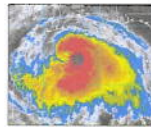
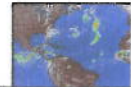
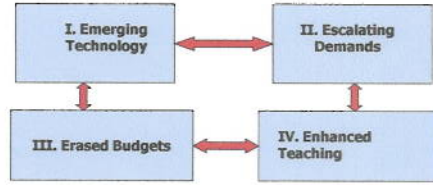


The Perfect E-Storm: Emerging Technologies, Enormous Demand, and Erased Budgets



Dr. Curtis J. Bonk
Professor, Indiana University
<http://mypage.iu.edu/~cjbbonk/>
cjbbonk@indiana.edu

Four Storms Are Approaching!



Storm 1. Emerging Learning Technologies



21 Things That Became Obsolete This Decade

December 11, 2009, Silicon Alley Insider



15 Gadgets that Changed Everything This Decade

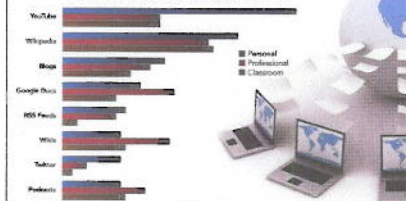
December 9, 2009, Jay Yarow, Silicon Alley Insider



Tech & Learning, Nov 2009

Educators are currently using many content-sharing tools personally, professionally, and in the classroom.

TOP EIGHT CONTENT-SHARING TOOLS



From the 30-32 Survey of K-12 Educators on Social Networking and Content-Sharing Tools, commissioned by eMentor, ISTE, EdSource, and MDE. See a snapshot of the results at www.mentormentor.com. To discuss the results, join the eMentor community on Twitter.

Unleashing the Future: Educators "Speak Up" about the Use of Emerging Technologies for Learning, Speak Up 2009, May 2010

<http://www.tomorrow.org/speakup/pdfs/SU09UnleashingTheFuture.pdf>

Table 2: Top technology picks for the ultimate school

Middle and High School Students	Principals	District Administrators
Communications tools (61%)	Interactive white boards (60%)	Collaboration Tools (67%)
Digital media tools (60%)	Mobile computer for every student such as laptop, mini-notebook, tablet PC (58%)	Mobile computer for every student such as laptop, mini-notebook, tablet PC (68%)
Online textbooks (58%)	Communications tools (55%)	Online Classes (56%)
Mobile computer for every student such as laptop, mini-notebook, tablet PC (57%)	Digital Media Tools (54%)	Campus wide Internet Access (57%)
Games or virtual simulations (56%)	Collaboration tools (51%)	Interactive white boards (55%)

1. New Search Technology (timeline oriented)



2. Exercise Learning



3. Teacher Sharing Sites



4. Teacher Social Networking



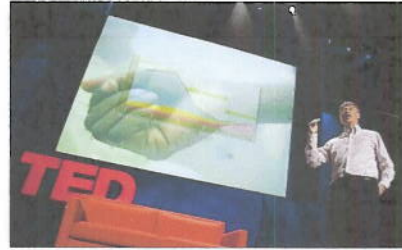
5. Social Networking Gaming (e.g., Farmville and gaming addictions)



6. e-Book Readers



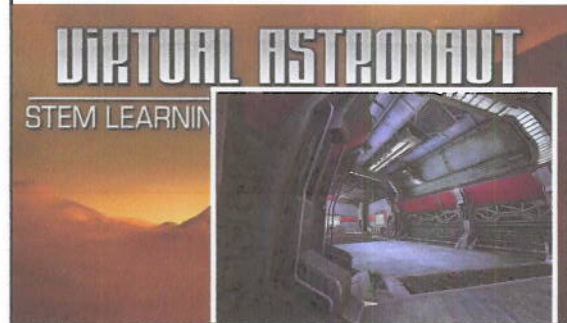
7. Shared Online Video (e.g., TED: technology, entertainment and design)



8. Live Streaming (e.g., Zoo Animals on Demand)



9. Simulations (e.g., Virtual Astronaut from WisdomTools)



10. Global Collaboration continued EPals and iEARN (International Education and Resource Network)



10. Smartphones



Mobile Learning and Blended Learning Exploding

College tech 'catching up' with students
 Kathleen Gray & Robin Erb, USA TODAY, Oct 6, 2009

- At Abilene Christian (University)...about 2,800 students and 70% of the 250 professors use the Apple technology for instructional purposes.
 - Art students use app to draft sketch and send it to the teacher and other students for advice before starting the real art pieces.
 - A drama teacher takes video of the lead dancer in a production and sends that along to other students for rehearsal.

