


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



Some Indiana Facts and Stats... (too many dropping out)

- IPS graduate rate from 28-45 percent. (IndyStar, May 16, 2005)
- "Just 326, 25 percent, of about 1,300 black males who entered IPS high schools in 1998 graduates four years later." (IndyStar, May 18, 2005)

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

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

- Imagine that two-thirds of the packages FedEx absolutely positively promises to deliver by tomorrow morning never arrive.
- Imagine that one-quarter of all new iPods can't play music recorded after 1999. Imagine that Gap advertises to the masses but sells its clothes only to rich customers.



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

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

- Now you have imagined the business equivalent of the U.S. system of public ed.
- 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.



There are alternatives...!!!

"Every year, more than 20,000 students quit high school before earning a diploma...Indiana graduate rates declined from 76 percent in 1991 to 72 percent in 2002." IndyStar, May 15, 2005

Poll #1. What are you???

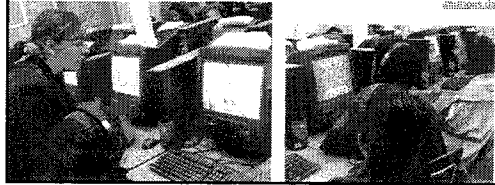
- A. Teacher, teacher assistant
- B. Special education teacher
- C. Counselor, school psychologist
- D. Curriculum specialist
- E. Administrator, principal
- F. Dept of Education, Gov't Official
- G. Social worker
- H. Other

Part I. 16 Myths of Technology in Education

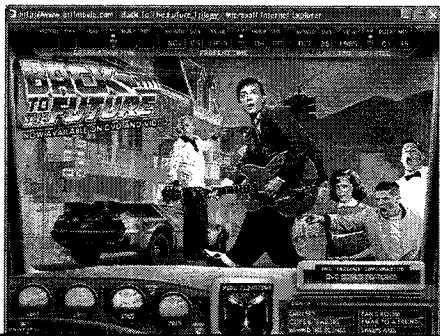


Technology Myth #1. A teacher from the 1880s can easily walk into a class and teach today.

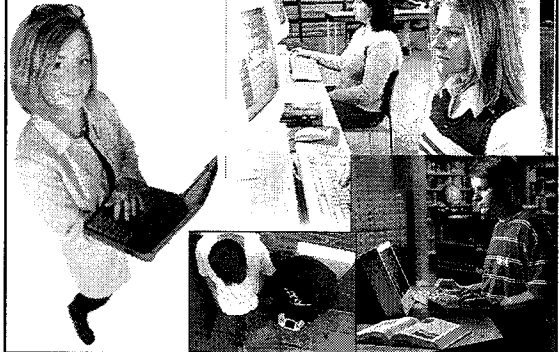
*Chris Kuch is the Science Department Chair at
Herbert A. Simmons Middle School in Haverhill, MA.
kuchc@simmons.middle.haverhill.ma.k12.us
ckuch@herbss.ms.k12.us*



1955



I'm a librarian

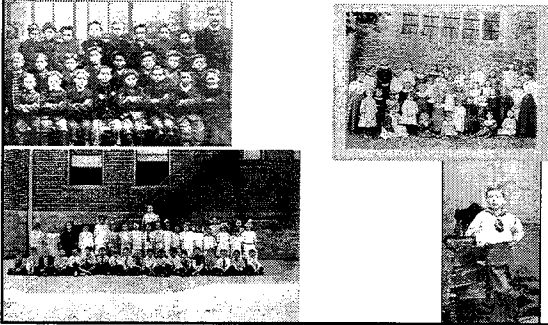


<p>1885</p> <p>CHARLES RICHARD SAMBEN</p> <p>STYL: TARA VOLZGHE</p>	<p>1955</p> <p>STEP FARMER...</p> <p>CAST: TOM VIKRAN</p>
<p>1985</p> <p>LEONARD GEORGE REELEY</p> <p>CAST: CECILIN GLOVER</p>	<p>2015</p> <p>LEONARD GEORGE REELEY</p> <p>CAST: DANIEL L. BROWN, CHRISTOPHER LEOTE</p>

