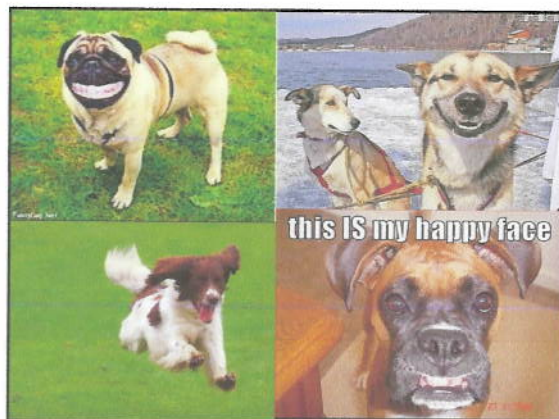


**E-Learning: It's about Nature (technology) AND Nurture (pedagogy)**

**Curtis J. Bonk, Professor, Indiana University**  
 President, SurveyShare  
 cjbonk@indiana.edu  
<http://mypage.iu.edu/~cjbonk/>



**Dog Get Degree, The Chronicle of Higher Ed, Sept 23, 2009, Unmuzzling Diploma Mills: Dog Earns M.B.A. Online, Marc Parry**

**THE CHRONICLE**  
 of Higher Education

**The Wired Campus**

**Unmuzzling Diploma Mills: Dog Earns M.B.A. Online**  
 By Marc Parry

Nov 23, 2009, 11:00 PM ET

Men's this for "muzzling" diploma mills? GetEdCentral.com, an online learning consumer group, managed to purchase an online M.B.A. for its mascot, a dog named Chester Ludlow.

The Vermont pig earned his master's by paying over \$499 to Roskilde University, which offers "distance learning courses based on life and career experience," according to a news release from

**Indiana Launches Western Governors University Program. Diverse: Issues in Higher Education, Jamal Eric Watson August 9, 2010**  
<http://diverseeducation.com/article/14623/indiana-launches-western-governors-university-program.html>

**Diverse**  
 EDUCATION

**WESTERN GOVERNORS UNIVERSITY**

Learn more: Become an **Online** student

**Online Learning: By the Numbers, Chronicle of HE, Oct 31, 2010**  
<http://chronicle.com/article/Online-Learning-Enrollment/125202/>

**Online Learning: By the Numbers**

**GROWTH AND TYPE OF ONLINE ENROLLMENT**  
 among students

**Growth and Enrollments for Online-Only Enrollment**

**Enrollments of Online-Only Students Pursuing Bachelor's Degrees, by Field, 2009**

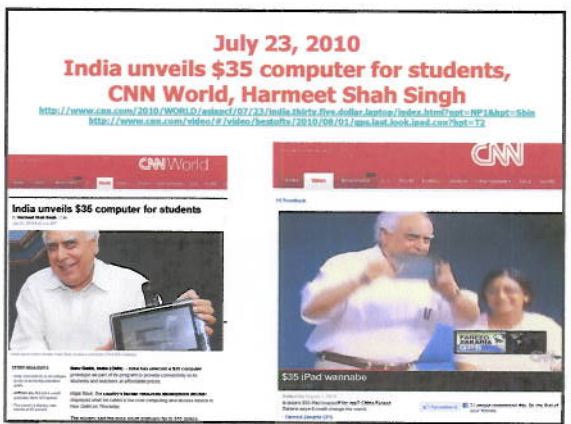
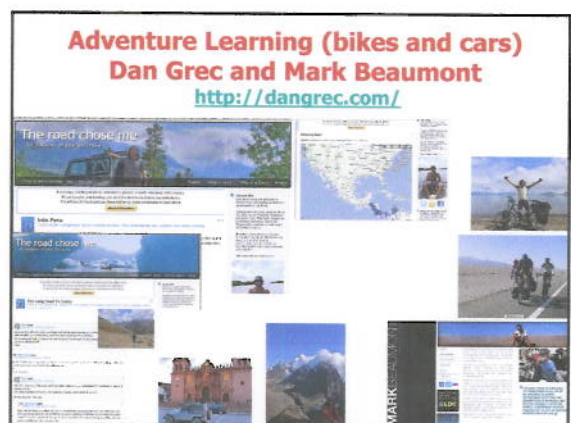
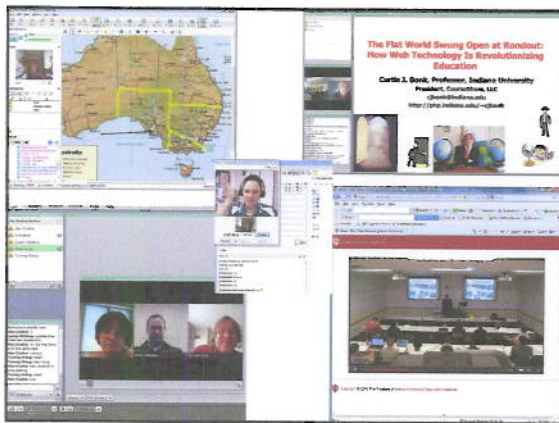
**Growth in Enrollments of Students Taking at Least One Online Course**