12. Mobile Learning

Unleashing the Future: Educators "Speak Up" about the Use of Emerging Technologies for Learning, Speak Up 2009, May 2010

<http://www.tomorrow.org/speakup/pdfs/SU09UnleashingTheFuture.pdf>

Table 2: Educators' biggest concerns about using mobile devices at school

Reason	Teachers (n=94,280)	Principals (n=2,894)	District Administrators (n=535)
Students will be distracted	76%	44%	34%
Not all students have the mobile devices (digital equity)	62%	48%	52%
Concerned that students will cheat using the devices	33%	N/A	N/A
Teachers don't know how to effectively use the devices within instruction	24%	51%	54%
Need curriculum to support the use of mobile devices	23%	37%	39%
Concerns with theft at school	N/A	56%	40%
Current district cell phone policies	N/A	56%	59%

Unleashing the Future: Educators "Speak Up" about the Use of Emerging Technologies for Learning, Speak Up 2009, May 2010

<http://www.tomorrow.org/speakup/pdfs/SU09UnleashingTheFuture.pdf>

Figure 2: Mobile devices benefit students and teachers

Benefit	District Administrators (n=535)	Principals (n=2,894)	Teachers (n=94,280)
Extends school day	64%	51%	41%
Improves communications	51%	41%	29%
Develops teachers' technology skills	41%	29%	29%
Increases teacher productivity	29%	29%	29%

Unleashing the Future: Educators "Speak Up" about the Use of Emerging Technologies for Learning, Speak Up 2009, May 2010

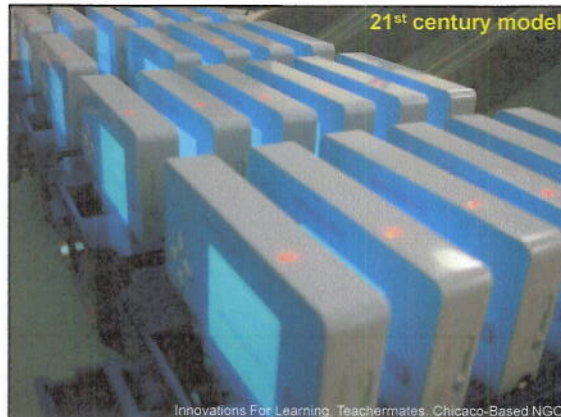
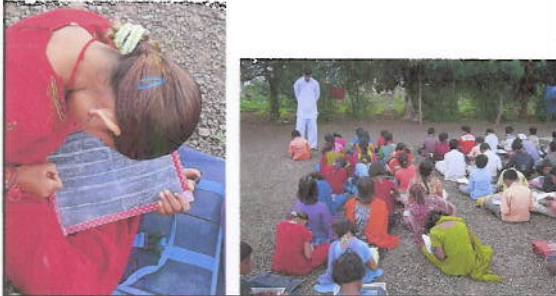
<http://www.tomorrow.org/speakup/pdfs/SU09UnleashingTheFuture.pdf>

Figure 3: Educators' Speak Up about perceived benefits of using mobile devices for instruction

Benefit	Teachers (n=94,280)	Principals (n=2,894)	District Administrators (n=535)
Increase student engagement	76%	57%	50%
Personalize instruction	57%	41%	41%
Prepare students for world of work	50%	41%	39%
Develop collaboration/teamwork	41%	41%	41%
Develop critical thinking/problem solving	41%	41%	41%
Develop stronger communications skills	39%	41%	41%

Mobile Internet (source: Dr. Paul Kim, Stanford)