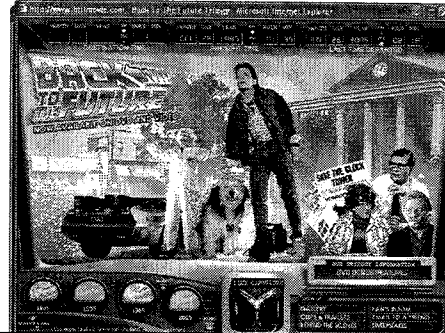
Schools of the 1880s



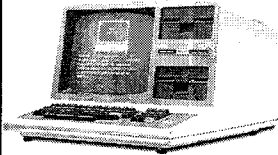
Students of the 1880s



1985



Technology of the 1980s



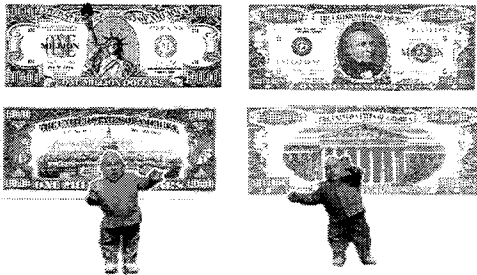
Radio Shack TRS-80 Model III

Introduced: July 1980
 Price: US \$699 base model
 US \$7495 w/ 32K, dual drives.
 CPU: Zilog Z-80, 2.03 MHz
 RAM: 4K, 48K max.
 Ports: Cassette tape, expansion, serial
 Display: 12-inch BMW monitor: 64 X 16 text
 Storage: 0, 1, or 2 internal 178K floppy drives
 External cassette @ 500 / 1500 baud
 OS: BASIC in ROM, TRS-DOS on disk

Technology of the 1980s



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

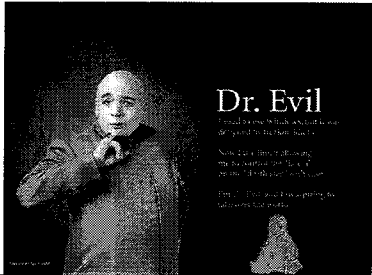


Emerging Learning Technologies

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

Myth #3.

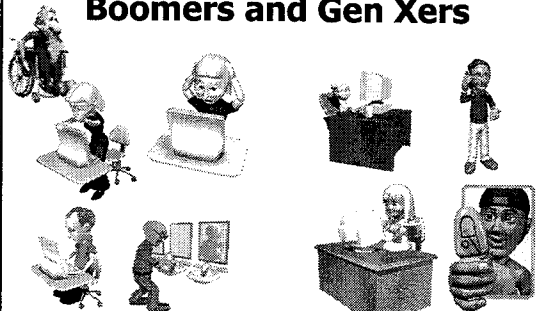
I must have a technology background to use effectively.



Dr. Evil
Fred Stone with an illustration
by Fred Stone

Not a computer whiz? No problem. This book shows you how to use technology effectively in your classroom.


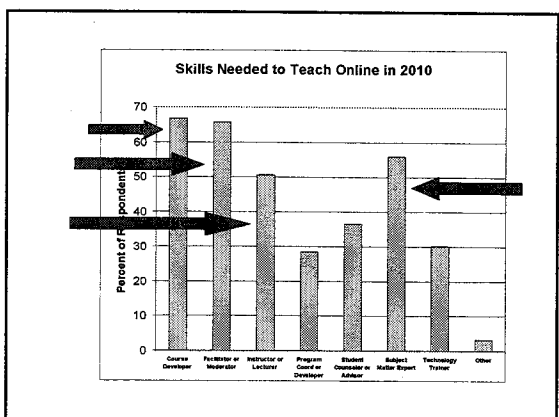
Differences between Boomers and Gen Xers



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 out

Flip-flops are in the high school kids, and for everyone else. Also out: cell phones, MP3 players, iPods, and laptops.

Info Not Enough



Michigan Rethinks Laptop Giveaway Program

Author: Megan Dwyer
Published: The Heartland Institute 06/01/2005

As computer technology prepares students to compete in a household with...

Michigan has sought to have done so with little success.


The state's track record to give laptop computers to students is not as good as it seems. Conducted by Michigan Lessons. Perhaps unsurprisingly...

<http://www.eschoolnews.com>
Contents Copyright 2005 eSchool News. All rights reserved.

Mich., Ind. mull 1-to-1 computing plans
By Robert Brunfield, Assistant Editor, eSchool News
May 10, 2005

One-to-one computing—and the educational possibilities that arise when each student has access to his or her own machine—has been the dream of many school officials for some time. But budgetary realities have kept most school districts and states from achieving the dream. Now, as one state moves toward implementing a one-to-one desktop computer program, another appears poised to cut funding entirely from its statewide laptop initiative.

Federal and state budget cuts have led Michigan state officials to consider ending that state's far-reaching one-to-one laptop program for sixth-grade students. Similar budget concerns have led Indiana state officials to go ahead with what many call a less-ambitious, desktop one-to-one model for the entire state's high schools.



Center for Ed Tech

Interoperability Standards, Nov. 24, 2003

<http://www.cetis.ac.uk/content2/20031124150257>
<http://www.sakaiproject.org/sakaiproject/>

SAKAI Overview

Free Online Tools and Resources

(e.g., Encyclopedia of Women)

BECOME A MEMBER GET CONTACT INFORMATION ETC.

Laguna

California Set from the Permanent Collection

Part 1, The Beginning, 1827-1915

Part 2, 1915-1945

Part 3, 1945-1975

Part 4, 1975-2000

Part 5, 2000-Present

Part 6, 2000-Present

Part 7, 2000-Present

Part 8, 2000-Present

Part 9, 2000-Present

Part 10, 2000-Present

Myth #5.

Technology is not appropriate for at-risk students.