**Percentage of Students Enrolled by Type of College, 2009**

**Free Master's Degree in Texas**  
**ISMART: Integration of Science, Mathematics, and Reflective Teaching (ISMART), University of Houston**  
<http://www.coe.uh.edu/mycoe/CUIN/math/ISMART%20 flyer4.pdf>  
<http://www.coe.uh.edu/mycoe/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**





### Mobile Exercise Learning



### But I am not Content!!!




### Shovelware



U.S. DEPARTMENT OF EDUCATION

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



Prepared by  
Barbara Means  
Yuko Toyama  
Robert Murphy  
Marianne Bakia  
Katie Jones  
Center for Technology in Learning

Revised September 2010

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

eSchool News | The best e-news with online learning news

Study: Online Learning might be less effective for some

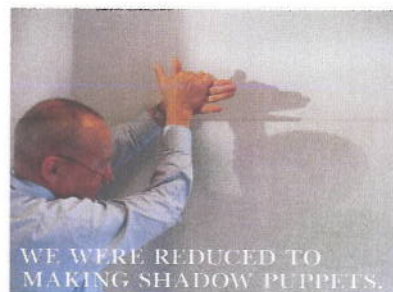
Classroom students scored 84.5 percent on the first exam in the economics course, and online students scored 83.3 percent.

THE CHRONICLE

Wired Campus

What's New in Education? Experimental Evidence on the Effects of Online Instruction on Student Learning

### And I do not want to go back to shadow puppets!



### 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/blogPost/Bill-Gates-Predicts-Technology-Will-Make-Place-Based-Colleges-Less-Important-in-5-Years/>

Wired Campus

Bill Gates on in-person vs. online edu...

### YouTube U. Beats YouSnooze U., Chronicle of HE, Oct 31, 2010, Salman Khan

<http://chronicle.com/article/YouTube-U-Beats-YouSnooze/125105/>

THE CHRONICLE

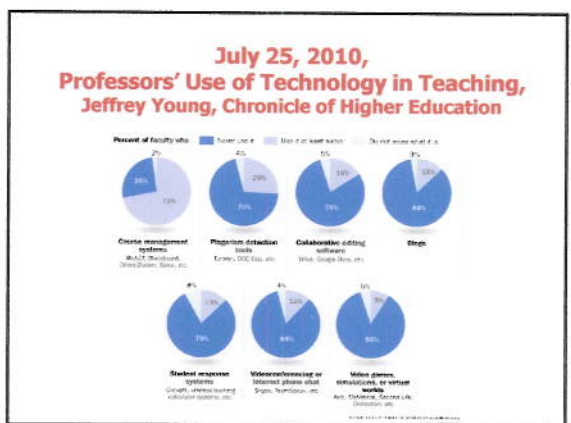
Online Learning

YouTube U. Beats YouSnooze U.

