


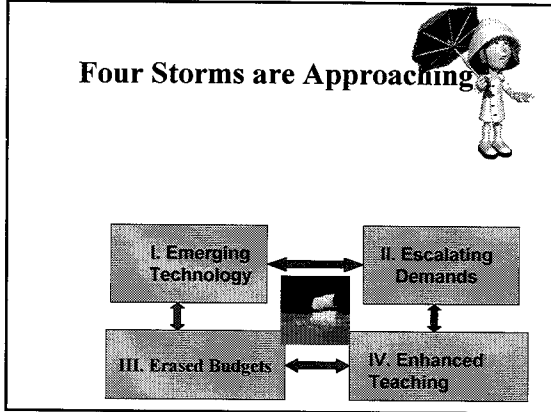


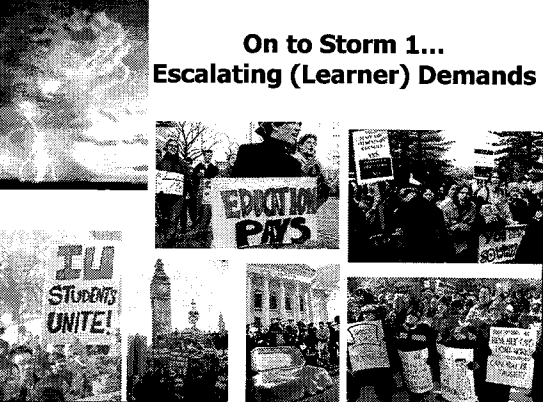
**Active Learning with Technology:
Myths, Magic, or Just a Lot of Bonk**



 **Dr. Curtis J. Bonk**
Professor, Indiana University
President, SurveyShare, Inc.
<http://php.indiana.edu/~cjbbonk>
cjbbonk@indiana.edu

**On to Storm 1...
Escalating (Learner) Demands**



**K-12 Online Learning and Virtual Schools:
Expanding Options and Opening Access
(Susan Patrick, NACOL, 2006)**

- There are 147 virtual charter schools with 65,354 students in 18 states.
- In 2002-2003, 36% of public high school districts in the United States offered distance education courses.
- 72% of school districts with distance education programs planned to expand online offerings in the coming year.

**K-12 Online Learning and Virtual Schools:
Expanding Options and Opening Access
(Susan Patrick, NACOL, 2006)**

- 2000: 40,000-50,000 enrollments in K-12 online education.
- 2002-03: Eduventures reported 300,000 students in virtual learning in US; 4,766 in Canada.
- 2002-2003: NCES reported 328,000 distance education enrollments in public K-12.
- 2005: Peak Group online enrollments of 500,000.
- 2006: Peak Group projects 1 million enrollments.

**K-12 Online Learning and Virtual Schools:
Expanding Options and Opening Access
(Susan Patrick, NACOL, 2006)**

- According to recent research from the *Silent Epidemic* study, 47% said a major reason for dropping out was that "classes were not interesting" and they were "bored"; 88% of drop outs had passing grades.
- 90% of the fastest growing jobs in the economy require a college degree
- 94% of students say that doing well in school is important to future success.
- College degree = 130% more income

Risky Business, Edutopia April 6, 2006, by James Daly

http://www.edutopia.org/magazine/ed1/article.php?id=Art_1497&issue=apr_06

- Despite being the wealthiest country on Earth, America maintains a public education system in which 30 percent of high school students don't graduate, one out of every four reads below basic grade levels, and, compared to students from more affluent backgrounds, few of their low-income counterparts are adequately prepared for college.

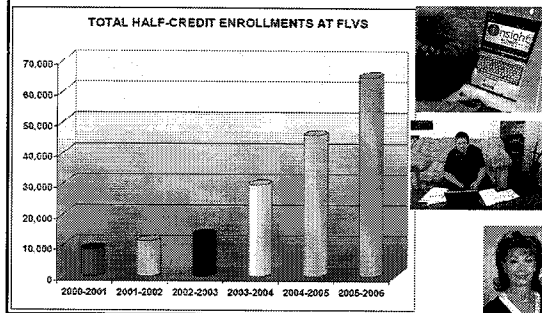


- "Silent Epidemic"
 - Gates Foundation commissioned first study of high school drop outs
 - 88% had passing grades
 - 69% were not motivated to work hard
 - 66% would have worked harder if more had been demanded of them
 - 81% called for more real world learning opportunities

K-12 Online Learning and Virtual Schools: Expanding Options and Opening Access (Susan Patrick, NACOL, 2006)

- In April 2006, Michigan became the 1st state to require online learning for high school graduation.
- 80% of K-12 school districts cited "the course was otherwise unavailable" as the number one reason for offering courses at a distance.
- According to the Manhattan Institute, 70% of all students in public high schools graduate, and only 32% of all students leave high school qualified to attend four-year colleges.

Growth of Online Learning in Secondary Schools



The Growth of Online



No Child Left Behind Summit,

Learning and Students Today: Options for No Child Left Behind
Susan Patrick, Director, Office of Educational Technology, U.S.

Department of Education

http://www.ncbttechsummits.org/summit2/presentations/p_Patrick.pdf

- Reasons: Rural, medical, disabilities, at risk, work, sport, poverty, AP, supplement, catch up, summer, etc.
- Types: Virtual charter schools, State run schools, District run, University run.



Report of the Michigan Dept of Ed on the Development and Growth of the Michigan Virtual High School (1999-2005); April 13, 2005 (provided by Daniel W. Schultz)

Figure 1 Summary of MVHS Courses and Online Enrollments

| MVHS Courses and Online Enrollments: 1999-2005 | | | | | | | |
|--|-------|-------|-------|--------|--------|--------------------|------------------|
| Number of | 99-00 | 00-01 | 01-02 | 02-03 | 03-04 | 04-05 ^a | Total |
| Schools Served ^b | 18 | 101 | 194 | 281 | 385 | 345 | 711 ^c |
| Districts Served | 18 | 95 | 179 | 221 | 242 | 263 | 453 ^c |
| Enrollments | 100 | 676 | 2302 | 5299 | 6805 | 5277 | 20,460 |
| Unique Course Offerings | 6 | 17 | 27 | 128 | 142 | 141 | 167 ^c |
| Test Preparation Users | 0 | 7657 | 9513 | 21,337 | 37,513 | 49,741 | 125,561 |
| Online Instructors Enrolled | 0 | 81 | 87 | 87 | 100 | 21 | 376 |

a) All agreements public schools, non-public schools, home schools, and public schools at various levels and outside of Michigan.
b) Does not include Spring 2005 enrollment due to the date of this report.
c) Unbolded counts.