George Lucas Educational Foundation (GLEF) and PBL

edutopia

Healthier Testing Made Easy

There's a radical idea. We need more assessments.

The Poll

Does emphasizing social and emotional learning improve student performance?

Give us your opinion.

Poll

Residence

Choose the residence nearest to where you live on our website, and we'll give you a prize, based on your answer.

California's Green

California's Green is a new website that will help you learn more about the state's green energy and environmental efforts.

Myth #6.

Online courses will not meet Indiana standards.

INDIANA'S ACADEMIC STANDARDS

Indiana's Academic Standards & Resources

Dr. Suellen Reed • Indiana Superintendent of Public Instruction

Students and Teachers, From K to 12,

Steve and Nick

[Listen to our Song](#)

Text: Water Pollution
Vocabulary: Predator, Prey, Population, Community, Decomposer

Water's End

Imagine all the people that would suffer if you were to be down on your knees, this thought would make you feel like there is a God above you.

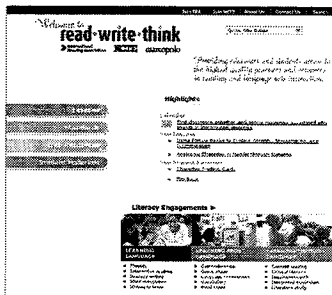
Thousands of people die in the deserts every day. The water is so scarce that people are dying. The water is so scarce that people are dying. The water is so scarce that people are dying.

It all started on June 10, 1969. One simple word was said in a small town. You'll never see it again. The only water left will be in 100 years.

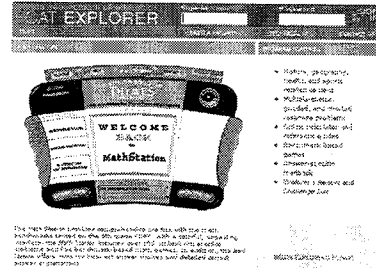
Imagine all the people that would suffer if you were to be down on your knees, this thought would make you feel like there is a God above you.

Please, do what you can with the time that is given. When the water is gone, there's nothing to be seen. The world is the predators and the prey. The only water left will be in 100 years. The decomposers are the animals, plants, and the world. Because the water is so scarce, the world is the predators and the prey.

Lesson Plan Sites with Links to Standards



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



Scavenger Hunts

Focused on the future

Spartanburg School District 3

Using Scavenger Hunts

- How To Use the Scavenger Hunt Template
- 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 Select a Decade
- Language Arts Scavenger Hunt

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



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)

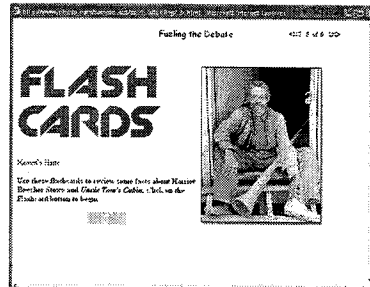
Video Library of Concepts, Cases, or Experts

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

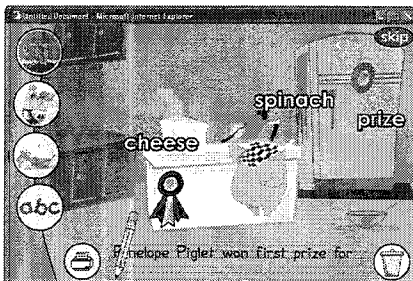


Experience. The difference.

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



Online Stories (with Audio)
(Electronic Classroom of Tomorrow (ECOT) in Ohio)



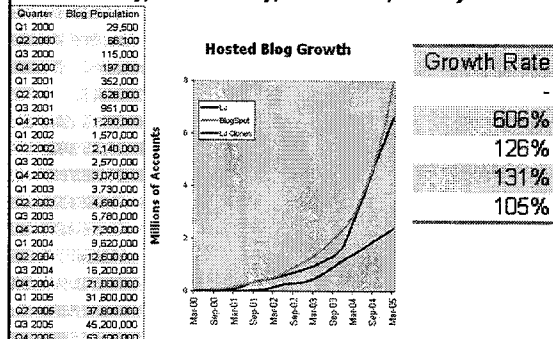
Podcasts and Wikis and Blogs!
Oh, My!



Podcasts, Wikis, and Blogs!

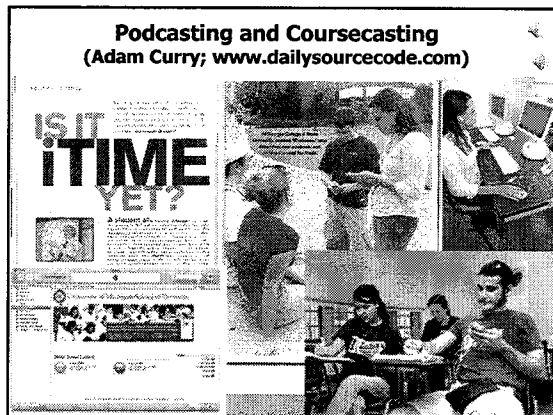
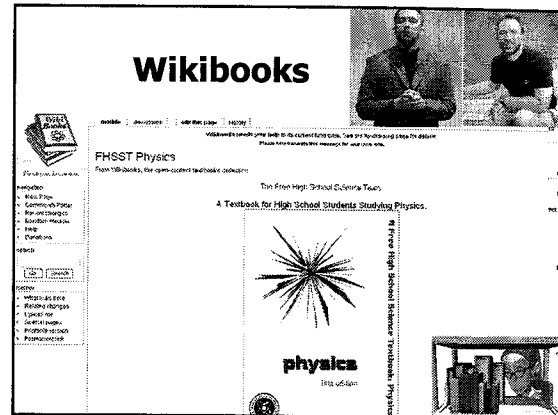