Seeds of Empowerment, India, Paul Kim, Stanford

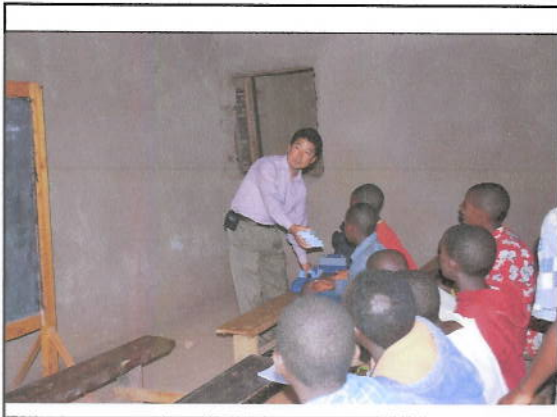


Seeds of Empowerment, India, Paul Kim, Stanford

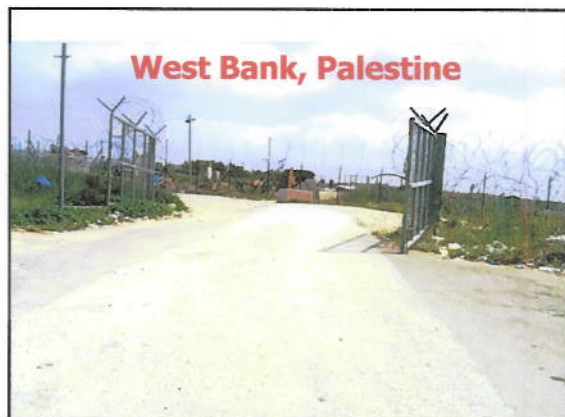


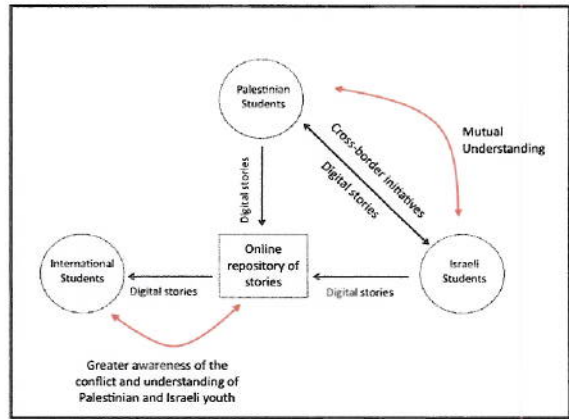
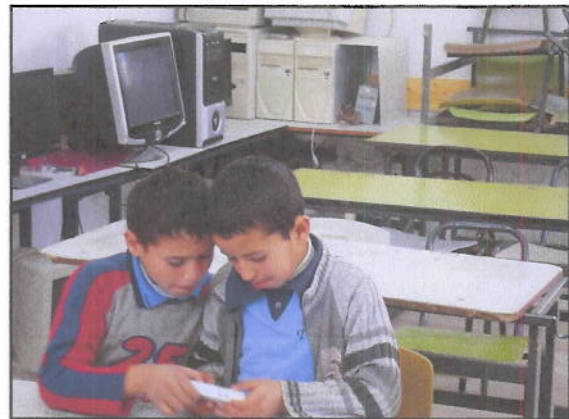
Seeds of Empowerment, India, Paul Kim, Stanford





Kibera, Kenya – Slum area



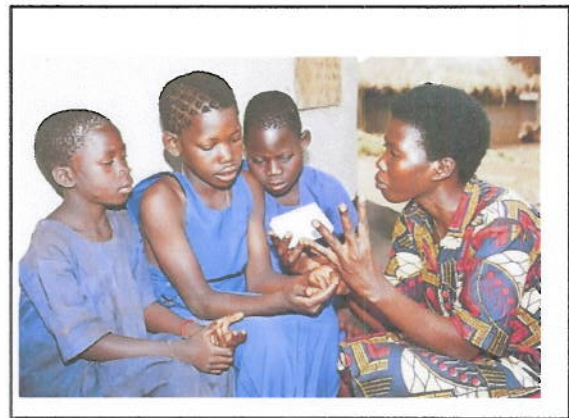


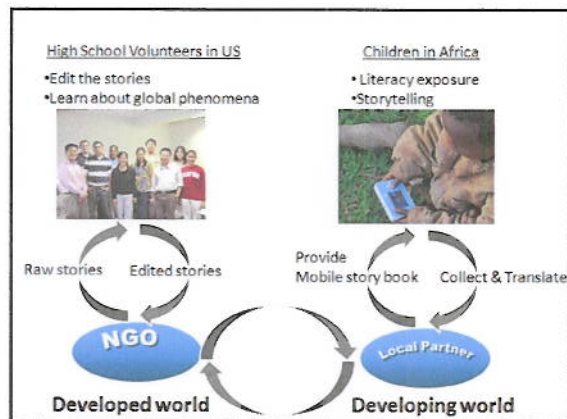
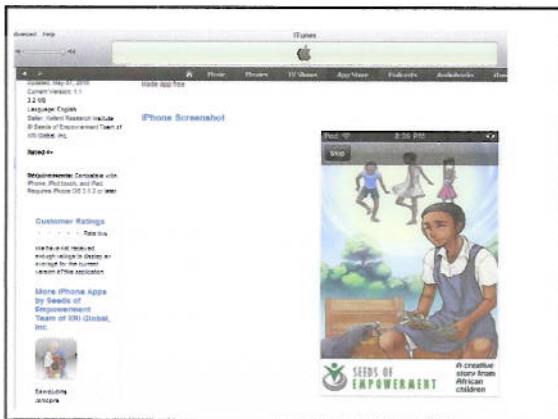
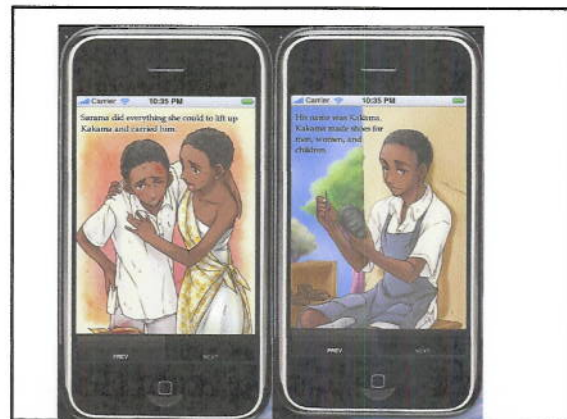
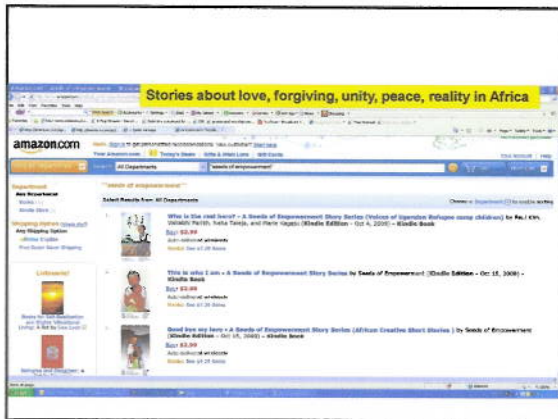
Powering the device on bicycle

PocketSchool on Two Wheels



The image shows a hand holding a blue tablet device. Below it, a close-up shows a bicycle dynamometer. To the right, a person is riding a bicycle on a dirt path.