Report of the Michigan Dept of Ed on the Development and Growth of the Michigan Virtual High School (1999-2005); April 13, 2005

Figure 2 Map of Participating MVHS School Buildings (2003-04)

Online at Fond du Lac High (March 10, 2006)

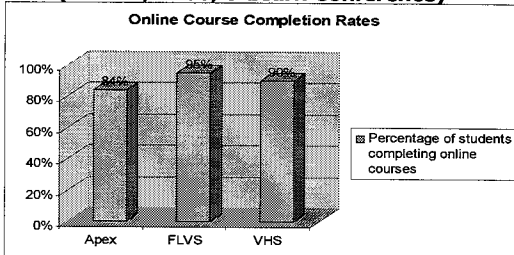
Enrollments by Gender (2005-06)
 Female 59%
 Male 41%

Enrollments by Race (2005-06)
 White Non-Hispanic 68%
 Hispanic 13%
 African-American 8%
 Asian 4%
 Multi-Ethnic 4%
 Other 3%

FLVS Enrollment Participation by School Type (2005-06)
 Public and Charter 64%
 Home School 28%
 Private 8%

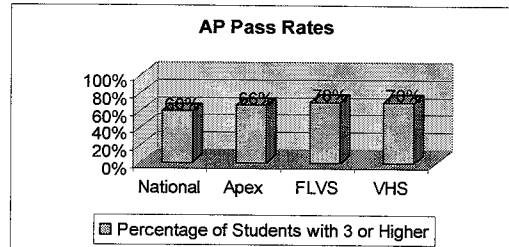
- 174 FLVS full-time and 106 adjunct teachers
- 80 Courses (from GED to 10 advanced placement courses)
- 31,000 students in 65,000 half-credit courses (2005-2006)
- Courses are delivered over the Internet. To assure student success with virtual learning, a variety of web-based, technology-based and traditional resources are provided. Teachers communicate with students and parents on a regular basis via phone, email, online chats, instant messaging, and discussion forums.
- http://www.flvs.net/educators/annual_external_evaluations.php

Are Online Students Engaged? (Patrick, 2006, e-Learn Conference)



Apex= Apex Learning, Inc FLVS= Florida Virtual School VHS=Virtual High School

Are Online Students Learning?



Apex= Apex Learning, Inc FLVS= Florida Virtual School VHS=Virtual High School

Virtual School Leaders Encourage Growth of K-12 Online Learning; Discuss High School Reform at Regional Summit (June 26, 2006)

<http://sev.pnewswire.com/education/20060626/NYM25126062006-1.html>

- "We know firsthand that demand for virtual education is growing," said FLVS President & CEO Julie Young. "For the past five years, we have seen double-digit growth at FLVS."

50,000 Utah Students Earning High School Credits Online! (June 20, 2006)

Utah's online Electronic High School leads the nation in student enrollment

By Tiffany Erickson
Deseret Morning News

More than 50,000 Utah students are earning high school credit from their bedrooms, desks and kitchens. And though the Electronic High School may not be the easiest way to earn credits, students are choosing to the program to catch up on classes, graduate early or just fit a few more electives into their school days.

Currently Utah has the largest online learning program in the country. Florida is a distant second with just over 30,000 enrolled.

Richard Siddoway, principal of the Electronic High School, said Utah had a jump on the rest of the nation in establishing the program. While other states started creating online courses in the late '90s, the program debuted in Utah in 1993 — before Newscape, Explorer and other learners.

Students back then used file transfer protocol.

"There was a great deal of skepticism when we began that we were going to be a diploma mill," Siddoway said. "But when they learned that courses were equally rigorous or more so that went away — from police skepticism to finally embracing it."

The program has doubled each year since 2000, the year officials established a solid



University of Miami Online High School

Attend high school online, anytime, anywhere.

UNIVERSITY OF MIAMI ONLINE HIGH SCHOOL

Programs To Fit Each Student's Needs

University of Miami Online High School offers a range of online programs for all students in grades 9 through 12. Our programs include:

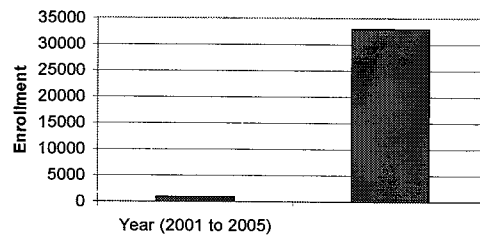
- Flexible Learning: 100% online and 50% online/50% on-campus
- Full-time programs: 100% online and 50% online/50% on-campus
- Part-time programs: 100% online and 50% online/50% on-campus

Watch the UMOHS Video! [Click here to watch the video.](#)

Complete College Counseling! [Click here to learn more.](#)

The OUM (Abtar Kaur, 2005, Ed Media)

Enrollment Growth at the UOM

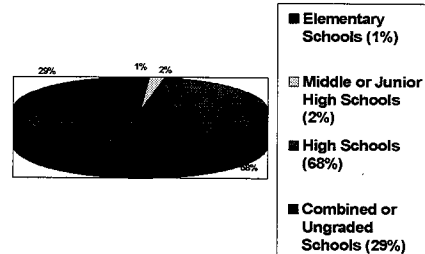


The African Virtual University

<http://www.avu.org/default.asp>

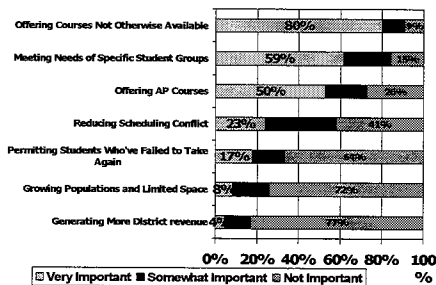
Percentage Distribution of Enrollments in Distance Education Courses: 2002-03

(Patrick, 2006, e-Learn Conference)



Reasons for Offering Distance Education Courses

(Patrick, 2006, e-Learn Conference)



Distance Education at Degree-Granting Postsecondary Institutions: 2000-2001

(Patrick, 2006, e-Learn Conference)

- 56% of all 2-year and 4-year institutions offer e-learning courses
- 127,000 online courses offered
- 3,077,000 enrollments in distance education courses
- 90% use asynchronous Internet based courses
- 51% use two-way interactive videoconferencing

What Leaders Need to Know: Four Key Ideas

(Patrick, 2006, e-Learn Conference)

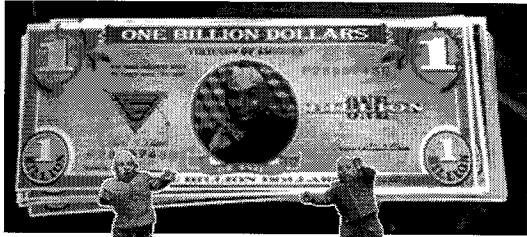
- **#1 Online Learning Expands Options**
 - "The first impetus to the growth of K-12 distance education was an interest in expanding educational options and providing equal opportunities for all learners." (p.7)
- **#2 Online Learning Is Rapidly Growing**
 - "Recent Surveys show that K-12 online learning is a rapidly growing phenomenon." (p.4)
 - Growing 30% annually

Online Learning Works

(Patrick, 2006, e-Learn Conference)

- **#3 Is Effective: "Equal or Better"**
 - "One conclusion seems clear: On average, students seem to perform equally well or better academically in online learning." (p. 17)
- **#4 Improves Teaching**
 - Teachers who teach online reported positive improvements in face-to-face, too.
 - "...three in four reported a positive impact on their face-to-face teaching." (p. 25)

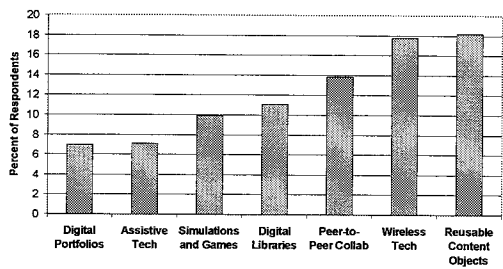
Ok, Million Dollar Question: Which technology will impact schools the most?