Blogging (75,000 new blogs each day, USA Today, March 27, 2006)



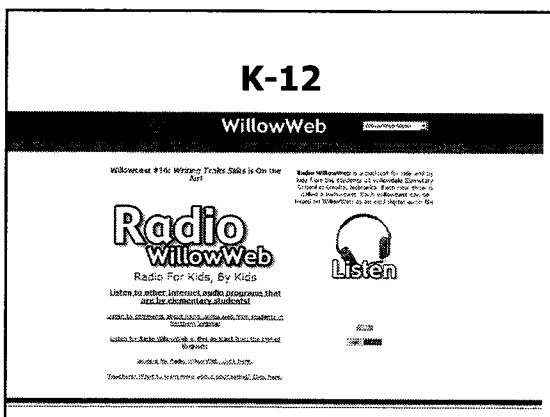
Use of Weblogs (especially English writing class)

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



Educational Applications

- Recordings of lectures (Coursecasting)
- Textbook text
- Student projects
- Interviews
- Language lessons
- Oral reports
- K-12 classroom interactions
- Downloadable library
- Recordings of performances



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

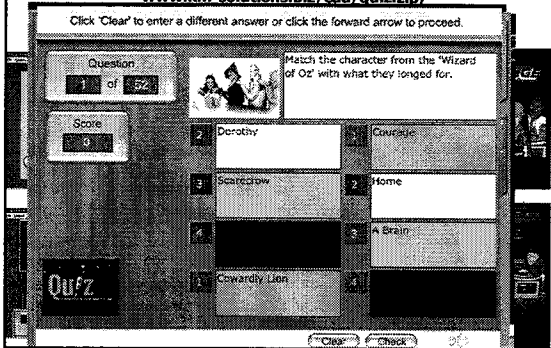


Credit: Marc Rosenthal

Virtual Worlds/Virtual Reality/MMOG



Online Jeopardy Game
www.km-solutions.biz/caa/quiz.zip



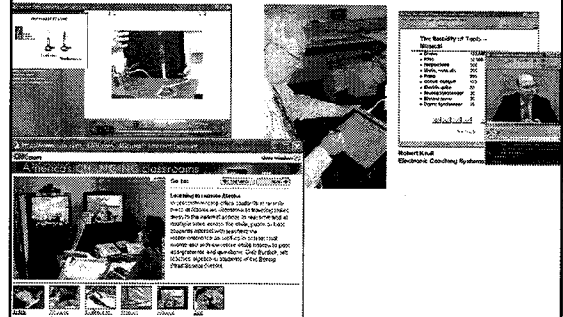
Myth #9.
Technology in the classroom eliminates the role of the teacher.



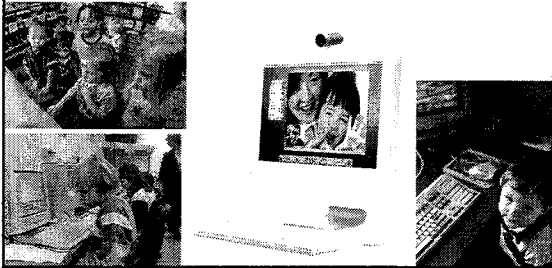
Real World: Internships and Field Experience Job Interviews



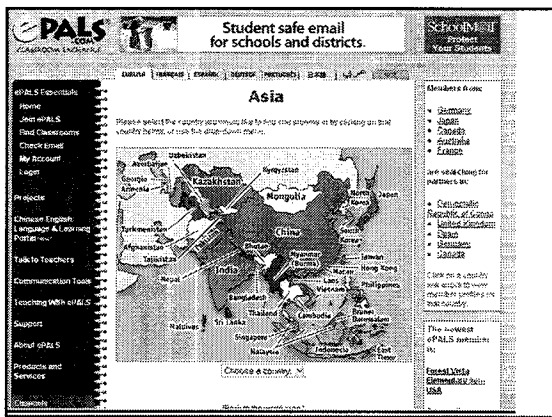
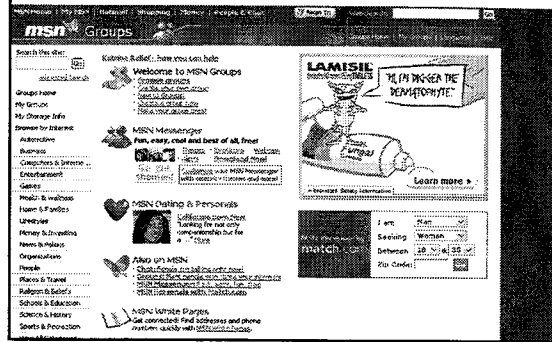
Videostreaming and Videoconferencing
 (to take off in next several years ...\$4.5 billion in 2007
 (Sept 23, 2003, Stephanie Olsen, CNet News.com).