13. Mobile Video Blogging (Stanford, Paul Kim)

14. 'One Laptop Per Child'

15. Google Sky

<http://earth.google.com/sky/index.html>

Google Earth gazes into deep space

Space Portals

(e.g., A New Motion Picture of the Universe, With Free Admission for Colleges Large and Small, By Ben Terris, Chronicle of HE, Feb 7, 2010)

From its mountaintop site of Cerro Panchón, in Chile (rendered above), the new telescope will look for dangerous asteroids and help researchers learn more about dark matter and dark energy. The Large Synoptic Survey Telescope has a combination of mirrors and three camera lenses that can capture the movements of billions of stars and galaxies.

16. Text Messaging

On to Storm 2... Escalating (Learner) Demands

Growth of Online Learning in Secondary Schools


(Florida Virtual School; AP American History)

Year	Number of Completions
1999-2000	12
2000-2001	27
2001-2002	89
2002-2003	347
2003-2004	8,263
2004-2005	20,538
2005-2006	25,653
2006-2007	37,212
2007-2008	51,983
2008-2009	88,275

*Projected completions for 2007-08

Michigan Virtual School

Michigan Virtual School



4.1 The Michigan Virtual School (cont.)

Since its inception, MVS has:

- Served more than 50,000 course enrollments.
- Served more than 157,000 students with an online ACT, SAT, PSAT or Michigan assessment practice tool.
- Served more than 800 public and private schools with an online course or test review tool, and
- Recorded approximately a 75% course completion rate during the last three years.

(See Figure 3 for annual enrollment and course completions.)

Figure 3: MVS Courses and Online Enrollments 1999-2007

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Enrollments**	160	476	2,212	5,554	8,827	9,917	6,217	8,041	11,009
Schools served†	16	201	194	111	309	478	672	1,046	1,106
Unique courses	6	17	27	121	117	162	269	251	206

**This includes only approved courses (single enrollments).
†This includes home school enrollments.
***Track an earlier year.

Keeping Pace with k - 12 Online Learning

A Review of State-Level Policy and Practice

2007

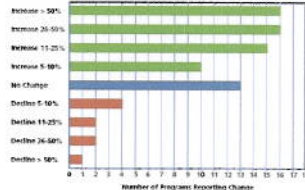


Figure 4: Number of programs reporting percent change in number of course registrations (for supplemental programs) and enrolled students (for full-time programs) between school years 2006-2006 and 2006-2007. One program reported a decline of 50% or higher; 13 programs reported no

Tech & Learning, Nov 2009



FAST FACTS ABOUT ONLINE LEARNING

K-12 online learning is an estimated **\$50 million** market that is growing at an estimated pace of 30% annually.

- 44** states have significant supplemental online learning programs, or significant full-time programs (in which students take most or all of their courses online), or both.
- 34** states offer state-led programs that are designed, in most cases, to work with school districts to supplement course offerings for students.
- 57%** of public secondary schools in the U.S. provide access to students for online learning.
- 72%** of school districts with distance education programs planned to expand online offerings in the coming year.

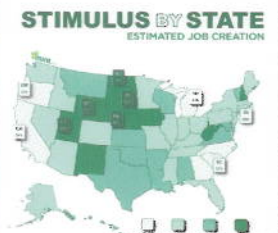

SOURCE: THE INTERNATIONAL ASSOCIATION FOR K-12 ONLINE LEARNING (IA2OL), A NON-PROFIT ORGANIZATION THAT FACILITATES COLLABORATION, ADVOCACY, AND RESEARCH TO ENHANCE QUALITY K-12 ONLINE TEACHING AND LEARNING.