KHAN

### July 24, 2010 Reaching the Last Technology Holdouts at the Front of the Classroom, Jeffrey Young, Chronicle of Higher Education

<http://chronicle.com/article/Reaching-the-Last-Technology/123659/>

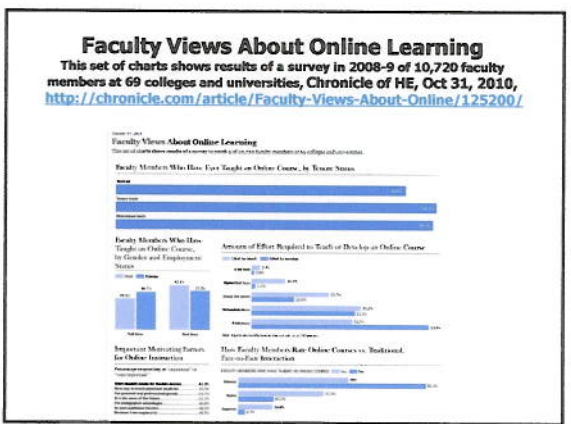


### College 2.0: Teachers Without Technology Strike Back, August 15, 2010, The Chronicle of Higher Education, Jeffrey R. Young

THE CHRONICLE

Technology

College 2.0: Teachers Without Technology Strike Back





### Ed. Schools Lag Behind in Virtual-Teacher Training, Ian Quillen, Education Week, September 2010

Can computers take the place of teachers?

Ed. Schools Lag Behind in Virtual-Teacher Training

Virtual Teacher Training: Key Graduate Programs to Train Online Teachers Make the Most Sense, at Least for Now

### "Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL, TravelinEdMan (27 free/open YouTube videos), September 2010

<http://www.youtube.com/user/TravelinEdMan>

### May 24, 2010 Author Nicholas Carr, The Web Shatters Focus, Rewires Brains, Wired

[http://www.wired.com/magazine/2010/05/ff\\_nicholas\\_carr/](http://www.wired.com/magazine/2010/05/ff_nicholas_carr/)

Author Nicholas Carr: The Web Shatters Focus, Rewires Brains

Atlantic  
Google  
MAGAZINE  
WHAT THE INTERNET IS DOING TO OUR BRAINS  
THE SHALLOWS

### Marissa Mayer

Marissa Mayer leads the company's product management efforts on search products—web search, images, news, books, products, maps, Google Earth, Google Toolbar, Google Desktop, Google Health, Google Labs and more. She joined Google in 1999 as Google's first female engineer and led the user interface and web server teams at that time. Her efforts have included designing and developing Google's search interface, internationalizing the site to more than 100 languages, defining Google News, Gmail, and Orkut, and launching more than 100 features and products on Google.com

### John Bivens, head of services and support for On Demand Books, demonstrates the printing of a book from an Espresso Book Machine at Google headquarters.

### Brewster Kahle, and Aaron Swartz, Open Library the Internet Archive

**Clay Shirky, NYU: How cognitive surplus will change the world, TED, June 2010**  
[http://www.ted.com/talks/clay\\_shirky\\_how\\_cognitive\\_surplus\\_will\\_change\\_the\\_world.html](http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world.html)

Clay Shirky: How cognitive surplus will change the world

**COGNITIVE SURPLUS**  
 HOW IT WILL CHANGE EVERYTHING

**HERE COMES EVERYBODY**  
 CLAY SHIRKY

**Does the Digital Classroom Enfeeble the Mind?**  
 By JARON LANIER, NY Times, September 16, 2010  
[http://www.nytimes.com/2010/09/16/magazine/16clay.html?\\_r=1&ref=nytimes.com](http://www.nytimes.com/2010/09/16/magazine/16clay.html?_r=1&ref=nytimes.com)

Does the Digital Classroom Enfeeble the Mind?