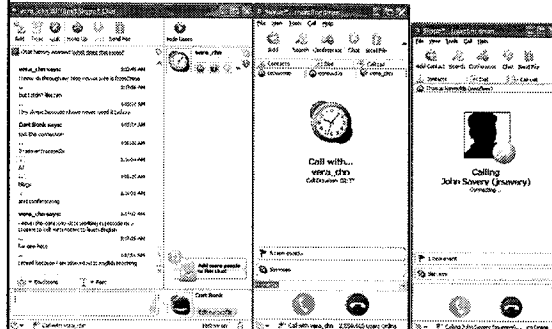
Myth #10. Online learning limits the social development of students.



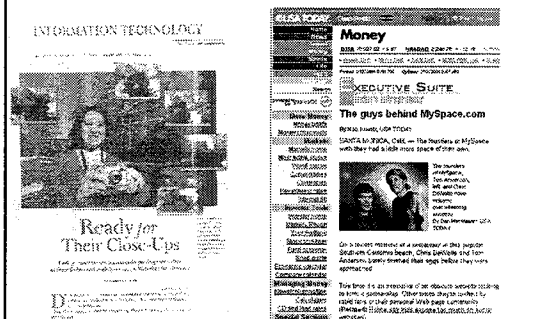
Collaborative Tools



Internet Phone Service (e.g., Skype)



Social Networking Web 2.0 (the read/write web)



Videcasts (April 21, 2006)

- As I was drinking my coffee and reading my e-mail this morning, I stumbled on ComVu PocketCaster. Here is a link to my blog post about it in case you haven't heard of ComVu. While there are several bells and whistles, in a nut shell it provides an incredibly simple hosted service for LIVE (yes, at the very moment) videocasting from a mobile phone for access by anyone with an Internet connection. So, now you can do on the spot Live video lectures from a mobile phone while in your car, your back deck, your beach chair...

Myth #11.
Technology only makes it harder
for teachers, students, and parents.



Online Exams and Homework
USA Today 11/25/03



There's Something for Everyone!

- Teachers**
 - Save time
 - Increase student engagement
 - Differentiate instruction
 - Provide immediate feedback
- Students**
 - Learn at their own pace
 - Access resources anytime, anywhere
 - Practice skills repeatedly
- Parents**
 - Stay involved in their child's education
 - Monitor progress
 - Provide additional resources
- Schools**
 - Increase student achievement
 - Reduce costs
 - Improve operational efficiency
- Librarians**
 - Increase book usage
 - Provide digital resources
 - Enhance research skills
- Funding**
 - Attract new students
 - Increase enrollment
 - Improve retention

your phone is your friend

Computer Grading
(New York Times, May 19, 2004, Latent Semantic Analysis, Thomas K. Landauer, UC Boulder)

Education

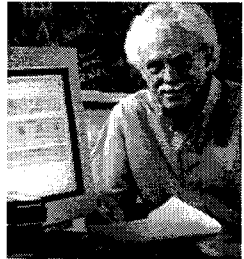
Indiana Essays Being Graded by Computers

By [Author Name]

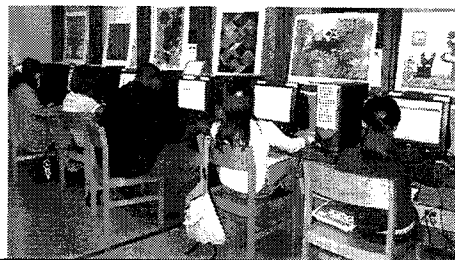
INDIANAPOLIS — In the computer lab at Warren Central High School in north Vigo County, Ind., a young student sits at a computer, his face lit with concentration as he reads the screen.

It's not just the student who is looking at the screen. It's also a computer program that is grading his essays. The program, called e-Reader, is a software program that can read and grade essays.

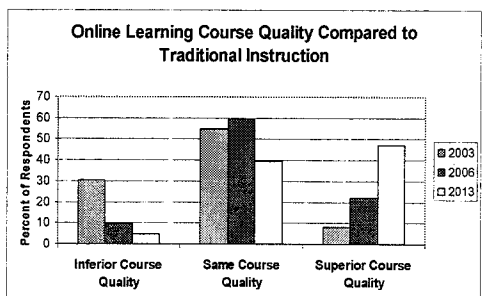
The program is being used to grade essays in the state of Indiana. The program is being used to grade essays in the state of Indiana. The program is being used to grade essays in the state of Indiana.



Myth #12.
Online learning is inferior to more
traditional FTF instruction.