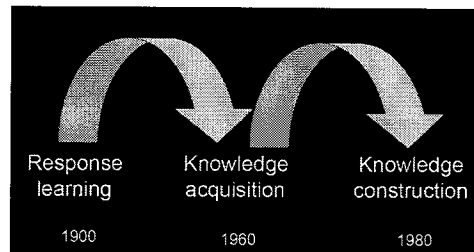
Storm 1. Emerging Learning Technologies

1. Assistive Technologies & Talking Computers
2. Blogs and Online Diaries
3. Digital Portfolios
4. Electronic Books
5. Online Communities and Learning Portals
6. Intelligent Agents
7. Online Exams and Homework
8. Online Games and Simulations (Massive Multiplayer Gaming)
9. Online Translation Tools & Language Lrng
10. Course Management Systems
11. Peer-to-Peer Collaboration
12. Reusable Content Objects
13. Videostreaming, IP Videoconferencing
14. Virtual Worlds/Reality
15. Wearable Computing
16. Wireless Tech: Tablet PCs, Handheld Devices

Technologies Expected to Most Impact the Delivery of Online Learning During the Next Five Years

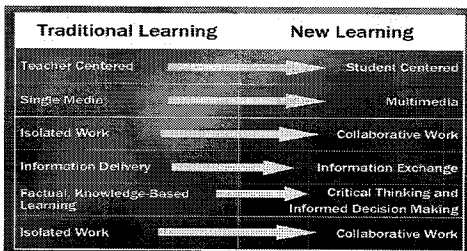


Evolution of Learning Theory (Bernard Robin, Univ of Houston, 2006)



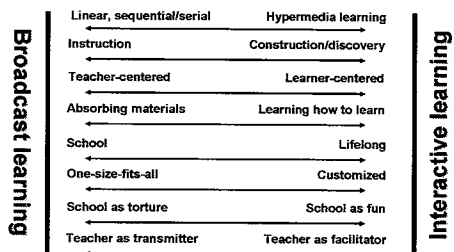
Lambert & McCombs, 1998

Education in Transition (Bernard Robin, Univ of Houston, 2006)



ISTE National Education Technology Standards for Teachers

Industrial Age vs. Info Age Learning (Bernard Robin, Univ of Houston, 2006)



Don Tapscott

SEDL, Tap into Knowledge, Knowledge Under Construction:

<http://www.sedl.org/pubs/tapinto/v3n1.pdf>

“When used appropriately, technology can become a mind tool, functioning as an intellectual partner with the learner to engage and facilitate critical thinking and higher-order thinking.”

SEDL, Tap into Knowledge, Knowledge Under Construction:

<http://www.sedl.org/pubs/tapinto/v3n1.pdf>

“Thought processing software allows students to organize ideas, express concepts, map relationships, build idea webs and outline their thoughts in a graphical, visual, and non-linear fashion.”

Computers as Cognitive Tools

Bank (1989); Robert Kozma (1986)

1. Computers transform, translate, calculate, sort, order, integrate, infer
2. Amplify, extend, and enhance human capabilities
3. Reduce cognitive load, free up resources
4. Internalize overtly modeled processes
5. Limited WM, structure of LTM, and cognitive strats
6. Prompt or model: examples, ask questions, eval answers, pose a hypothesis
7. Organize notes, links, concept maps, outlines, notebook, graphs, self-check

Role of Technology



- Computers to support not drill
- Use technology to enhance thinking—planning and revising learning goals, monitoring, reflecting on progress, construct knowledge
- Simplify access to research materials
- Autonomy, social support, critique activities, develop problem-solving, connect evidence, organize ideas, rep arguments, make sense
- Facilitate data storage and transfer
- Communication within and beyond classroom.

Tech Rich Environments Goldman and Vandy Colleagues (1999)

- Jasper Woodbury series (SMART)
 - Problem solve and share solutions
- Little Planet Series
 - Research and write books
- The GLOBE project
 - Global Learning and Observations to Benefit the Environment
 - Collect data, observe, submit data and share results
- The Journey North
 - Ask experts, solve problems, track data, interview, collab
- The JASON Project
 - Interact with expedition team, virtual fieldtrips, explorations

Authentic Data Analysis (e.g., The Globe Project, Kids as Global Scientists, The Journey North, etc.)

Resource Collections > Teaching Tools > pd0992_118.jpg

Identification
Wood frog (*Pana sylvatica*)

Contributors

James Harding @ Globetographer

Knowledge Building Communities Scardamalia & Bereiter (1994)

- Emphasis on problems, depth, open, decentralized, collective, communities.
- More advanced others participate, communal database, live experts, both open & private.
- Computer tools—foster choice of links, nature of relationships
- Asking leading questions, probing for details
- Alternative forms of assessment—group cooperation, design presentations, peer feedback

Kids as Global Scientists (Nancy Songer, 1998)

- Students learned about local weather
- Developed a proficiency with the Internet
- Communication used to hook students in for deeper science learning
- Students move from consumers to reporters and participants
- Build new idea relationships through greater personalization of information
- Technology problems

Students as Infotectives

(Jamie McKenzie, *Grazing the Internet: Raising a generation of free-ranging students.* Sept. 1998, pp. 26-31, Phi Delta Kappan)

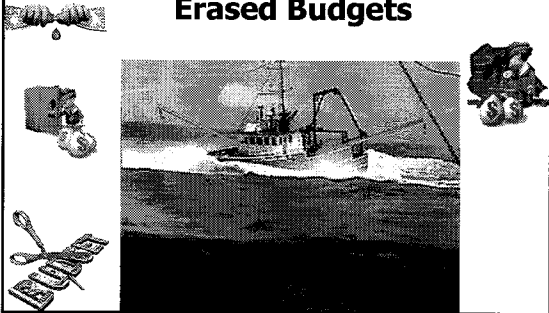
- Envisioning what's possible, invent, rearrange
- Inquiry and Detective Skills
 - changing course, asking for help,
 - framing essential questions and subsidiary questions,
 - planning voyage,
 - screening garbage, analyzing data.
- Suggesting and testing hypotheses
- Seeing what's missing
- Suspending judgment



Any questions or comments so far?



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



Seven Cost-Saving Strategies for the IT Funding Crunch

By Paul Nasti

As school districts across the country face budget cuts, IT departments are being squeezed. Here are seven strategies to help IT departments survive the funding crunch.

1. Consolidate Hardware

2. Consolidate Software

3. Consolidate Services

4. Consolidate Support

5. Consolidate Training

6. Consolidate Security

7. Consolidate Disaster Recovery

Successful Strategies for Saving & Securing Technology Funding

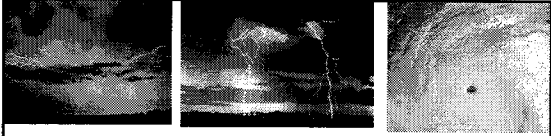
By Jennifer H. Lewis, Florida Elementary Schools

As school districts across the country face budget cuts, IT departments are being squeezed. Here are seven strategies to help IT departments survive the funding crunch.

District's IT outsourcing could save \$1 million per year

By Cathy Murray, Assistant Editor, eSchool News
January 7, 2004

A Florida school district has announced plans to outsource its entire information technology (IT) department to a cloud provider, communications firm, and managed services provider. The district hopes to save \$1 million a year for the next 20 years.



Recap of the Perfect E-Storm....

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



Poll #1. What are you???

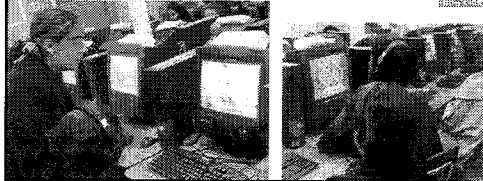
- A. Teacher, teacher assistant
- B. Special education teacher
- C. Counselor, school psychologist
- D. Curriculum specialist
- E. Administrator, principal
- F. Dept of Education, Gov't Official
- G. Social worker
- H. Other

Part I. 16 Myths of Technology in Education



Technology Myth #1.
A teacher from the 1880s can easily walk into a class and teach today.

Given that the National Assessment of Education Progress is the most common measure of student achievement, it is not surprising that the results of the NAEP are often used to evaluate the effectiveness of schools and teachers.



Students of the 1880s



Myth #2.
Teachers are reluctant and resistant to use technology.