**JARON LANIER: YOU ARE NOT A GADGET**

**Learning by Playing: Video Games in the Classroom**

**Poll: Who is frustrated sometimes???**

**TERMINATING TEXTBOOKS**

**California Governor Arnold Schwarzenegger Speaks**

**RECOVERY**

**Online Education vs. Traditional Learning: Time to End the Family Feud, Mark David Milliron, Chronicle of HE, Oct 31, 2010**  
[http://chronicle.com/article/Online-vs-Traditional/125115/?ai=pm&utm\\_source=pm&utm\\_medium=en](http://chronicle.com/article/Online-vs-Traditional/125115/?ai=pm&utm_source=pm&utm_medium=en)

**THE CHRONICLE**  
 of Higher Education

**Online Learning**

**Online Education vs. Traditional Learning: Time to End the Family Feud**

**BILL & MELINDA GATES foundation**

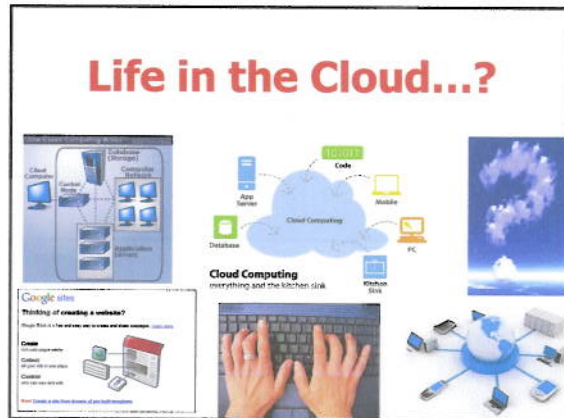
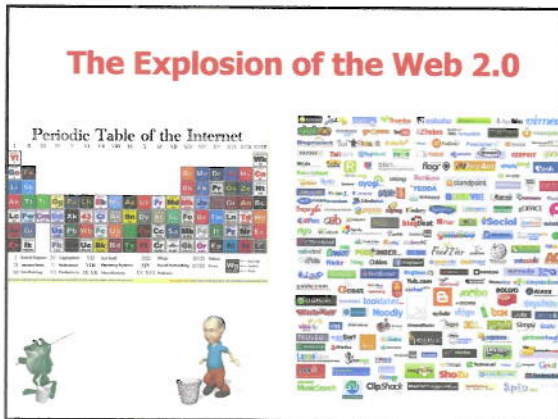
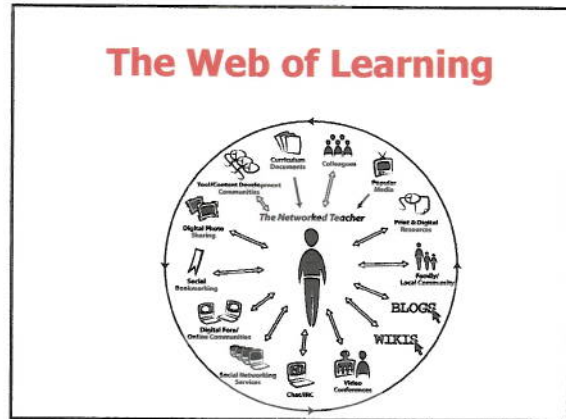
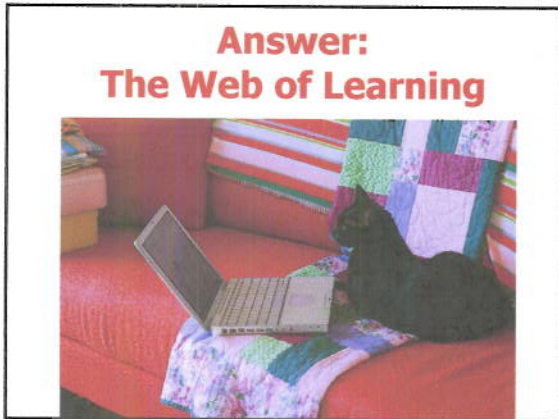
**Question:**  
**What is the Web?**