Online quality is inferior.



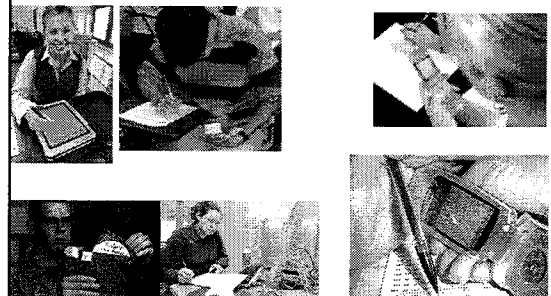
Mobile-phone cheating in exams on the rise

By Reuters
 PUBLISHED: 11/25/03 11:00 AM
 REUTERS

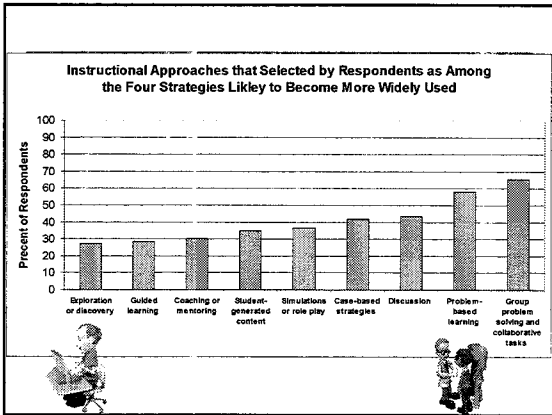
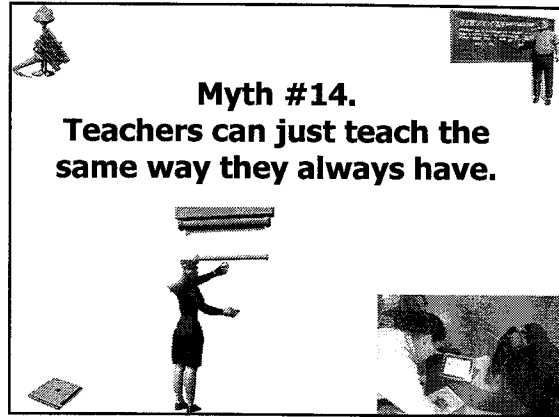
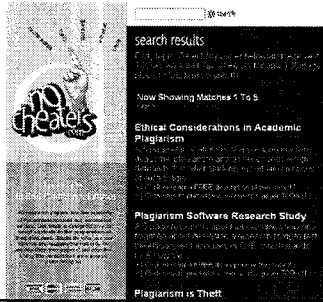
Online era eases path to cheating

By Reuters
 PUBLISHED: 11/25/03 11:00 AM
 REUTERS

Myth #13. Students will cheat more online.



The Evil House of Cheat

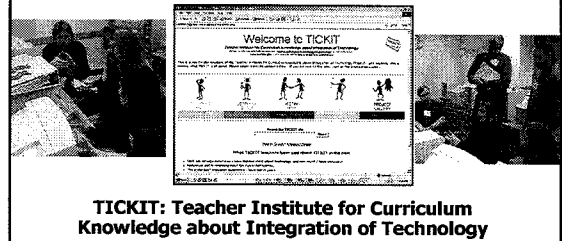


Many Professional Development Programs




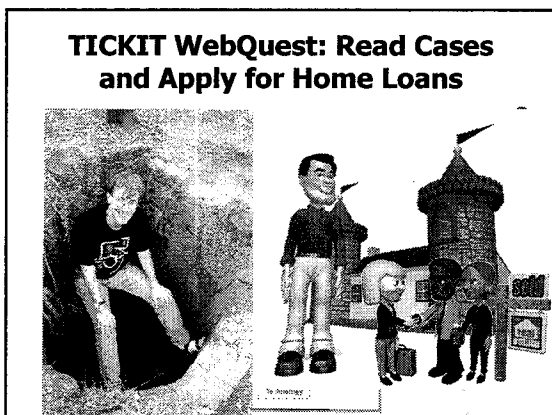
Teacher Professional Development in Technology Integration (the TICKIT Program)

(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


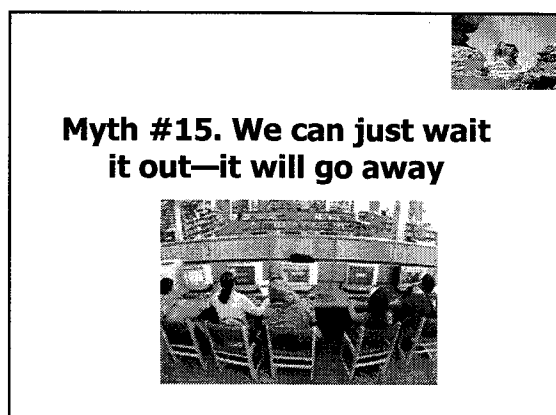
Findings

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"

Prefer online to traditional!

