The Perfect E-Storm: Emerging Technology, Enhanced Pedagogy, Enormous Learner Demands, and Stagnant Budgets

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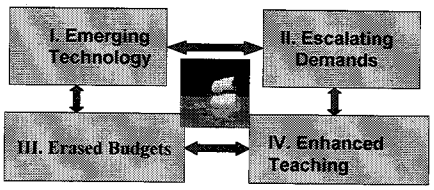
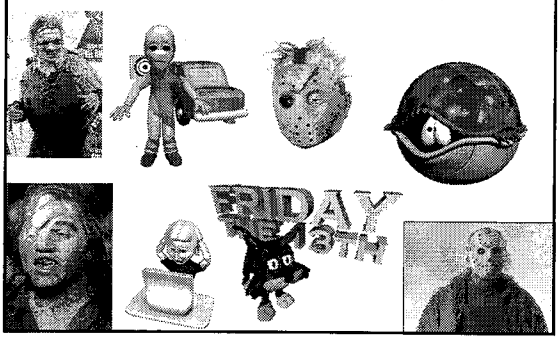
President, SurveyShare, Inc.
http://php.indiana.edu/~cjbonk
cjbonk@indiana.edu

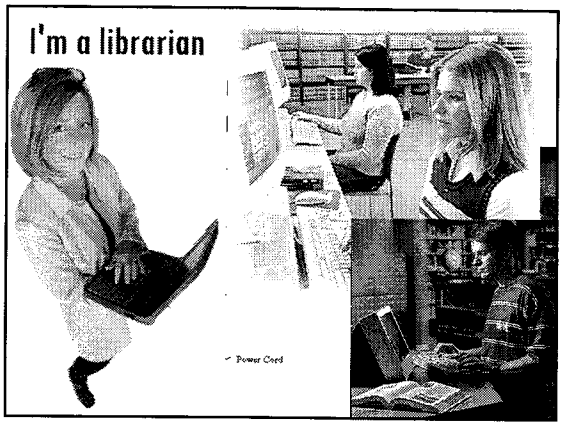
Four Storms are Approaching



Some are scared of the storm!!!



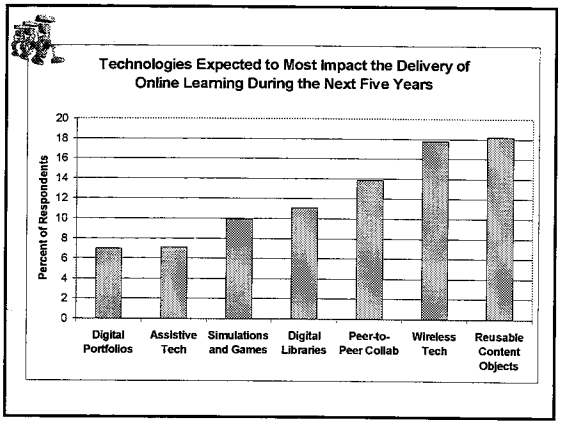
I'm a librarian

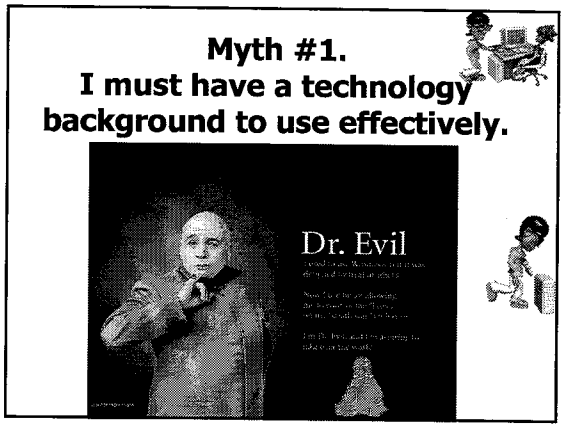


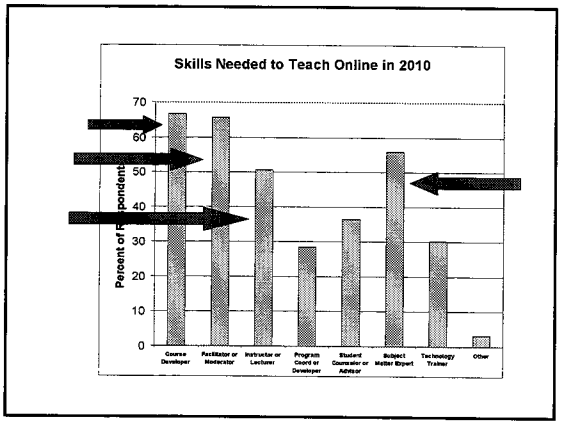
Ok, Million Dollar Question: Which technology will impact schools the most?