- 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!**

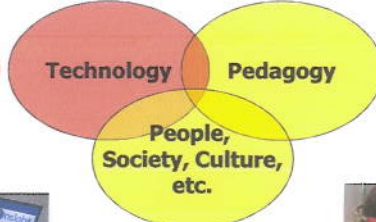
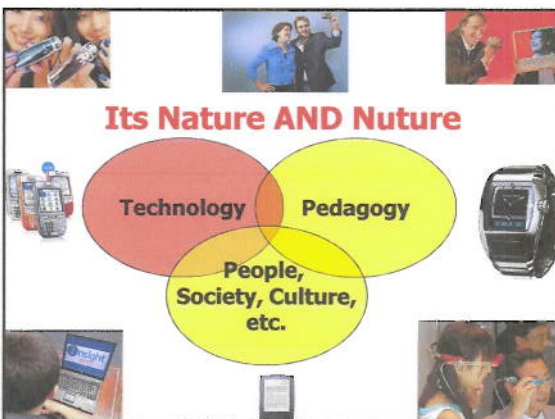




## It's Nature (i.e, technology) and Nurture (i.e., pedagogy)!



## Its Nature AND Nurture

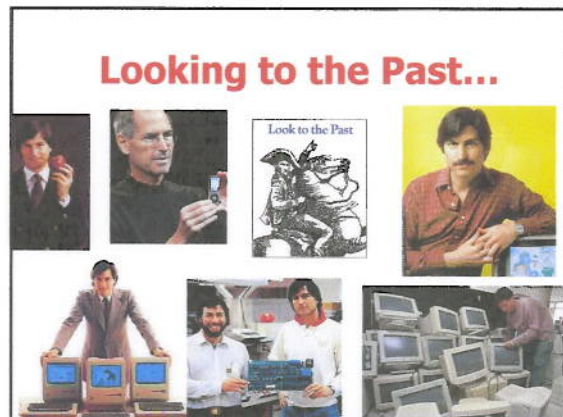



## Timeline of Technology for Teaching, NY Times, September 15, 2010

<http://www.nytimes.com/interactive/2010/09/15/magazine/classroom-technology.html?ref=magazine>



## Looking to the Past...



## Technology of the 1980s

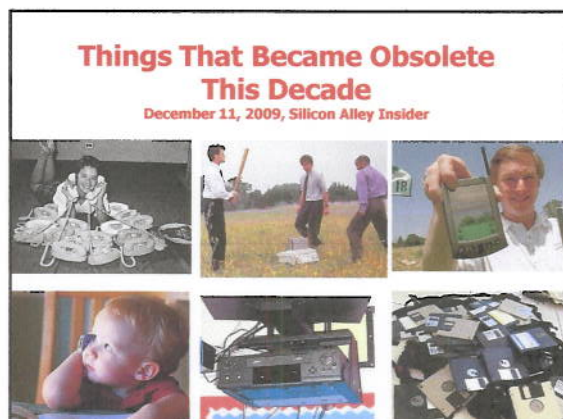


Radio Shack TRS-80 Model III	
Introduced:	July 1980
Price:	US \$699 base model US \$2495 w/ 32K, dual discs.
CPU:	Z80 2.00, 2.03 MHz
RAM:	4K, 48K max.
Ports:	Cassette tape, separator, serial
Display:	12-inch BW monitor: 64 X 16 bit
Storage:	0, 1, or 2 internal 178K floppy disks External cassette @ 500 / 1500 baud
OS:	BDOS in ROM, TRS-DOS on disk