Teacher Dorothy Swain uses a tablet connected to an electronic blackboard in one of her classes at Winterboro School. With this technology, teachers can write on the board from anywhere in the classroom. (Bob Crisp, The Daily Home (Alabama), April 9, 2006)



Some are scared of technology!!!

Myth #3. I must have a technology background to use effectively.

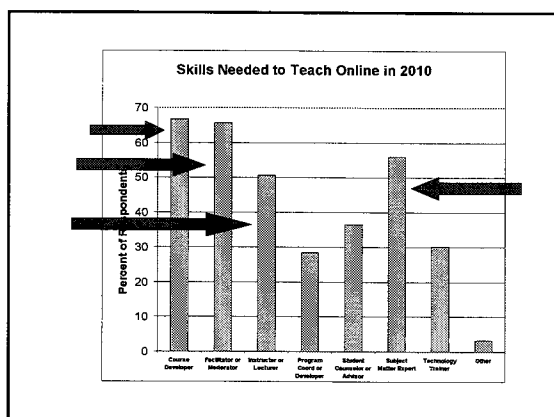
Need a Community of Practice: Online Professional Development

Differences between Boomers and Gen Xers

Three Most Vital Skills

The Online Teacher, TAFE, Guy Kemshal-Bell (April, 2001)

- Ability to engage the learner (30)
- Ability to motivate online learners (23)
- Ability to build relationships (19)
- Technical ability (18)
- Having a positive attitude (14)
- Adapt to individual needs (12)
- Innovation or creativity (11)



Myth #4. My School and Kids Cannot Afford the Technology.

MiamiHerald.com

Board OK's flip-flops, but iPods are over

Flip-flops are in high school kids, out for everyone else. Also out: bedroom alppers, unshowered clothes, iPods and laptops.

INFORMATION TECHNOLOGY
One Computer Is Not Enough

Center for Ed Tech

moodle

Moodle 1.2
 Moodle 1.2 is now available for download. It includes several new features and improvements over the previous version.

Moodle 1.1 Teacher
 Moodle 1.1 Teacher is a new version of the Moodle 1.1 platform, designed specifically for teachers.

Free Online Tools and Resources (e.g., Encyclopedia of Women)

ENGLISH **Writer's Window**

read published writing
 share your writing
 about writers' window
 writing workshop
 writing community
 continuous social

Myth #5. Technology is not appropriate for at-risk students.

Myth #6. Online courses will not meet standards.

INDIANA'S ACADEMIC STANDARDS

Indiana Academic Standards & Resources

Dr. Suellen Reed • Indiana Superintendent of Public Instruction

Students and Teachers, From K to 12, Students and Teachers, From K to 12. Hit the Podcasts

TEACHING TOOL: At Longfellow Middle School in La Crosse, Wis., students produce podcasts that are syndicated over Apple's iTunes music store.

By **JEFFREY SHERINGO**
 Publisher, January 25, 2009

THE subjects were typical for a seventh-grade classroom, a summary of a medieval metaphorical strategies on improving memory and making

Lesson Plan Sites with Links to Standards

read-write-think Home | Links | Resources | Search | About us | Contact Us | Search

Lesson Plan Selector

9-12 9-12 | 9-12 | 9-12 | 9-12 | 9-12

Analyzing the Purpose and Meaning of Political Cartoons

Objectives:
 An young people develop the ability to more discern about social and political events. They may compare the cartoon to what they hear, see, and read in the news. For this reason, it is important for students to learn how to recognize messages hidden in the news items.

Instruction:
 In this lesson, high school students learn to evaluate political cartoons for their meaning, and then, and determine if cartoons truly convey critical messages about political situations. They analyze an online cartoon to learn about the world and the cartoonist's perspective. They use a list of questions to help them decide to create a political cartoon and determine which of the signs of satire they wish to use.

Standards:
 From: **History to Civics**
 Civically, A.P. (2002) "To know and understand pathways to liberty and equality through knowledge, inquiry, and critical thinking." 47, 200-204

Outcomes:
 • Outcomes: students will be able to identify the message in a cartoon, and explain the cartoonist's perspective on the subject.
 • Students will be able to identify the message in a cartoon, and explain the cartoonist's perspective on the subject.
 • Students will be able to identify the message in a cartoon, and explain the cartoonist's perspective on the subject.

Students at one middle school in Miami answered more than 250,000 questions in 1 year! (Gina Koch Hidalgo, FETC Connections, Fall 2005)

FCAI EXPLORER

READER DISCOVERY

- Adaptive subject, multiple choice and multiple choice questions.
- Interactive feedback for every question.
- Multiple choice questions, many with response highlighting for correct answers.
- Designed to reinforce learning content.
- Multiple choice questions.
- Student's choice and choice of questions.

Answer Discovery provides comprehensive coverage for the reading level and includes the following features:
 • Adaptive subject, multiple choice and multiple choice questions.
 • Interactive feedback for every question.
 • Multiple choice questions, many with response highlighting for correct answers.
 • Designed to reinforce learning content.
 • Multiple choice questions.
 • Student's choice and choice of questions.

Scavenger Hunts

Spartanburg School District 3

Using Scavenger Hunts

- How To Use the Scavenger Hunt Templates
- Why Use Scavenger Hunts?
- Evolution of a WebQuest—Begin with a scavenger hunt or guided tour, build activities until you have the resources to develop a WebQuest.
- Internet Scavenger Hunts
- Creating Scavenger Hunts
- Template
- Sample Completed Astronaut Scavenger Hunt
- Sample Scavenger Hunt—Select a Decade Rubric for Sale
- Language Arts

BrainPop (movies, experiments, timelines, activity pages) (Gina Koch Hidalgo, FETC Connections, Fall 2005)

BrainPOP POP QUIZ

CORRECT!

Circulatory System

COSMEO: Online Homework Help from the Discovery Channel

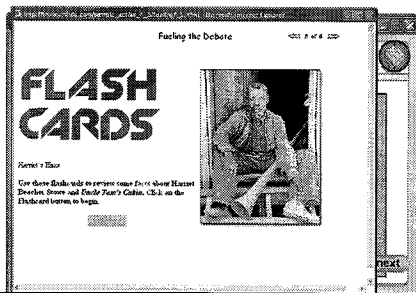
includes math homework help, 15,000 interactive learning quizzes, games, and puzzles, 27,000 research articles, and 30,000 video clips that correlate to state standards!!!
 And the collection is expanding daily (cost = \$9.95/month for up to 4 kids per family)

Myth #7. Online learning is boring! Retention of students is a problem!!!

Boring e-Learning

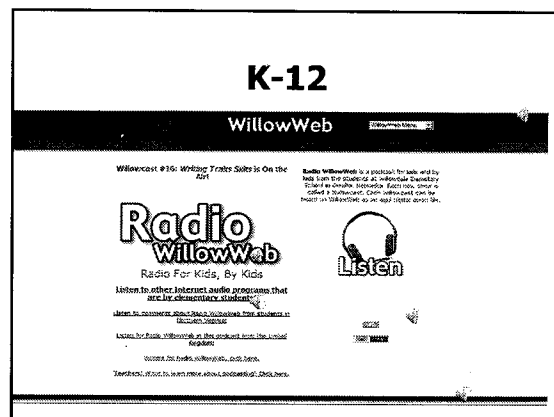
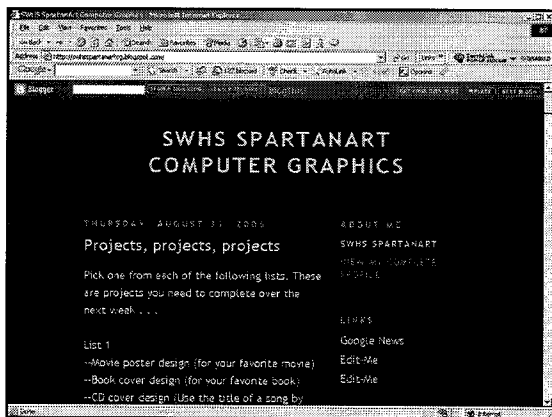
Experience. The difference.