We're in the Midst of Storm 3: Erased Budgets




STIMULUS BY STATE

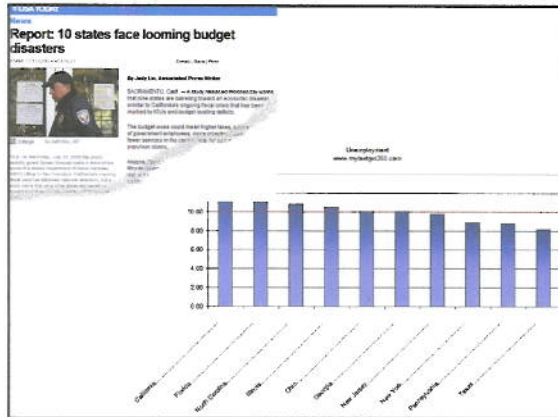
ESTIMATED JOB CREATION

PROBLEM

STATE FUNDING CUTS
+ FEWER STUDENTS
+ BAD ECONOMY
+ STUDENT NEEDS
= SCHOOL FINANCE CRISIS



Obama to Invest in High-Tech Education

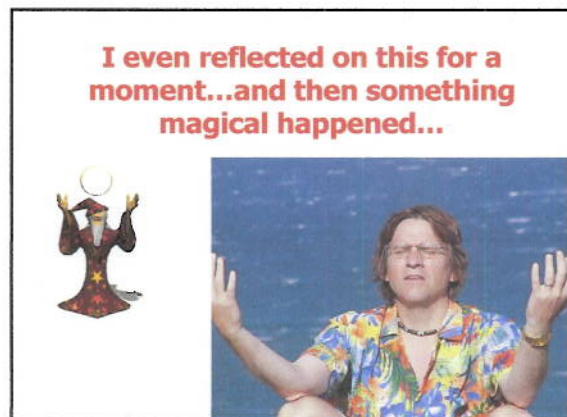
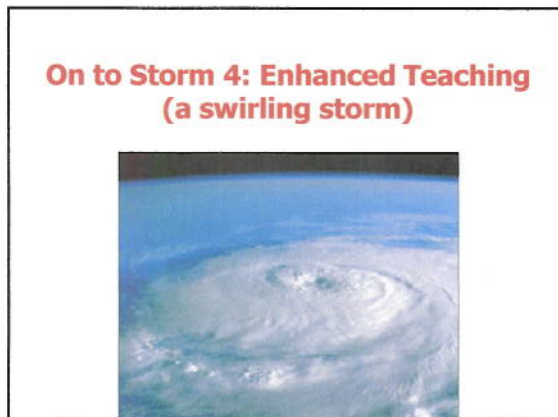
Obama urges investment in high-tech education

The president says training Americans for jobs of the future will help create a more stable foundation for the economy.

NEW YORK (CNNMoney.com) — President Obama on Monday pushed his plans to make the nation's economy more stable in the future by investing in education for high-tech industries.

The president unveiled a new "innovation strategy" that builds on \$100 billion of economic stimulus funds to support entrepreneurship, education, infrastructure and other investments.

The plan aims to make the U.S. economy more competitive and help prevent volatile "boom and bust" cycles in the



The 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: (open, inviting)

A. Create a Class Wiki (Wikispaces)

1. Tone/Climate: B. Video Course Intros from Instructors.

Yun Yun Chow, Open U Malaysia
 Making Art Lessons Come Alive with Web 2.0
<http://www.youtube.com/watch?v=BO9rqJD1GXo>

2. Encouragement, Feedback, etc.:

A. New Self-testing Skills. High School Student Self-Testing (e.g., Calm Chemistry)

2. Encouragement, Feedback, etc.:

B. Online Self-Testing (e.g., self study in vocabulary, anatomy, chemistry, dissection, etc.)

Upper Extremity Muscles

Which of the following are ANTONYMS for the word MAXIMUM?

- clear, understandable, forthcoming, amiable
- was-phony, trifling person
- crisis, withheld, lumpy, bold
- make happy, cheer, amuse, please
- weaker, least, minimum, slight

2. Encouragement, Feedback, etc.:

C. Tutorials with Screen Capture (e.g., Jing, Screencr)

3. Curiosity, Fun:

A. Online News (Giant jellyfish, Tiny T. rex, and Ardi)

This slide features a collage of online news snippets. On the left is a detailed illustration of a Tyrannosaurus Rex. To its right are several news article thumbnails, including one titled 'Japanese fishermen brace for giant jellyfish' and another 'Human origin takes a new track'.

3. Curiosity, Fun:

B. Virtual Tours

This slide displays screenshots from virtual tour websites. One interface shows a 3D landscape with a river and mountains. Another shows a 'Virtual Field Trip of the Landscapes of New Zealand' with a person in a field. A third shows a 'Viata 1: Squally Point' virtual tour of a coastal cliffside.

3. Curiosity, Fun:

C. Virtual Field Trips

This slide shows screenshots of virtual field trip resources. One is a 'Web brings national parks closer to kids' article with a photo of a man and a child. Another is a 'Virtual Field Trip' interface with a map. A third shows a person in a field with the text 'The general biology of that field are leading more time'.

3. Curiosity, Fun: D. Games

e.g., Online Jeopardy Game Games2Train: The Challenge; Thiagi.com

This slide features screenshots of online games. On the left is a 'Gameshow Pro web' interface with a 'Please wait while Gameshow Pro 3 is loading' message. On the right is a 'QUESTION BOWL' game board with various question categories and values.

4. Variety, Novelty:

A. Cool Resource Provider or Tech Demos

- Have students sign up to be a cool resource provider once during the semester.
- Have them find additional paper, people, electronic resources, etc.
- Share and explain what found with class.

This slide includes a 'PS40 Cool Resource Provider and Moderator Sign Up Sheet' with a sun icon and a photo of a classroom where students are working at computers.

4. Variety, Novelty:

B. Expert Chats/Real Explorer or Teacher Interaction

Jean Pennycook (Geographical blogging)
http://www.penguinscience.com/clim_change_ms.php

This slide shows a blog post titled 'A Chat to Antarctica' with a photo of a person in a red jacket standing in a snowy, icy landscape. The blog text discusses climate change and Antarctica.