## Things That Became Obsolete This Decade

December 11, 2009, Silicon Alley Insider





## Gadgets that Changed Everything This Decade

December 9, 2009, Jay Yarow, Silicon Alley Insider

## Nature: 10 Emerging Learning Technology Trends

## 1. New Interfaces

Jeff Han on TED Talks

## 2. Inexpensive Laptops and Tablet Computers

OLPC, Marvell Join Forces, Announce sub-\$100 Tablet by December 2010, Mike Prospero, May 27, 2010

**LAPTOP** TOSHIBA

OLPC, Marvell Join Forces, Announce sub-\$100 Tablet by December 2010

## 3. 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

Digital textbook using Tablet PC

## 4. E-Book Readers; July 29, 2010

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

Amazon unveils 3rd-generation Kindle e-book reader

Volume of Kindle book sales shows Amazon's Jeff Bezos

**5. Mobile Entertainment Systems, 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**

**Samsung: Galaxy Tab has leg up on Apple iPad, By Stephen Shankland, CNET, September 3, 2010**

**An iPad for Everyone**

**6. Smartpen smartens up - while lightening up Latest from Livescribe makes updates, changes requested by customers, Jefferson Graham USA TODAY, August 26, 2010**

[http://www.usatoday.com/printedition/money/20100826/livescribe26\\_story.html?oc-intent=tabkip](http://www.usatoday.com/printedition/money/20100826/livescribe26_story.html?oc-intent=tabkip)

**7. Pocket Dictionaries, Campus Tech in China: Impressions From 3 Campuses, Jeff Young, September 9, 2010**

<http://chronicle.com/blogPost/Campus-Tech-in-China-/26817/>

I didn't see any laptops in use here, though the three Korean exchange students I sat with proudly produced their favorite educational gadgets: portable electronic dictionaries that can hunt down words in Chinese, Korean, English, and Japanese. Language learning has the best use of technology here, according to some professors I've talked to this week, and electronic stores sell what seems like hundreds of varieties of digital dictionaries.

**8. Social Networking Gaming (e.g., Farmville) For social networks, it's game on, USA Today, Jon Swartz, Thursday October 15, 2009**

**June 9, 2010**

**Force is with new GPS units**

**WikiReader: Updating can be a pain.**

**TwitterPeek: Restricted to Twitter.**

**9. Mobile Learning, Will Technology Kill the Academic Calendar? Online, semesters give way to students who set their own schedules, Marc Parry, Chronicle of HE, October 10, 2010**

<http://chronicle.com/article/Will-Technology-Kill-the-Academic-Calendar/124857/>

Robert Johnson, who championed the open-format Learn Anytime program at a two-year college in Louisville, Ky., now plans to do likewise for Louisiana's system of community and technical colleges. Mr. Johnson (above) checks students' e-mail while waiting for a flight. "Everything I need to do today, I can do on my phone," says Robert Johnson, who led the self-paced Learn Anytime program at Jefferson Community & Technical College, in Louisville, Ky. He often grades papers and communicates with students from a cafe near his home. Ford T. Smith, an adjunct faculty member at Jefferson Community & Technical College, spends so much time teaching open-format online classes that he calls his daughter Angel, after the course-management system.



### 10. Telepresence Systems (e.g., Cisco and HP)

The collage features several images related to telepresence: a person sitting at a table in a conference room, a large screen displaying a meeting, and various smaller images of people interacting with technology. Some images are labeled with dates and titles like 'The Next Generation of Video Conferencing'.

### Nature AND Nurture: Pedagogy

The diagram consists of three overlapping circles: a yellow circle labeled 'Technology', a red circle labeled 'Pedagogy', and a green circle labeled 'People, Society, Culture, etc.'. The central intersection of all three circles is highlighted. The diagram is surrounded by a collage of images showing people in various settings, including classrooms and outdoor activities.

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

The collage includes images of students in a classroom, some appearing bored and others engaged. A central graphic shows a person sitting at a desk with the word 'BORED' written below them, and another person sitting at a desk with the word 'MOTIVATION' written below them.