**Online Drill (perhaps with Audio)
(Electronic Classroom of Tomorrow (ECOT) in Ohio)**



**Use of Weblogs
(especially English writing class)**

1. **Instructor or Tutor blog:** resources, information, space to chat
2. **Learner blog:** reflections, sharing links and pics, fosters ownership of learning
3. **Partner blog:** work on team projects or activities
4. **Class blog:** international exchanges, projects, PBL
5. **Revision:** review and explode sentences from previous posts, add details
6. **Nutshell:** summarize themes or comments across blogs
7. **Blog on blog:** reflections on feelings, confusions, and experiences with blogs

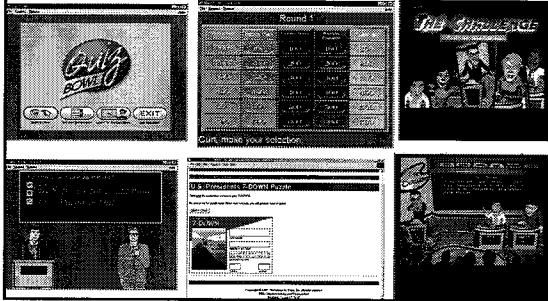


**Myth #8.
Technology in the classroom is
simply about playing games.**



Credit: Marc Rosenthal

Online Jeopardy Game
www.km-solutions.biz/caa/quiz.zip;
 Games2Train: The Challenge; Thiagi.com

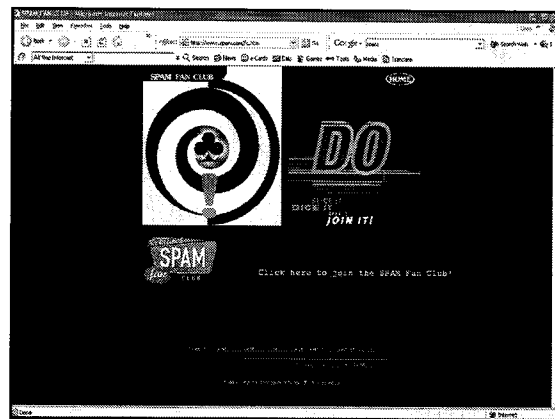


Sure, there is negative technology!



Monty Python Spam Song

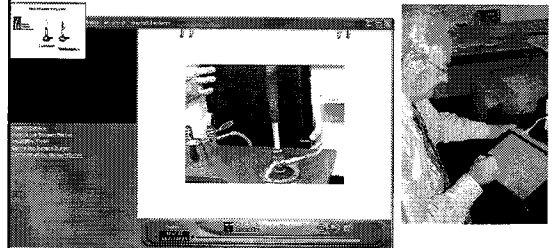
- **Vikings: Spam spam spam spam. Lovely spam! Wonderful spam! Spam spa-a-a-a-am spam spa-a-a-a-a-am spam. Lovely spam! Lovely spam! Lovely spam! Lovely spam! Lovely spam! Spam spam spam spam!**



Myth #9.
Technology in the classroom eliminates the role of the teacher.



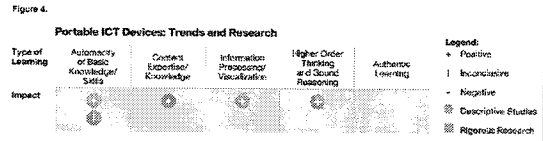
Videostreaming and Videoconferencing
 (to take off in next several years ...\$4.5 billion in 2007
 (Sept 23, 2003, Stephanie Olsen, CNet News.com).



Technology in Schools: What the Research Says (Fadel & Lemke; Metiri Group and Cisco Systems, 2006)

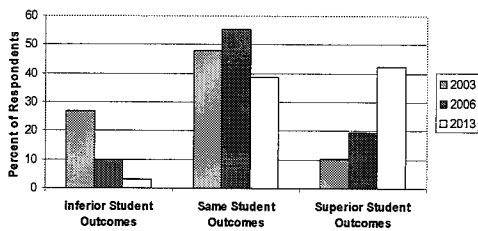
- **Purposes of technology in schools**
 - Improve learning
 - Increase student engagement
 - Improve economics viability of students (productivity, technology fluency, teaming)
 - Increasing relevancy and real-world apps
 - Close digital divide
 - Build 21st century skills (critical thinking, sound reasoning, global awareness, communication skills, information and visual literacy, creativity, productivity, scientific reasoning, etc.)

Technology in Schools: What the Research Says (Fadel & Lemke; Metiri Group and Cisco Systems, 2006)



Online quality is inferior.

Student Outcomes in Online Learning Compared to Traditional Instruction.



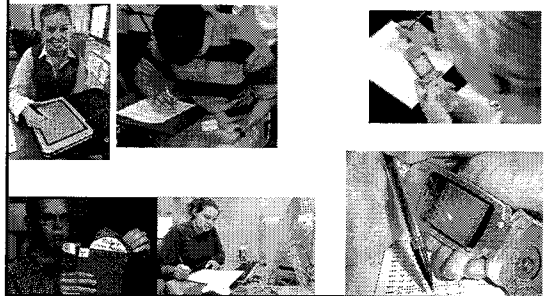
Mobile-phone cheating in exams on the rise

Dr. Reuter
1/18/2010 10:28:20 AM
REUTERS

Online era eases path to cheating

Students find it easier to cheat on tests and assignments in the online era.
By James Steyer and Matt Simonson
1/18/2010 10:28:20 AM
The New York Times

Myth #13. Students will cheat more online.



The Evil House of Cheat

search results

Now Showing Matches 1 To 5

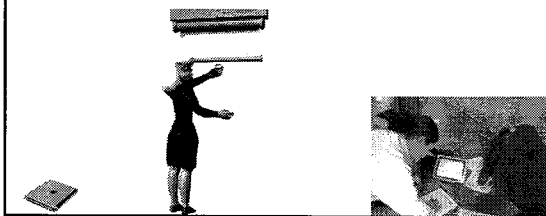
Ethical Considerations in Academic Plagiarism

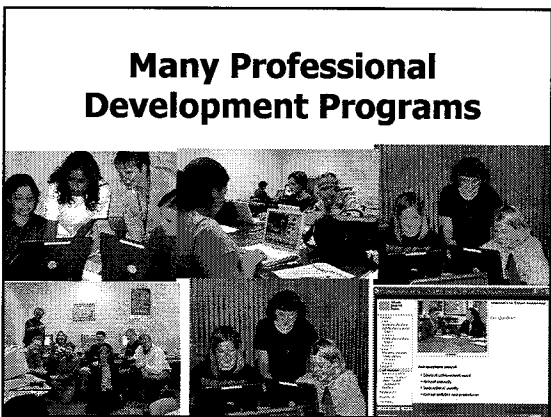
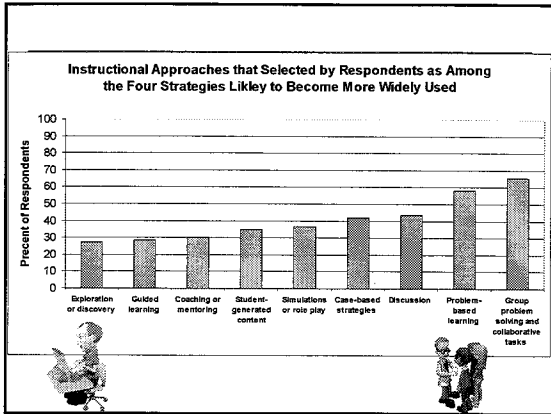
Plagiarism Software Research Study

Plagiarism is Theft



Myth #14. Teachers can just teach the same way they always have.