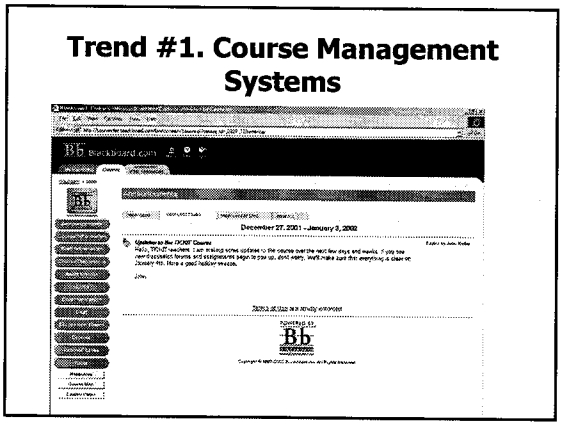
Storm 1. Emerging Learning Technologies

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
Percent of Respondents
20
18
16
14
12
10
8
6
4
2
0
Digital Portfolios
Assistive Tech
Simulations and Games
Digital Libraries
Peer-to-Peer Collab
Wireless Tech
Reusable Content Objects


Myth #1.
I must have a technology background to use effectively.
Dr. Evil


Skills Needed to Teach Online in 2010
Percent of Respondents
70
60
50
40
30
20
10
0
Course Developer
Facilitator or Moderator
Instructor or Lecturer
Program Coord or Developer
Student Counselor or Advisor
Subject Matter Expert
Technology Trainer
Other


Trend #1. Course Management Systems
Bb
December 27, 2001 - January 2, 2002

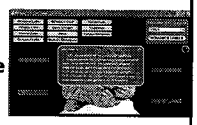
Trend #2: Wireless Technology
MOST (UN)WIRED SCHOOLS?
CNET and U.S. News and World Report got the top 50 universities' tech specs and asked them which computers they recommend to students and faculty.
CLICK HERE TO VIEW
Creating the Real-Time Enterprise
Handheld Computing

Trend #3: Mobile Technology
msn Tech & Gadgets
Next hot trend for cell phones: Reading?
Mobile technology meets the novel in Japan
The gadget is an all-in-one handheld de
allows users to view full-motion video, l
music, record voice messages in real tin
images and play games.

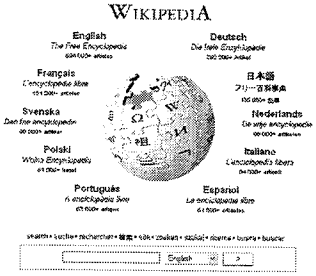
Trend #4: Reusable Content Objects

- **"Learning Objects are small or large resources that can be used to provide a learning experience. These assets can be lessons, video clips, images, or even people. The Learning Objects can represent tiny "chunks" of knowledge, or they can be whole courses."**

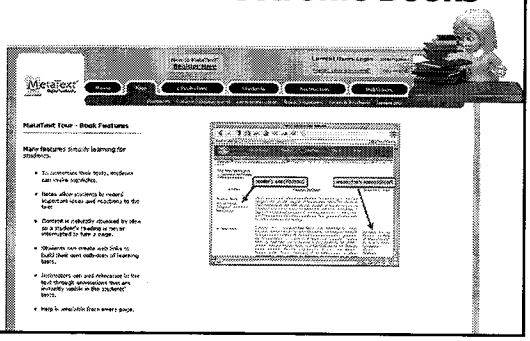
  Claude Ostyn, Click2Learn



Trend #5. Wikipedia (Jimmy Wales, Founder)