EDUCATION with Student View
Students prefer online courses
 Classes popular with on-campus students

From *News 10, 2004* Press 5 10 a.m. EST 10 10 a.m.

UPI — Andy Zevalle lives just a few blocks from the campus of Black Hills State University in Spearfish, South Dakota. He's commuting to class isn't the problem. But he misses the lecture halls, the morning papers, and wants more during the day to reduce monotony.

UPI — A 10-year-old student has just finished a math class. He's not sure if he's better off with the online course or the traditional one.

Money
 DOW 10.88 2.25 21.07 NASDAQ 2,172.24 4.84
 EQUITY *FUND* *COM* *CURRENCY* *CREDIT* *COMMODITY* *LEADERBOARD* *MARKET* *ECONOMY* *TECHNOLOGY* *POLITICS* *LAW* *SPORTS* *ENTERTAINMENT* *LIFE*
 Postal 11:00 AM PST Updated 11:00 AM PST

Generation Y: They've arrived at work with a new attitude

By Stephanie Amour, USA TODAY

Peak Consulting, an educational consulting group, estimates:

- 1 million American high school students are currently taking Internet courses in 2004-05
- 571,000 in 2003
- 378,000 in 2002
- More students log on to learn, Boston.com, Peter Schworm, September 16, 2004.

No Child Left Behind Summit,

e-Learning and Students Today: Options for No Child Left Behind
 Susan Patrick, Director, Office of Educational Technology, U.S. Department of Education
http://www.nclbtechsummit.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.

North Central Regional Educational Laboratory
 Colorado Department of Education • Illinois Virtual High School • Wisconsin Virtual School

KEEPING PACE WITH K-12 ONLINE LEARNING A Snapshot of State-Level Policy and Practice

LEARNING POINT
 1120 East Overland Blvd., Suite 200
 Englewood, CO 80150-1200
 800-542-2116 • 303-686-6500
www.learningpoint.org

STATE	STATEWIDE PROGRAM	ONLINE PROGRAM ACTIVITY ¹	POLICY ²
California	Yes	Moderate	Extensive
Colorado	Yes	High	Minimal
Florida	Yes	Moderate	Moderate
Idaho	Yes	Low	Moderate
Illinois	Yes	None	Minimal
Michigan	Yes	Low	Minimal
Minnesota	No	Moderate	Extensive
Ohio	No	High	Moderate
Pennsylvania	No	High	Moderate
Texas	No	Moderate	Moderate
Wisconsin	Yes	Moderate	Minimal

May 2004, http://www.ncrel.org/tech/pace/Keeping_Pace.pdf

ECOT Electronic Classroom of Tomorrow

About ECOT | ECOT News & Events | Contact ECOT | Careers

Welcome to ECOT!

ECOT honors graduates in fourth annual Commencement ceremony.

ECOT Traveling Superintendents greet students, teachers in Portsmouth and South County.

The Electronic Classroom of Tomorrow (ECOT) is an online public community school sponsored by the Lucas County (Ohio) Educational Service Center (LUESC). ECOT's experienced teachers educate thousands of students throughout the state of Ohio.

Explore our site to find out all about ECOT: details about our online courses of study, the enrollment process, and most importantly, the people that make it all happen—the students, teachers and administration of ECOT.

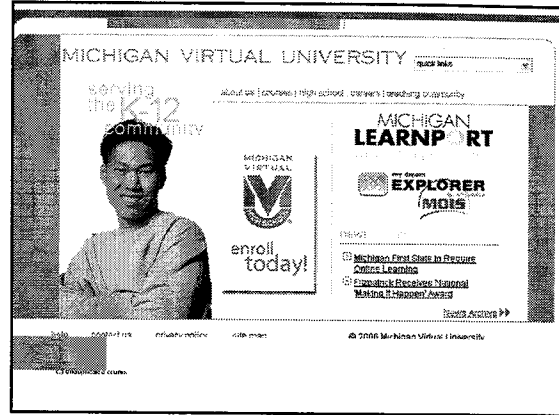
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A Concept Paper on Funding State Sponsored E-Learning Programs
Daniel W. Schultz and Jamey Fitzpatrick
Michigan Virtual University, January 2004

Table 1: State Sponsored Virtual High School Enrollment Growth

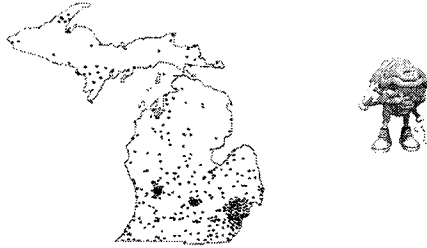
K-12 Virtual Initiative	Launch Year	Launch Year Enrollment	Enrollments in 2002/03	Avg. Annual Enrollment Growth
Florida Virtual High	1997	77	10,000	165%
Illinois Virtual High School	2001	409	1,232	201%
West Virginia Virtual High School	2000	300	1,200	100%
E-School (Hawaii)	1997	96	500	39%
Michigan Virtual High School	2000	77	7,282	125%

Source: School data and Eduventures research, September 2003



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)



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



Digital Stories

Home | Products | Educational Stories

Educational Stories

The Eastland Disaster
 Author: Johnny Chung & Justin Flores
 Book: Miles Myers High School
 Inspired By: Johnny Chung & Justin Flores

Did you know that Chicago has its very own shipwreck? The excursion steamer Eastland rolled over in 1915, ending the lives of over 900 people in the shallow waters of Lake Michigan.