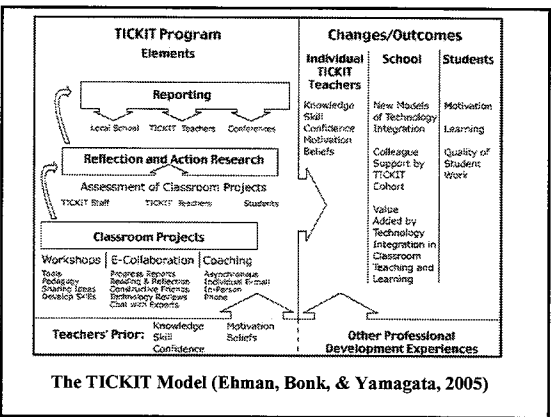




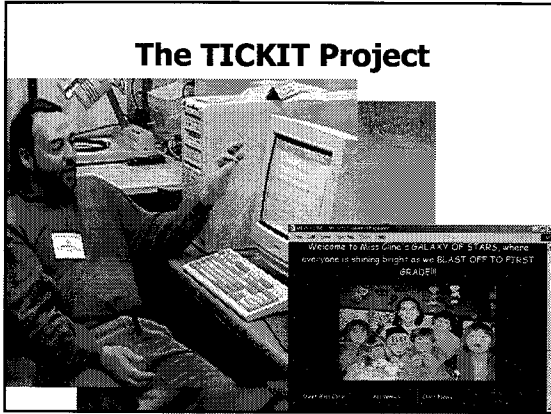
Teacher Professional Development in Technology Integration (the TICKIT Program)

(Bonk, Ehman, & Yamagata-Lynch, in press, AACE Journal)
<http://www.iub.edu/~tickit>

TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology



| Project type | Number of projects (132) |
|--|--------------------------|
| Webquest | 64 |
| Electronic newsletters | 1 |
| Web editing & publishing | 13 |
| Online conferencing, collab, and discussion (includes email and phone) | 10 |
| Virtual tours | 1 |
| Computer apps (Excel, PP, Word, Internet) | 38 |
| Book review | 2 |
| Brochure construction | 1 |
| Electronic portfolio | 2 |



Findings

| Factors | Means | | t | Sig. | † Effect Size |
|---------------------------------|--------------------------------|---------------------------------|--------|---------|---------------|
| | TICKIT Completers [‡] | TICKIT Applicants ^{††} | | | |
| 1. Technology Integration | 74.05 | 38.25 | 7.663 | .000*** | 1.81 |
| 2. Technology Limitations | 11.60** | 15.79 | -3.281 | .002** | .63 |
| 3. Technology Resistance | 4.37** | 7.91 | -3.143 | .003** | .80 |
| 4. Computer Proficiency | 25.51 | 18.84 | 4.614 | .000*** | 1.20 |
| 5. Learner-centered Instruction | 18.29 | 12.40 | 5.120 | .000*** | 1.22 |

p < .01 ; *p < .001
 †All effect sizes favor TICKIT group
 ††Lower scores on factors two and three indicate more positive responses
 ††† The 'n' for each comparison varies due to incomplete data. We used list-wise deletion of missing data (Completers n=66-77; Applicants n=18-20)

TICKIT Teacher Voices

> "This class was very helpful. I gained a lot of confidence as a technology user from this class."
 > "The door is now open. I will continue to try to find technological ways to teach them."
 > "This was the best program I have ever been involved with as a teacher."
 > "Thank you! A poor tired out "old broad" has a new lease on teaching"

- ### Overall Lessons Learned (& Not Learned)
- Avoid Teachers Who Are Compelled By School Administrators Into Participating
 - Teachers Need a Reasonable Tech Environment
 - Teach Technology Use in the Teacher's Computing Environment, Not Ours
 - A Local Leader is Important for the Cohort

Myth #15. We can just wait it out—it will go away

Prefer online to traditional!

EDUCATION with Student News

Students prefer online courses
Classes popular with on-campus students

They: Monday, 12:30PM - 3:15 PM, 141-1014-0871

12/17 - Andy Sheehy Brings just a few blocks from the campus of Black Hills State University in Spearhead, South Dakota, is a computing 12 class. It's a course that, like all the others, features much, isn't a morning lecture, and usually ends during the day to restore connectivity.

12/18 - A 14-year-old student from Black Hills State University in Spearhead, South Dakota, is a computing 12 class. It's a course that, like all the others, features much, isn't a morning lecture, and usually ends during the day to restore connectivity.

Always online -- and always talking
When three girls without a word in a classroom

NEW STUDENTS

Myth #16.
Online learning is too much text and passive learning. Must learn in meaningful ways!!!



Educational Uses of Digital Storytelling

Home Page Introduction Goals and Objectives Getting Started Examples Tools/Creation Resources Ratings

Stories for History and Social Studies

Although personal narratives can include historical information to add context to a story, a different kind of digital story can

Multimedia and Hand-held Devices

Create-A-Scape futurelab

What is a mediascape?
Create a mediascape
What is a mediascape?
Create a mediascape
What is a mediascape?
Create a mediascape

Innovation is but one click away...

TECHNOLOGY BUSINESS

CYBER

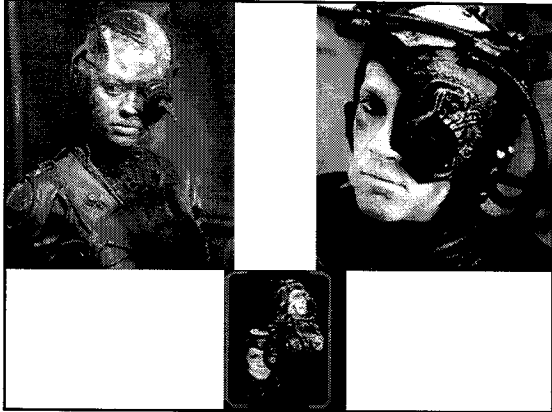
Interactive technology transforms the classroom

E-Portfolios

- Multimedia presentations (video, animation, voice-over testimonials)
- Examples of work
- Personal statement
- Self-reflections on that work
- Connections between experiences
- Standard biographical info
- i.e., progress, achievements, efforts...
- Large, complex, time to grade

What can we say about emerging technology then???

- **It is everywhere!!!!!!!**
- **Resistance is futile!!!!!!!**



Part II. Magic

Part III. Just a Lot of Bonk....

#1: Synchronous Conferencing

#2. Practitioner Feedback: Asynchronous Threaded Discussion plus Sync Expert Chat (e.g., Starter-Wrapper + Sync Guest Chat)

#3. Online Data Collection Survey Research

(e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyKey)

The image displays three different online survey platforms. SurveyShare offers a user-friendly interface with various question types and a 'SurveyShare' logo. Surveyor features a 'Survey without Limits' banner and a 'Surveyor' logo. Zoomerang has a 'Zoomerang' logo and a 'Create Surveys & Get Feedback' banner. Each interface shows different ways to design and distribute surveys.

#4. Brainstorming Chat

The screenshot shows a chat window with a title bar that reads 'Brainstorming Chat'. The chat history shows a conversation about a 'Buddy Program'. One participant asks, 'I'm sorry, do you mean the buddy program I was talking to last time, regarding the 'Grand Slam'?' and another responds, 'Yes, that's the one I was talking to last time, regarding the 'Grand Slam'?'.