### I even reflected on this for a moment...and then something magical happened...

The collage features a cartoon character on the left and a photograph of a man in a colorful Hawaiian shirt with his hands raised in a gesture of surprise or reflection on the right.

### Magic #1: 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

### 1. Tone/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>

The collage features several images related to video course intros: a person in a video frame, a group of people holding a sign that says 'Health', and a person in a white lab coat standing in front of a screen.

**2. Encouragement, Feedback, etc.:**  
**A. Online Self-Testing** (e.g., self study in accounting, vocabulary, anatomy, chemistry, dissection, etc.)

This collage features several educational resources: Khan Academy, an interactive financial accounting interface, a website titled 'Upper Extremity Muscles' with anatomical diagrams, and a section on 'Cat Behavior' with images of cats.

**3. Curiosity, Fun:**  
**A. Online Experiments** (e.g., psychology)

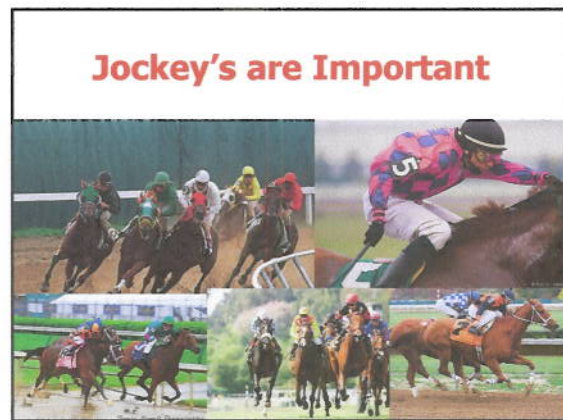
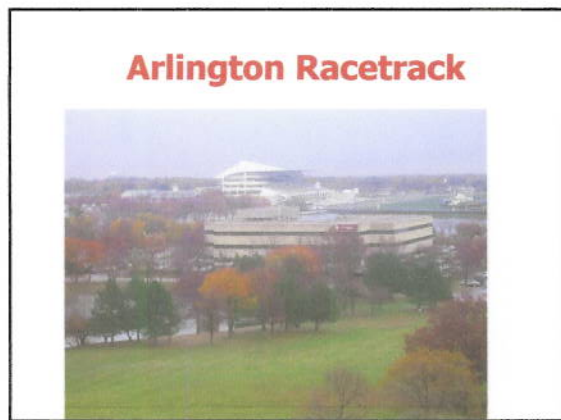
This collage shows online psychology experiments. It includes 'PSYCHEXPERIMENTS: Psychology Experiments on the Web', 'perceptionlab', and a 'Top Ten Online Psychology Experiments' list featuring a 'Color Reading Interference' test with a 'BLUE' button and a 'press ENTER or click here to start' instruction.

**3. Curiosity, Fun: B. Oceanographer**  
**touts deep sea web surfing** (e.g., Nautilus Live allows people to not only learn about the expeditions but watch them live and listen to the scientists in the control rooms as discoveries are made, eSchool News, June 2010, Deep-sea Images reveal colorful life on ocean's floor, Sept 2010)

This collage is centered on the Nautilus Live project. It includes the 'NAUTILUS LIVE' website interface, a photo of a scientist, and various news snippets about deep-sea expeditions and discoveries.

**4. Variety, Novelty: A. Bridges to World of Expert and Practitioners** (e.g., Watch or Listen to Online Conferences, Expert blogs, chats, interviews)

This collage illustrates online expert content. It features a video of a woman in a red jacket, a video of a man in a suit speaking at a podium with a 'IOMC' logo, and other smaller video thumbnails.





**5. Autonomy, Choice: A. Online Literature Search (Class Google Jockeys)**  
(links to text, soundtracks, video clips, etc.)