LIST OF VIDEO'S
 Eastland | The Eastland Disaster | The Eastland Disaster | One More Story for Tomorrow |
 The Eastland Disaster | The Eastland Disaster | The Eastland Disaster | The Eastland Disaster | The Eastland Disaster

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Innovation is but one click away...

eSCHOOL NEWSonline™
Where K-12 Education and Technology Meet

<http://www.eschoolnews.com>
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Interactive teaching' engages learners
From eSchool News staff and wire service reports
May 11, 2005

A wireless handheld technology similar to the remote control you use to control your television sets is transforming large, impersonal college lecture courses into dynamic, interactive learning labs. Although credited mostly to proponents—that's potential far beyond the lecture hall.

In a recent "Ethics and Public Policy" class, Brown University professor Ross Chert asked his students if they had a moral obligation to report cheating if they knew about it.

The room began to hum, but no one called out an answer or raised a hand. Still, in 90 seconds, Chert had roughly 150 student responses displayed on an overhead screen, plotted as a multicolored bar graph—64 percent, yes, 35 percent, no.

Virtual Tours and Timelines

Virtual Tour of Oxford

Welcome to the unique photographic virtual reality tour of the historic university city of Oxford.

This visually stunning resource uses interactive web pages which allow you to explore and manipulate 360-degree photographic panoramas of the city and university. It is constructed from hundreds of high quality photographs of Oxford.

Excels from the Virtual Tour of Oxford:

- A Virtual Walk up St Giles
- Inspector Marston's Oxford
- Virtual Walk around they village
- Allie Tolkien's Oxford - explores some of the favorite places of Oxford resident Mrs Tolkien, author of "The Lord of the Rings"
- The Virtual Magdalen Walk - from Magdalen Street to Magdalen Bridge
- The Virtual Walk around the University Park
- The Virtual Pub Crawl - take a walk at 66 of Oxford's pubs.

Virtual Fieldtrips

A Virtual Field Trip of the Landscape of New York

Virtual Field Trip: Squally Point

Visualization & Laboratory Software

The Italian Project

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

PSYCHEXPERIMENTS
Psychology 101: All levels in 100 minutes

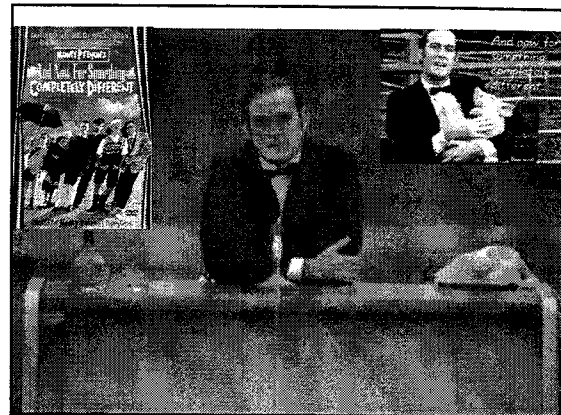
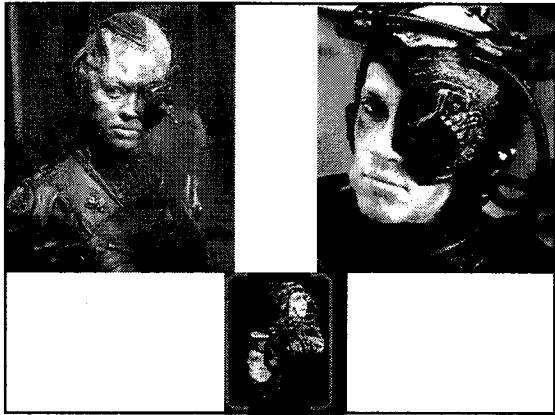
Interactive tutorial on the synthesis of ketones including:

- Ketone synthesis
- Distillation practice
- Mechanisms
- Reagents

With Quizzes and Laboratory

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

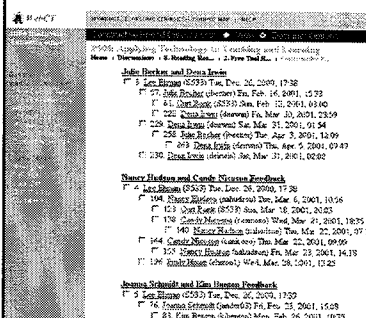

#2. Practitioner Feedback: Asynchronous Threaded Discussion plus Sync Expert Chat (e.g., Starter-Wrapper + Sync Guest Chat)

#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...


Poll #2: 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!!!



Your skeletal muscles' maximum burn rate is double that of your brain. Think about it.