#5: Online Role Play of Scholars, Personalities, or Famous People

The screenshot shows a forum thread titled 'What makes them? Or perhaps you out think me?'. The thread contains several posts from users like '74.4.2', '74.1', and '74.6'. The posts discuss various topics, including 'The Old Country WAY too heavy and emotional and even political here. Be back after a few weeks!', 'I'm sorry you Mom never taught you to play nicely and understand the other kid. Make her tough', and 'I hope that everyone has been finding wonderful today. Take advantage of your conversation, stop and be sure to learn from your conversation. There is so much that you can learn - just from the world around you. And if you did not get a chance to log a new password, you have a chance to do so in the world in ecological balance, although with our wonderful human efforts we can't be too far from it.'

#6. Online Resource Libraries

The screenshot shows a forum post from 'SiteScape Forum' titled 'P46: Learning and Cooperation in Education (Spring 2004)'. The post lists several 'Student Online Resource Libraries (ORL)' under the heading 'Folders'. The list includes 'Directions for Online Resource Library (ORL)', 'Online Resource Library for Amanda K. K.', and several other ORL entries.

#7. Choice: Multiple Topics

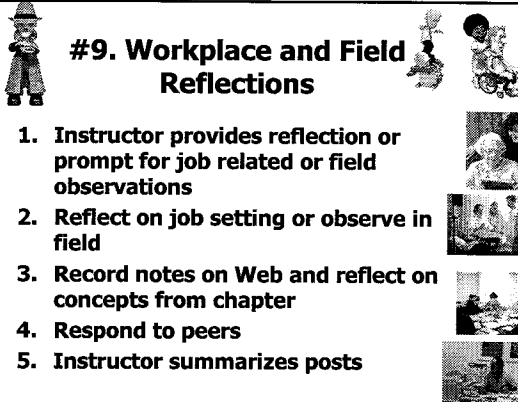
The screenshot shows a forum interface with a table of topics. The table has columns for 'Topic', 'Unread', 'Total', and 'Status'. The topics listed include 'All', 'The World's Most Interesting Inventions', 'The World's Most Interesting Discoveries', 'The World's Most Interesting Facts', 'The World's Most Interesting Stories', 'The World's Most Interesting Places', 'The World's Most Interesting People', 'The World's Most Interesting Animals', 'The World's Most Interesting Plants', 'The World's Most Interesting Foods', and 'The World's Most Interesting Drinks'.

#8. Online Collaboration and Editing

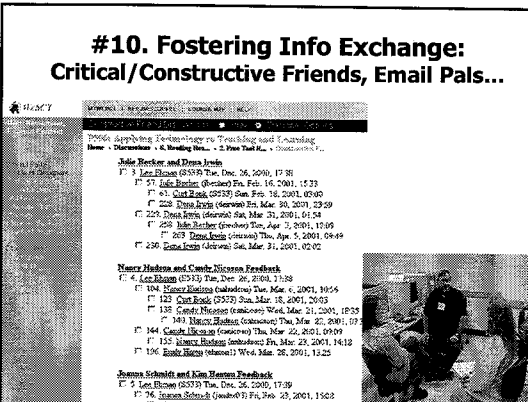
The screenshot shows a document editor interface with a text area containing several paragraphs of text. The text discusses 'collaborative editing' and 'online collaboration'. The interface includes a toolbar with various editing tools and a sidebar with a list of topics.

#9. Workplace and Field Reflections

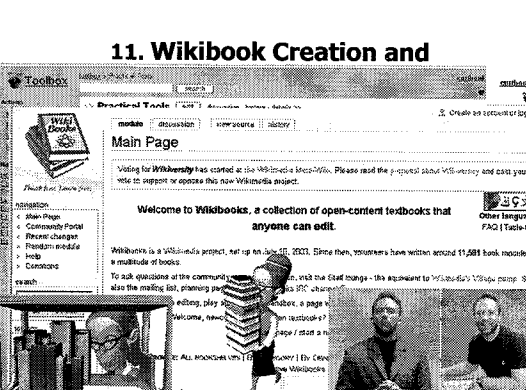
1. Instructor provides reflection or prompt for job related or field observations
2. Reflect on job setting or observe in field
3. Record notes on Web and reflect on concepts from chapter
4. Respond to peers
5. Instructor summarizes posts



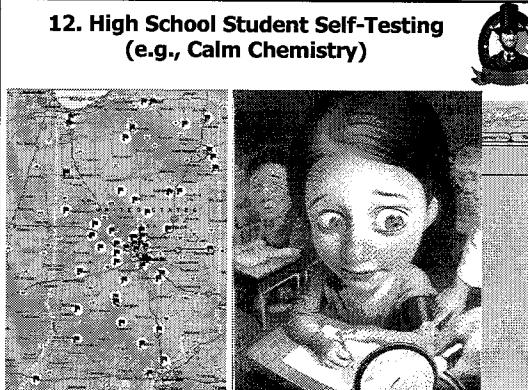
#10. Fostering Info Exchange: Critical/Constructive Friends, Email Pals...



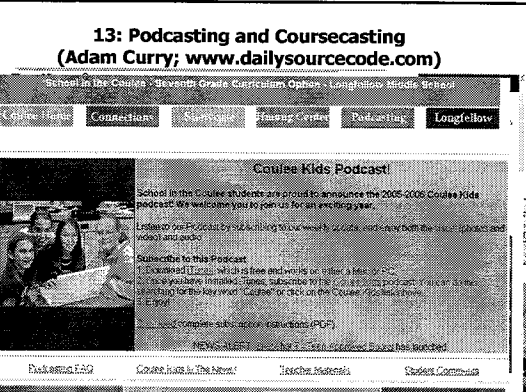
11. Wikibook Creation and



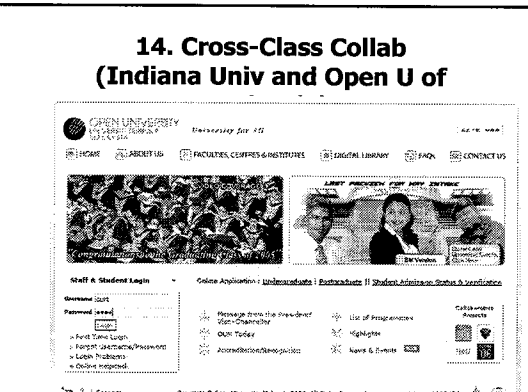
12. High School Student Self-Testing (e.g., Calm Chemistry)



13: Podcasting and Coursecasting (Adam Curry; www.dailysourcecode.com)



14. Cross-Class Collab (Indiana Univ and Open U of



15. Student Podcast

Kizooks!

WELCOME TO THE KIZOOKS WEBSITE!

ORDER HERE NOW! and get a *Season 1 Intro Piece Download!*

Take a Listen!

16. Instructor Portal: e.g., Google Book Search

Google Book Search

The complete plays of Shakespeare. Now at your fingertips.

In Shakespeare's day, gaining greater access to his plays meant asking it out with the other "groundlings" for the best view of the stage. It took centuries for the modern printing press to bring plays like *Hamlet* to people all around the world—and for the Bard to become one of the most quoted writers in history.

Now Shakespeare's oeuvre is even more accessible. Search within words for "to be, or not to be" to read the end of his famous soliloquy. Find out who called the world his "stage" and why. Browse through a smaller play—or follow your curiosity to discover a new one. And if you decide you want to buy a copy, "All editions" will show you every version in Google Book Search, many of which are available for purchase.