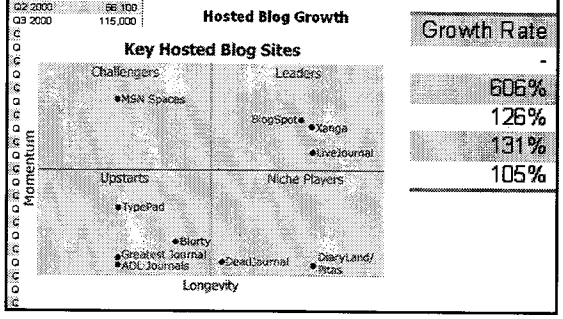


Trend #6. Electronic Books

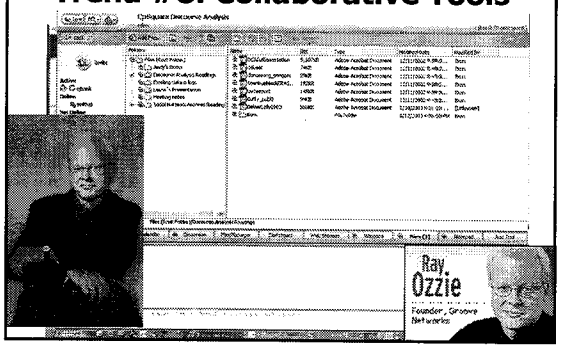


Trend #7: Blogging

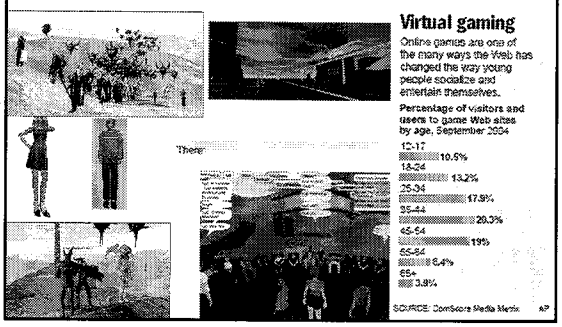
Quarter	Blog Population
Q1 2000	29,500
Q2 2000	66,100
Q3 2000	115,000



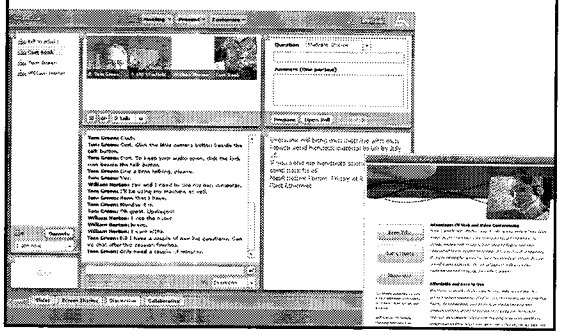
Trend #8. Collaborative Tools



Trend #9: Virtual Worlds/Virtual Reality/MMOG

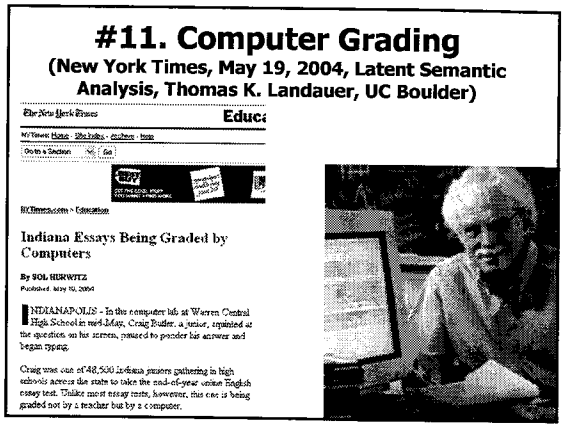


Trend #10: Synchronous Conferencing



#11. Computer Grading

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



The New York Times

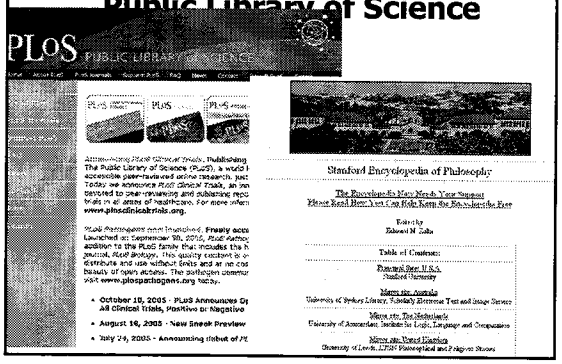
Indiana Essays Being Graded by Computers

By SOL HURWITZ

INDIANAPOLIS - In the computer lab at Warren Central High School in mid-May, Craig Butler, a junior, squinted at the question on his screen, paused to ponder his answer and began typing.