5. Autonomy, Choice:
A. Famous Person Web Explorations, Searches, Twitter Tracking, and Interviews
 (e.g., Thomas Friedman, NY Times reporter)

5. Autonomy, Choice:
B. Explore Online Museums, Zoos, Library Exhibits

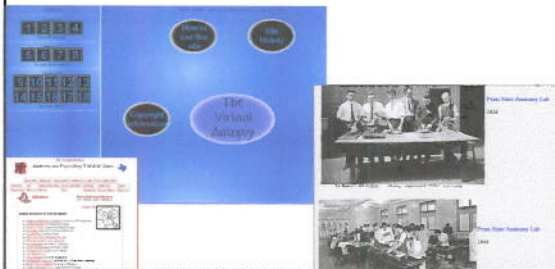
Arlington Racetrack

Jockey's are Important

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

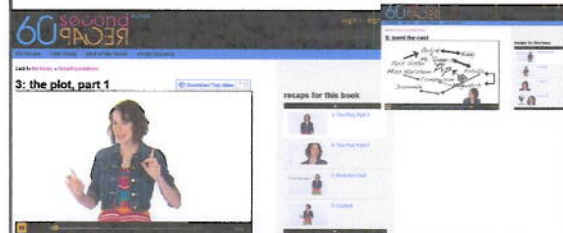
5. Autonomy, Choice:
D. Clickers; Innovation is but one click away...

6. Relevance, Meaningfulness:
A. Online Simulations and Demonstrations
 (e.g., self study in anatomy or chemistry, virtual autopsy, dissection, etc.)



6. Relevance, Meaningfulness:
B. 60 Second Recap, Jenny Sawyer

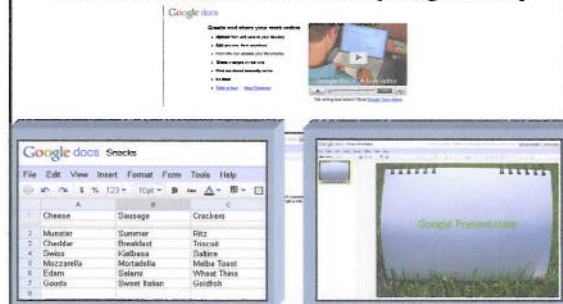
<http://www.60secondrecap.com/>
 Actress to students: Lend me your earbuds!
 English major, 24, rambunctiously recaps the classics in 60-second Web videos; By Greg Toppo; USA TODAY, September 2009



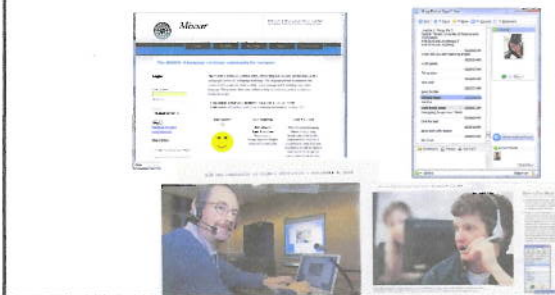
6. Relevance, Meaningfulness:
C. New Real World and Authentic Learning Skills (PBL, evaluation, interaction, communication, etc.)



7. Interactive, Collaborative:
A. Collaborative Documents (Google Docs)



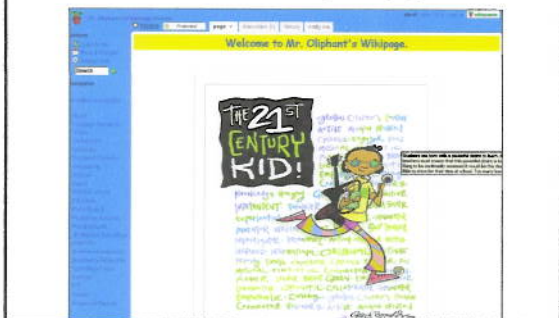
7. Interactive, Collaborative:
B. Online Language Learning
 (Skype with Mixer, Livemocha, Friends Abroad)



7. Interactive, Collaborative: C. International Children's Digital Library (ICDL) project (Univ. of Maryland, *Black Beauty*, *Aesop's Fables*, *Little Red Riding Hood*, *Grimm's Fairy Tales*, *Robinson Crusoe*, and *Mother Goose*.)



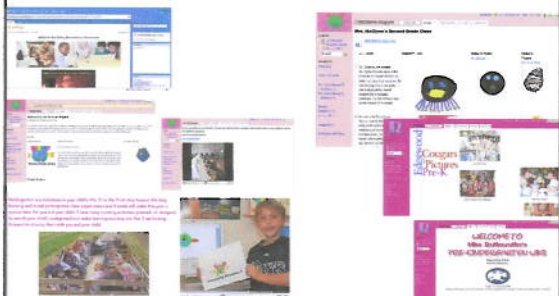
7. Interactive, Collaborative:
Interactive, Collaborative:
D. Instructor Wiki portal page



8. Engagement, Effort:
A. Follow Online Adventure



8. Engagement, Effort:
B. Wikis for Monster Writing (early childhood)



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



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



10. Yields Products, Goals:
A. Movie Festivals, Virtual Timelines, Digital Movies



**10. Yields Products, Goals:
B. Video Blogs**

**10. Yields Products, Goals:
C. Photo Festivals and Competitions**

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

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

**Poll #1: How many ideas did
you get so far?**

1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.
7. More than 10.