Comedy Tragedy Romances History

The Comedy of Errors
 "Here is a new language, and never more than here: words are made; may be a word that shall make it more true; that shall make it more true than any word that shall be." — Act 1, Scene 1

Think Aids: About Hamlet
 "This is a useful annotated list of resources that is designed to help students gain an understanding of the play. It includes a list of resources for the play, a list of resources for the play, and a list of resources for the play." — Act 1, Scene 1

Learn's Latin's Log
 "This is a useful annotated list of resources that is designed to help students gain an understanding of the play. It includes a list of resources for the play, a list of resources for the play, and a list of resources for the play." — Act 1, Scene 1

The Merry Wives of Windsor
 "This is a useful annotated list of resources that is designed to help students gain an understanding of the play. It includes a list of resources for the play, a list of resources for the play, and a list of resources for the play." — Act 1, Scene 1

Take a Library Field Trip

Download Google Earth to visit the Globe Theater and other Shakespearean sites

17. Language Learning (ChinesePod—learn Mandarin)

ChinesePod Main Page

Learn Mandarin with ChinesePod

Essential Teachers in Your Pocket. Get all resources for The Website, HSK, and ChinesePod on the ChinesePod App.

The Team of ChinesePod

Wang Jun, Li Rui, and others.

18. Synchronous Sessions (Brozo, Elluminate WebEx, etc.)

WebEx Synchronous Session

Participant List:

- John Doe
- Jane Smith
- Bob Johnson
- Alice Brown
- Charlie White
- Diana Green
- Frank Black
- Grace King
- Henry Lee
- Ivy Hill
- Jack Adams
- Karen Baker
- Liam Clark
- Mia Evans
- Noah Foster
- Olivia Garcia
- Peter Hall
- Quinn King
- Rachel Lee
- Sam Miller
- Tina Moore
- Uma Nash
- Victor Ortiz
- Wendy Park
- Xavier Reed
- Yara Stone
- Zoe Taylor

19. Exploration: Virtual Museums and Archeology

The Museum of Unworkable Devices

Unworkable devices

The museum is a celebration of technology that just doesn't work. It features a complete set of the most ingenious of unworkable devices for the budding inventor. It's not just the museum; it's the most creative and innovative of unworkable devices. Check for a museum that is not just a museum, but a museum of the unworkable. It's not just the museum; it's the most creative and innovative of unworkable devices. It's not just the museum; it's the most creative and innovative of unworkable devices.

Galleries

- The Physics Gallery: an historical view. The physics of unworkable devices and the physics of the real world.
- The Museum for unworkable devices: not unworkable devices.
- Exponential Growth: how hard it is to keep the world from growing.
- The City of Unworkable Devices: a city of unworkable devices.
- How it works: to make these machines work better.
- Themed galleries: The unworkable and the unworkable devices.
- The last thing you need: a museum of unworkable devices.

20. Online Labs (e.g., Foreign Language Practice Exercises Online)

PSYCHEXPERIMENTS

Psychology Experiments Online

Experiments:

- Classical Conditioning
- Operant Conditioning
- Memory
- Attention
- Perception
- Development
- Personality
- Intelligence
- Emotion
- Language
- Health
- Evolution
- Sex
- Drugs
- Alcohol
- Stress
- Depression
- Anxiety
- Phobias
- Obsessive Compulsive Disorder
- Schizophrenia
- Bipolar Disorder
- Major Depressive Disorder
- Generalized Anxiety Disorder
- Panic Disorder
- Post-Traumatic Stress Disorder
- Borderline Personality Disorder
- Narcissistic Personality Disorder
- Antisocial Personality Disorder
- Borderline Personality Disorder
- Narcissistic Personality Disorder
- Antisocial Personality Disorder

Web Content and Animations

21. Online Music Training Basic Acoustics of Musical Instruments

Soprano challenge

If you are a soprano and you think you'd like to test whether our observations reflect physical quantities as all is present, or not as some of them, perhaps you would like to try repeating the exercise recorded in the sound file above. All you need is a microphone and a computer or tape recorder. (It would help if you had some editing facility such as the Cool Edit software, but this is not necessary.) First, sing the scale below, some notes, in your professional singing voice, with projection. Depending on your comfortable range, you might want to make it C major, D major or E♭ major.

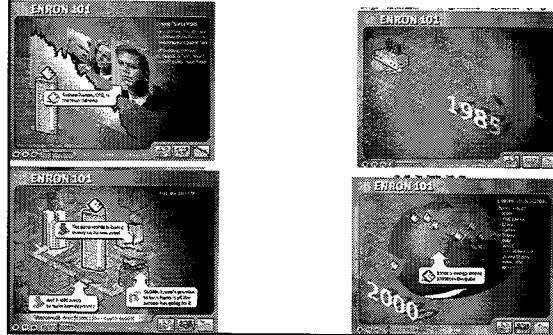


Notes: "Lo", "Le", "La", and "Li". This refers to the first notes in each of each scale. (If you have first note (one whole or half note) of each sample and put them together to make the leap path (in) the last note of each scale. Thus, get a third to mix up, the order of the notes in the final sample and every degree then, then we should really like to hear from you: that would be the basis of a very

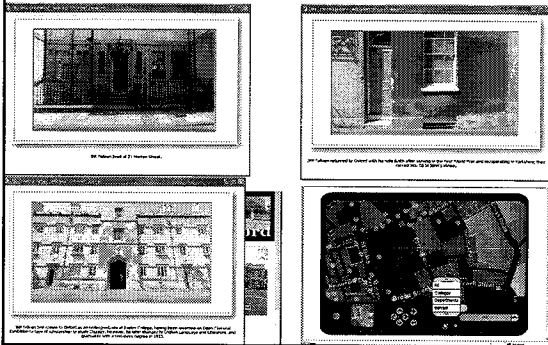
reports of the application to soprano singing are published respectively as

Web, J. and Webb, J. (2004) "Phase of vocal tract resonances by soprano", *Nature*, 431, 115-116. A detailed report is available from the author's website, www.jwebb.com.

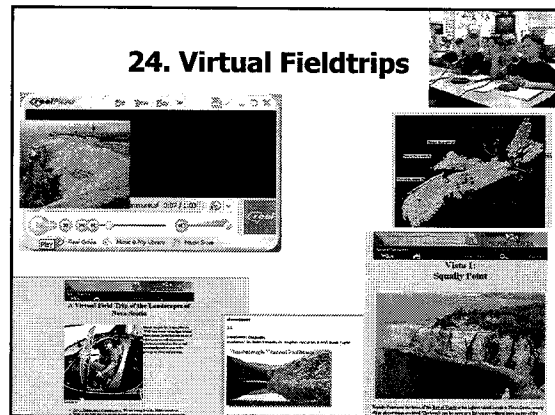
22. Interactive News on Web



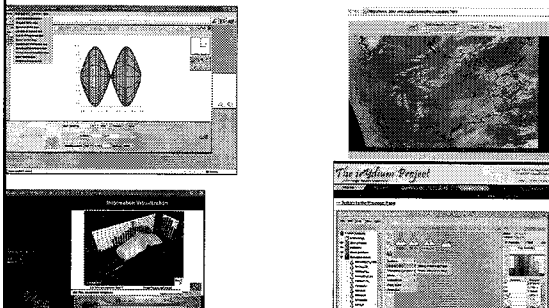
23. Virtual Tours and Timelines



24. Virtual Fieldtrips



25. Visualization & Laboratory Software



Poll: Do you think technology will change that way you teach?

- a. Yes, definitely
- b. Probably yes
- c. Maybe
- d. No
- e. Do not yet know

The End...Remember



It's Over...

Final Poll. Ok, then, who wants more???

- A. Yes
- B. No
- C. Not sure

Sorry...it really is the end!!!

BO

Your skin muscles maximize your running speed double your strength Think e