Craig was one of 46,500 Indiana juniors gathering in high schools across the state to take the end-of-year written English essay test. Unlike most essay tests, however, this one is being graded not by a teacher but by a computer.

#12. Free Online Resources: Public Library of Science



PLoS PUBLIC LIBRARY of SCIENCE

Standford Encyclopedia of Philosophy

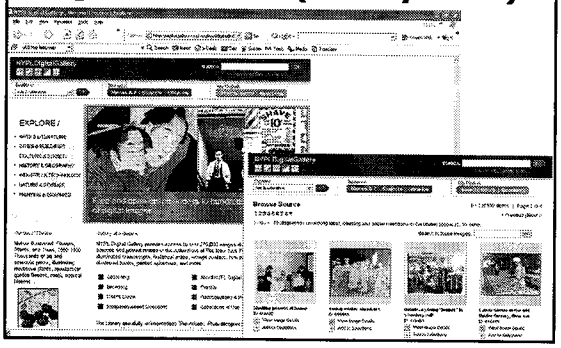
Museum of Online Museums

BECOME A MEMBER

Laguna

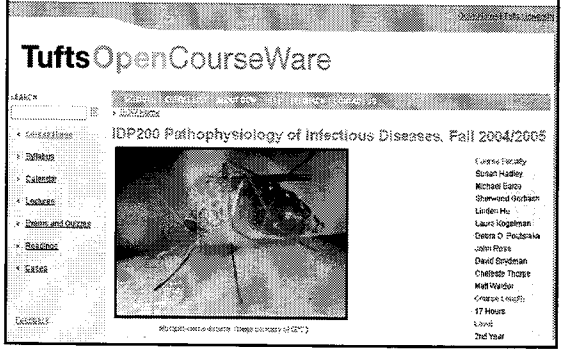
California Art from the Permanent Collection:

Digital Libraries (LibraryShare)



EXPLORE /

Tufts OpenCourseWare Project



TuftsOpenCourseWare

IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005

What about negative technologies?

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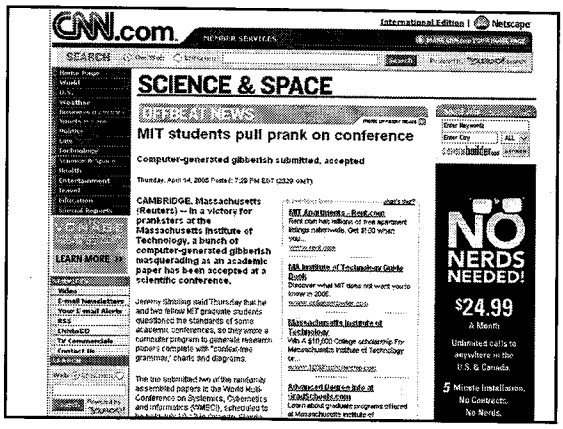
BA BSc MA MSc MBA PhD

Within 2 weeks!
No Study Required!
100% Verifiable!

These are real, genuine degrees that include Bachelors, Masters and Doctorate degrees. They are verifiable and student records and transcripts are also available. This little known secret has been kept quiet for years. The opportunity exists due to a legal loophole allowing some established colleges to award degrees at their discretion. With all of the attention that this news has been generating, I wouldn't be surprised to see this loophole closed very soon.

