bookstores remains to be seen.
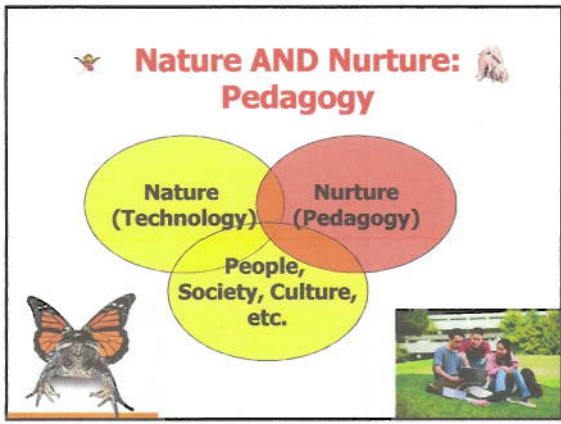
**#6. Group Video Chat,** February 28, 2011:
SocialEyes delivers group video chat , USA Today, Feb 28, 2011, Jon Swartz, http://www.socialeyes.com/

SocialEyes delivers group video chat

**#7. Mobile Apps, May 13, 2011:** USA Today, Mary Beth Marklein
http://www.usatoday.com/news/education/2011-05-12-iphone-apps-college-students_n.htm

Apps make college easier to access

**#8. Augmented Reality, May 17, 2011:**
USA Today, Edward Baig, May 17, 2011, Augmented reality has potential to reshape our lives.

**Nature AND Nurture: Pedagogy**

Nature (Technology)

Nurture (Pedagogy)

People, Society, Culture, etc.

**Question: What is the Web?**
- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?
========================
No, it is a learning tool!

## Answer: The Web of Learning

NING

Google

PBWORKS · Blogger · slideshare

*The Networked Teacher*

## We are entering a jumping off point...

Elements of the Web's Next Generation

## Is the World Flat or Open ?

NATIONAL BESTSELLER

The World Is Flat

A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY

Thomas L. Friedman

OPENING UP EDUCATION

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

## Framework #1: WE-ALL-LEARN:
### Ten Forces that Opened the Learning World

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**eal-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)

World is Open

## 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.

The Learning World is Open



**Learning on the Land...**
(e.g., UCLA Summer Digs Program, armchair archaeology)



**Learning on the Sea...**
(May 2010, Jessica Watson became the youngest person ever to sail solo, non-stop and unassisted around the world.)



Abby Sunderland's blog

**Learning on the Ice...**
(e.g., Ice Stories and the Last Ocean Project
http://www.lastocean.com/ and http://lastocean-project.org/; Cassandra Brooks)



**Nature AND Nurture: Pedagogy**



Nature (Technology)

Nurture (Pedagogy)

People, Society, Culture, etc.

Curtis J. Bonk | Ke Zhang

**Frame work #2: The R2D2 Model**

**Empowering Online Learning**
100+ Activities for Reading, Reflecting, Displaying & Doing

**The R2D2 Method**

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



**1. Auditory or Verbal Learners**

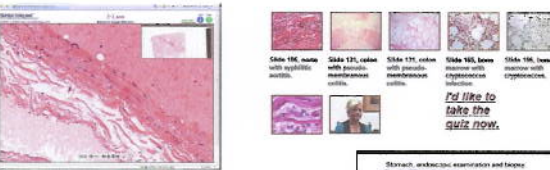- **Auditory and verbal learners prefer words, spoken or written explanations.**



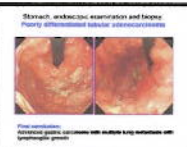**Read 1.** Reading from Open Access Journals and Listen to Open Access Podcasts



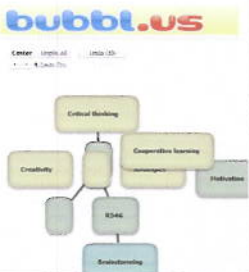**Reflect 2.** Analyze Online Cases (problems, solutions, etc.)



**Display 3.** Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)



**Do 4.** Simulations, Animations, and Role Play

We are not motivating students with the technologies that they love!



Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?



**Framework #3: TEC-VARIETY Model for Online Motivation and Retention**

1. **T**one/Climate: Psych Safety, Comfort, Belonging
2. **E**ncouragement, Feedback: Responsive, Supports
3. **C**uriosity: Fun, Fantasy, Control
   ...
4. **V**ariety: Novelty, Intrigue, Unknowns
5. **A**utonomy: Choice: Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractive: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Excitement
9. **T**ension: Challenge, Dissonance, Controversy
10. **Y**ields Products: Goal Driven, Products, Success, Ownership

**1. T**one/Climate: A. Video Course Intros
(examples from Northern Virginia Community College and Indiana University KD (online MBA) program)
Yun Yun Chow, Open U Malaysia, Making Art Lessons Come Alive with Web 2.0
http://www.youtube.com/watch?v=BO9rqJD1GXo



**3. Curiosity, Fun:**
A. Online Games



**8. E**ngagement, Effort:
A. Dr. Monica Rankin's class, UT Dallas, Cuban Revolution (April/May 2011)
http://www.youtube.com/watch?v=ocQMf1kPo98

## 10. Yields Products, Goals:
### A. Create Own Channel in YouTube
(e.g., my channel "TravelinEdMan")
http://www.youtube.com/user/TravelinEdMan



## TEC-VARIETY Model for Online Motivation and Retention

**T**one/Climate
**E**ncouragement, Feedback
**C**uriosity

**V**ariety
**A**utonomy
**R**elevance
**I**nteractive
**E**ngagement
**T**ension
**Y**ields Products



## Tinkering, Tottering, or Totally Extreme?



## Tinkering



## Tinker #1. Webcast Lectures
(Tegrity, Echo360, Mediasite, etc.)



## Tinker #2. Simulations and Video Animations and Self-Testings

**Tinker #3. Anchored Instruction with Shared Online Video**



**Tinker #4. Online Portals of Rich Data**
United Nations Opens World Digital Library, Turning the Pages from the British Library, etc. (history, culture, literature, writing, art, etc.)



# Tottering



**Totter #1. Class Synchronous Sessions and Asynchronous Sessions with Experts**
(Breeze/Adobe Connect Pro, Elluminate, WebEx, Dim Dim)



**Totter #2. Global Class Videoconferencing**
(e.g., The seminar was structured on a series of videoconferences and virtual classes on e-learning platform, organized by the Major of the Health and Veterinary Corps of Italian Army Lorenzo TIDU, Veterinary of the Task Force South of the Regional Command West, which is strongly involved in the specific field in favor of populations of the villages in the province of Farah.)



**Totter #3. Wikibooks, Wikipedia editing, wiki syllabi, wiki glossaries**
(Ron Owston, York University, Toronto)

**Totter #4. Video Blogging and Podcasting**



**Totally Extreme Learning**



**Totally Extreme #1. Live Science**
(Nautilus Live allows people to watch expeditions live & listen to scientists in control rooms a discoveries made)



**Totally Extreme #2. Adventure Learning**
(e.g., GeoThentic, Earthducation, Polar Husky, GoNorth; Aaron Doering, Univ of Minnesota)



**Totally Extreme #3.**
**Telepresence and Teleportec Systems**
**(e.g., Cisco and HP)**



**Totally Extreme #4.**
**MBAs from War Zones...!**

It is both Nature AND Nurture as well as PEOPLE!!! Technology is just part of the Equation

Technology

Pedagogy

People, Society, Culture, etc.

**Any Extreme Questions and Comments?**
Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Email: curt@worldisopen.com

The Future