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

- Solid and Fuzzy in groups
of two to four

**Addressing Diverse
Learners with R2D2**

The R2D2 Model

Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

Authors: Curtis J. Bonk | He Zhang

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. Kids Podcasts

Reflect on the Following Questions:

1. Have you listened to a podcast?
2. Do you listen to a certain podcast on a regular basis?
3. Have you created a podcast?
4. Have you created a vodcast?
5. Do you think podcasting is simply more talking heads?

Read 1b. Art and History Exhibits

Read 1c. Wiki Steps on How to do Something: Wikihow

<http://www.wikihow.com/>

The image shows a screenshot of the Wikihow website. The main article is titled "How to Use English Punctuation Correctly". The page layout includes a sidebar with navigation links, a main content area with text and a small image, and a footer with additional resources.

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

The image features a circular diagram with four quadrants labeled "Reflecting", "Observing", "Viewing", and "Watching". Below the diagram are three small images of people, likely related to the concept of reflective and observational learners.

Reflect 2a. Teacher Classroom Blogs

The image shows a screenshot of a teacher's classroom blog titled "Mrs. Huff's English Classes". The page includes a navigation menu with links like "FRONT PAGE", "ARCHIVES", "ABOUT", "NOTES", "HANDOUTS", "SUMMER READING", and "SUBSCRIBE". There is also a "CONTACT" section and a "FACEBOOK" link. The main content area displays a post from "Miller's English 10 Classroom Blog".

Reflect 2a. Kids Blogs

The image shows a screenshot of the DogEared website, which is a platform for kids' blogs. The page features a header with the "DogEared" logo and navigation links. The main content area displays a post titled "Cool New Books: Secret Agent Jack Stalwart Returns".

Reflect 2c. ORL or Library Day

The image shows a photograph of a library interior. Several people are sitting at long wooden tables, engaged in reading or study. The library has high ceilings and large windows, creating a bright and quiet atmosphere.

Reflect 2d. Watch, Listen to, and Reflect on Online Conferences

The image shows a screenshot of a YouTube video player. The video is titled "Future of Health Care - part 1 of 3" and is uploaded by "globalhealth.com". The player interface includes a video player, a description, and a list of comments.

Reflect 2e. Expert and Domain Specific Blogs (Health Blogs)

A collage of four health-related blogs. The top left is 'The Organic Blog' with a red header. The top right is 'THIS IS IT' with a person in a blue shirt. The bottom left is 'Health Blog' with a blue header and a photo of people. The bottom right is 'ER Nurse' with a green header and a photo of a nurse.

3. Visual Learners

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

Three visual elements: a circular flowchart with five colored segments (blue, red, green, yellow, purple) and arrows; a globe with a grid overlay; and a close-up photo of a person wearing a white helmet and oxygen mask.

Ed-tech officials: Video will make schools more 'efficient'

Most school and college decision makers agree that video technology can help boost learning

By Dennis Carter, Assistant Editor, May 5, 2010
<http://www.ecampusnews.com/technologies/ed-tech-officials-video-will-make-schools-more-efficient/>

A screenshot of an eCampus News article. The main headline is 'Ed-tech officials: Video will make schools more 'efficient''. Below the headline is a sub-headline and the author's name. The article text is partially visible, along with a small photo of a person at a computer.

Fifty-three percent of school officials said they would buy video technology in the next year.

Display 3a. Shared Online Videos for Anchoring or Ending Instruction

(find anchoring event in YouTube, CNN, BBC, TeacherTube, CurrentTV)

A collage of video player interfaces. It includes a YouTube player showing a man speaking, a CNN.com player showing a news anchor, and another player showing a man in a suit.

Display 3b. Shared Online Video (e.g., eduTube, Howcast, WonderHowTo, Clip Chef, Link TV, Fora TV, etc.)

A collage of various educational video player interfaces. It includes Howcast.com, WonderHowTo.com, and other educational video sites with their respective logos and video thumbnails.

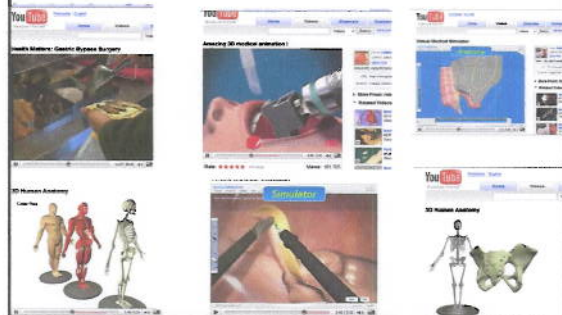
Display 3c. Videos of the Periodic Table

A collage of periodic table videos. It features a grid of video thumbnails for each element, a video player showing a person, and a video showing a chemical reaction in a test tube.