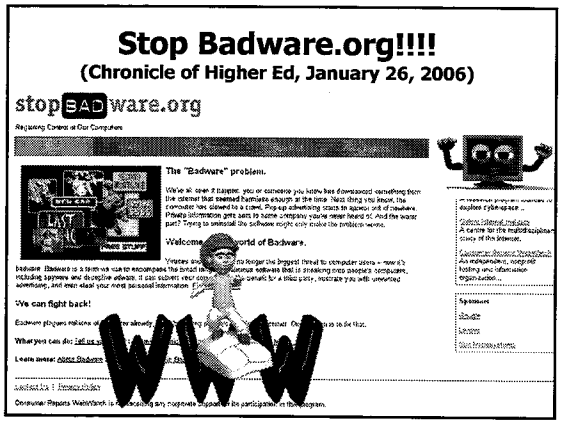
Order yours today!
Just call the number below.
You'll thank me later...

+1-206-984-0021

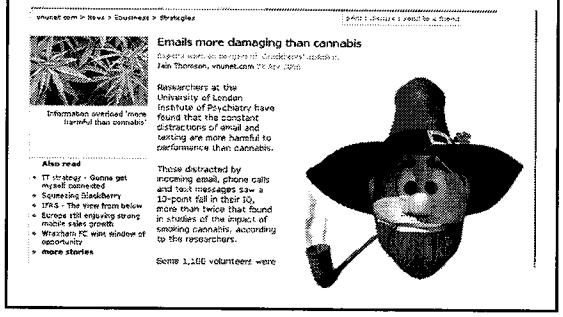


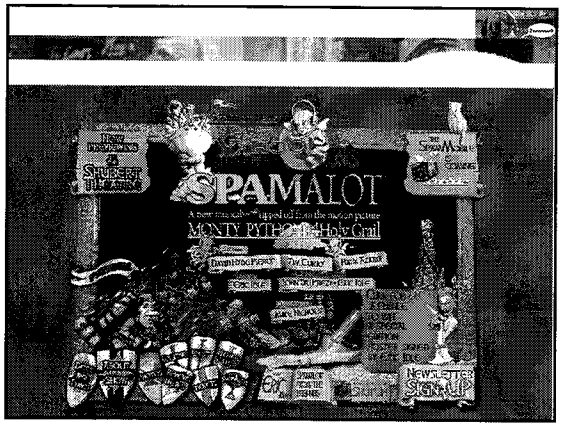
Stop Badware.org!!!!

(Chronicle of Higher Ed, January 26, 2006)



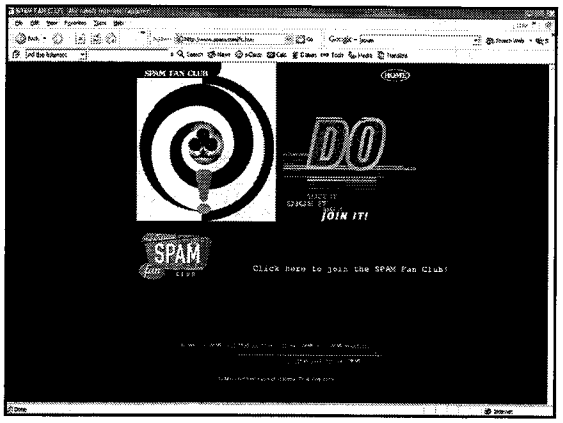
Ok, Who Feels Dumb When Answering Email?