**6. Relevance, Meaningfulness: A. Tour an Online Oil Drilling Site or Role Play Situations (i.e., BP)**



**7. Interactive, Collaborative: A. Collaborative Groups (Google Docs, Ning, Google Groups, MSN Groups, Yahoo Groups)**



**8. Engagement, Effort: A. Synchronous and Asynchronous Events (e.g., Breeze + Video + Online Forum + Online Papers)**



**9. Tension, Challenge, etc.: A. Ethical Debates**



**10. Yields Products, Goals: A. Student YouTube Products**



### 10. Yields Products, Goals: B. Video Blogs...MM

### TEC-VARIETY Model for Online Motivation and Retention

**Tone/Climate**  
**Encouragement, Feedback**  
**Curiosity**

**Variety**  
**Autonomy**  
**Relevance**  
**Interactive**  
**Engagement**  
**Tension**  
**Yields Products**

### 99 seconds: What have you learned so far?

- Solid and Fuzzy in groups of two to four

### II. Addressing Diverse Learners

### Magic #2: The R2D2 Model

Carlota J. Bonk | Ke Zhang

### 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 1a. Reading from Open Access Journals (e.g., PLOS)



## Read 1b. Course Announcements (e.g., Teaching with Twitter; Course announcements and following people (e.g., microblogging))



## Read 1c. Podcast Reflections



## 2. Reflective and Observational Learners

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



## Reflect 2a. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog; <http://comeandseeafrica.blogspot.com/>)



### Reflect 2b. Expert and Domain Specific Blog Reflections (English, Health, Business, etc. blogs)

A collage of several blog screenshots. On the left, 'The English Blog' features a person with arms raised. Below it, a blog post titled 'THIS IS IT' shows a person. To the right, 'ER Nurse' features a photo of two people. At the bottom right, a blog post has a large number '3.75'.

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

A collage of online case study screenshots. On the left, a medical case study is visible. On the right, there is a grid of small images, possibly related to a medical or scientific case. Below the grid, there are more screenshots of case study content.

### 3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.

Two diagrams illustrating visual learning. The first is a circular flowchart with four quadrants labeled 'Doing', 'Thinking', 'Feeling', and 'Knowing'. The second is a diagram titled 'Dark Star 1' showing a globe with various regions labeled.

### Display 3a. Timeline Tools (e.g., SMILILE from MIT, Learning Tools from UBC)

A collage of screenshots showing different timeline tools and educational content. One prominent screenshot is titled 'Gates through the' and shows a timeline of Bill Gates' life. Another screenshot is titled 'The Social Machine' and shows a network diagram.

### Display 3b. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Glify, Mindmeister, or Mindomo)

A collage of screenshots for concept mapping and timeline tools. On the left, a screenshot shows 'collaborative online mind mapping' with a dark interface. On the right, the 'bubbl.us' logo is visible above a simple concept map diagram.

### Display 3c. Online Portals of Rich Data (United Nations Opens World Digital Library, Turning the Pages from the British Library, etc.)

A collage of screenshots of online portals for rich data. One screenshot shows a world map with various data points. Another screenshot shows a digital library interface with a large document image and text.



### 4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.

### Do 4a. Wikibooks, Wikipedia editing, wiki syllabi, wiki glossaries (students sign up for tasks) (Ron Owston, York Univ.)


### Do 4b. Podcast Productions and Virtual Performances for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

### Do 4c. International and Global Education and Competitions (e.g., Global Game Jams, online role play, Global Videoconferencing)

### Poll #1: How many ideas did you get?

- 0 if I am lucky.
- Just 1.
- 2, yes, 2...just 2!
- Do I hear 3? 3!!!!
- 4-5.
- 5-10.
- More than 10.

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



**Try the R2D2 Method!**  
**Try TEC-VARIETY!**  
**Slides at: [TrainingShare.com](http://TrainingShare.com)**  
**Papers: [PublicationShare.com](http://PublicationShare.com)**  
**Book: <http://worldisopen.com/>**  
**Email: [curt@worldisopen.com](mailto:curt@worldisopen.com)**