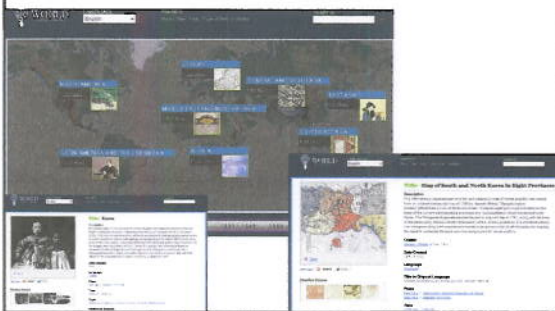
Display 3d. Video iPod Vocabulary Training



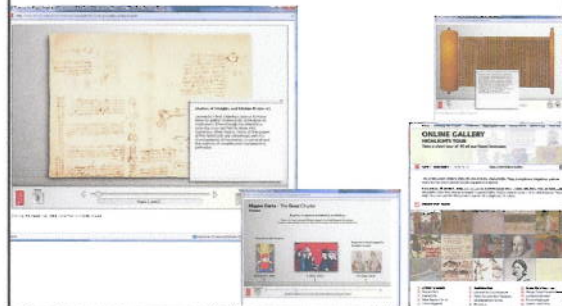
Display 3e. Medical Animations and Videos
(find anchoring event (YouTube, CNN, BBC, TeacherTube, CurrentTV))



Display 3f. United Nations Opens World Digital Library, April 21, 2009
Chronicle of Higher Ed, <http://www.wdl.org/en/>



Display 3g. Online Historical Document
(e.g., Turning The Pages, British Library)



Display 3h. Online Timelines
(US Presidents)



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



Display 3j. Online History Portals and Resources (Civil Rights Digital Library and Amistad)

The image shows a screenshot of the Civil Rights Digital Library website. It features a header with the title 'Display 3j. Online History Portals and Resources (Civil Rights Digital Library and Amistad)'. Below the header, there are two main sections: 'Welcome to the Civil Rights Digital Library' and 'AMISTAD'. The 'Welcome' section includes a video player and text about the library's mission. The 'AMISTAD' section features a photo of a man and text about the Amistad ship.

Display 3k. Download and Use Online 3D Sketches (Google SketchUp; download <http://sketchup.google.com/3dwarehouse>)

The image shows a screenshot of the Google 3D Warehouse website. It features a header with the title 'Display 3k. Download and Use Online 3D Sketches (Google SketchUp; download http://sketchup.google.com/3dwarehouse)'. Below the header, there is a search bar and a 3D model of a bridge. The model is labeled 'Roosevelt Island Bridge & Motorgate Parking'. There are also buttons for 'Image', 'Map', and 'Download Model'.

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.

The image shows a diagram of a learning cycle with four stages: 'Doing', 'Thinking', 'Feeling', and 'Understanding'. Each stage is represented by a different color and includes a list of activities. Below the diagram are several images of students engaged in tactile/kinesthetic activities, such as role playing, dramatization, and hands-on projects.

Do 4a. Student Podcast (in schools—kids have power!)

The image shows a screenshot of a student podcast titled 'Water's End'. It features a yellow background with text and images of students. The text includes a poem about water pollution and a list of vocabulary words: 'Epic, Water Pollution, Vocabulary, Precipitation, Population, Communities, Disasters'.

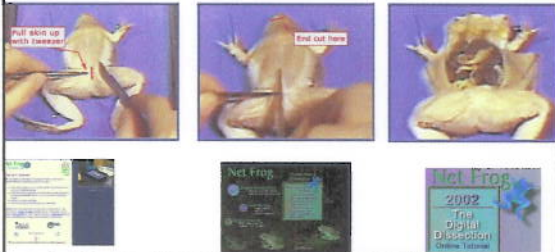
Do 4b. Podcasts for students of pronunciation class (e.g., Tzu-Su Chen, Taiwan)

The image shows a screenshot of a podcast player. It features a blue background with the text 'Hey Jude, don't make it bad Take a sad song and make it better'. There are also images of a podcast player interface and a photo of a student.

Do 4c. Wikis for Kids to Share (or put class lessons in a wiki)

The image shows a screenshot of a wiki page titled 'J. R. Wood's Nature Guide'. It features a green background with text and images of nature. There are also photos of two students.

**Do 4d. Hands-On Frog Dissection
(Net Frog, Univ. of Virginia)**



**Do 4e. Online Performances
Virtual Worlds/Reality/MMOG
(e.g., Shakespeare plays reenacted)**



Recap of the Perfect E-Storm....

1. Emerging Technology
2. Escalating (Learner) Demands
3. Erased Budgets
4. Enhanced Teaching

Poll #2: How many ideas did you get from the second part of this talk?

- a. None—you are an idiot.
- b. 1 (and it is a lonely #).
- c. 2 (it can be as bad as one).
- d. 3-5
- e. 6-10
- f. Higher than I can count!



3 99 Seconds Stop and Share: Top Three Things Learned today! 3

**Try the R2D2 Method!
Try TEC-VARIETY!
And hope for some magic!!!**

Sample papers :
<http://www.publicationshare.com/>
Archived talks:
<http://www.trainingshare.com/>