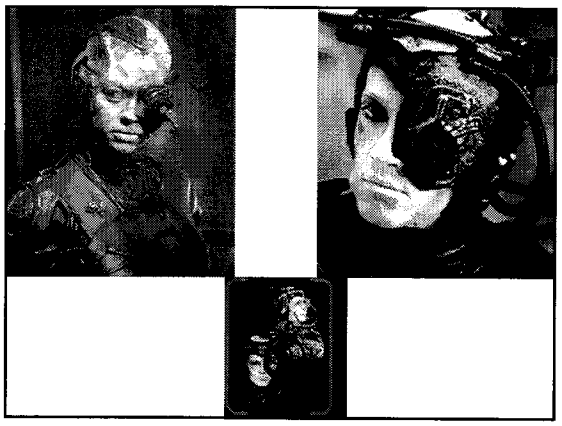
Monty Python Spam Song

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

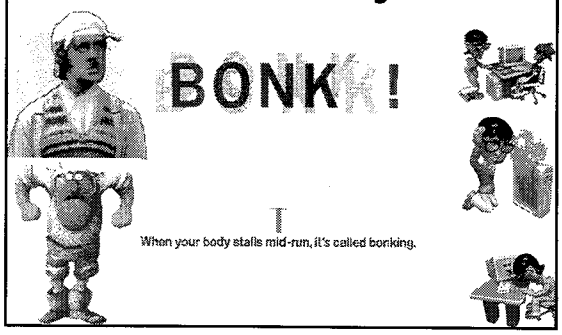


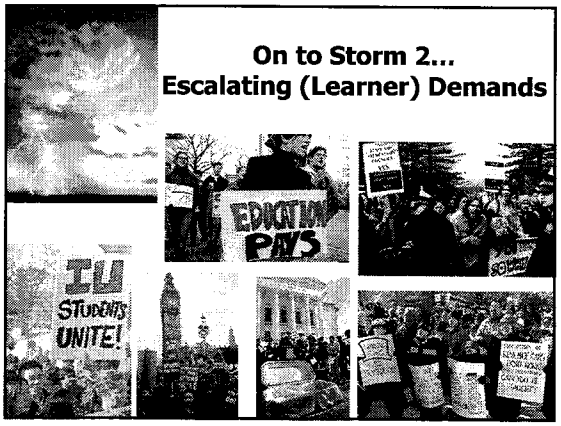
What can we say about emerging technology then???

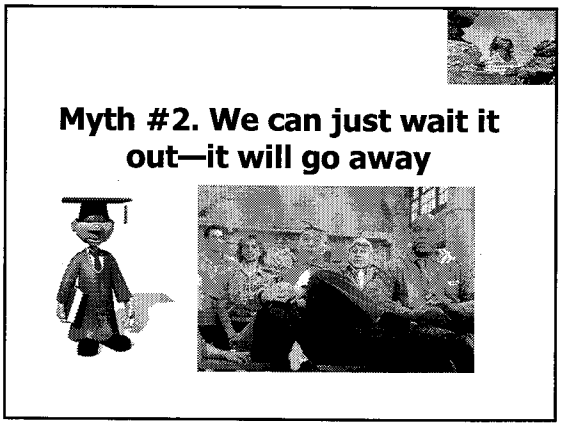
- **It is everywhere!!!!!!!!**
- **Resistance is futile!!!!!!!**



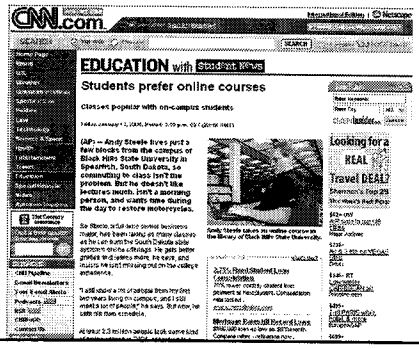
How many have ever felt that they hit the wall as far as teaching online?



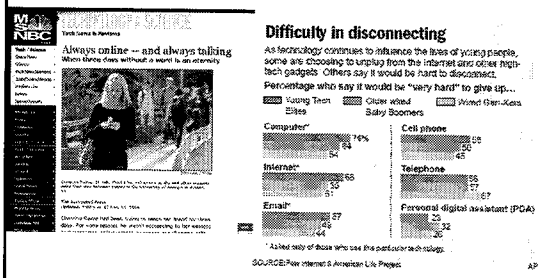




Prefer online to traditional!



Demand for Internet in US

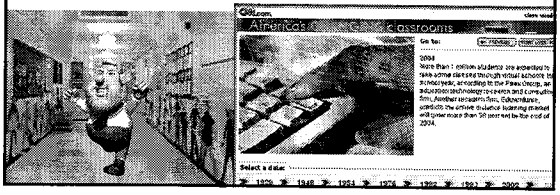


Generation Raised on the Internet Comes of Age, MSNBC, Dec., 13, 2004, Martha Irvine

- **For 21-year-old William Herbert, the Internet has replaced newspapers and TV weather reports (he visits Weather.com every morning). He pays his bills online, registers for classes, books airline and train tickets, checks TV listings, buys movie tickets and gets travel directions.**

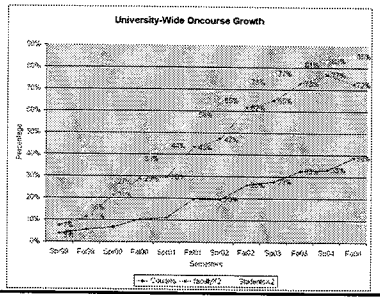
Peak Consulting, an educational consulting group, estimates:

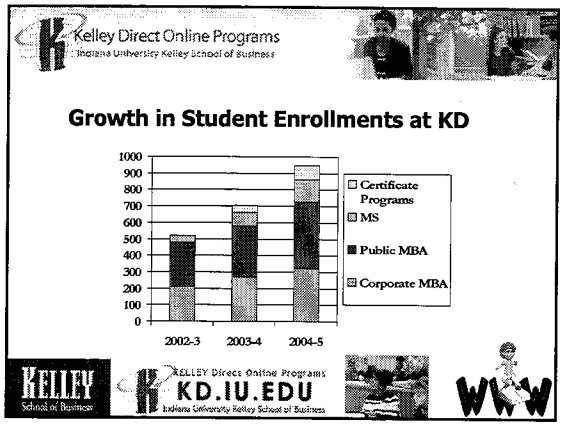
- 1 million American high school students are currently taking Internet courses in 2004-05
- 571,000 in 2003
- 378,000 in 2002
  - More students log on to learn, Boston.com, Peter Schworm, September 16, 2004.

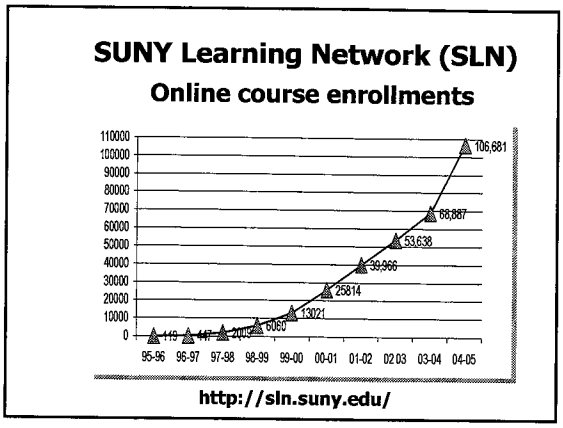


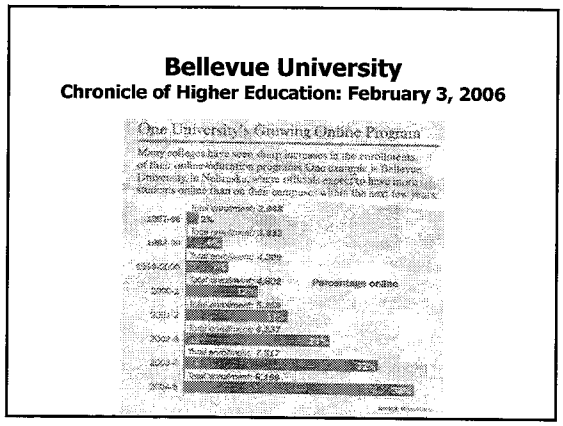
Indiana Univ (8 campuses): Spring 2005

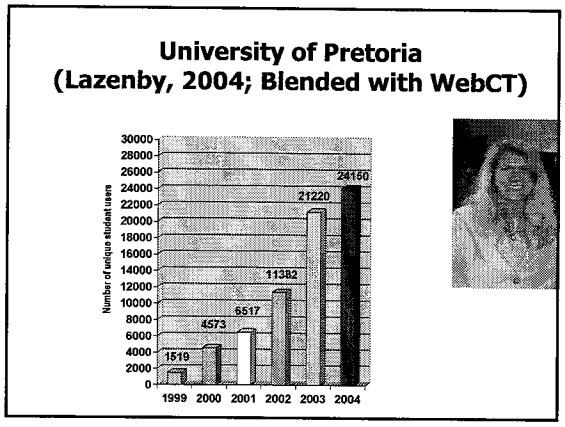
Students: 89,413 loaded; 78,549 logged in (88%)
Faculty: 7,014 loaded; 5,441 logged in (78%)
Courses: 22,419 loaded; 9,206 active (41%)

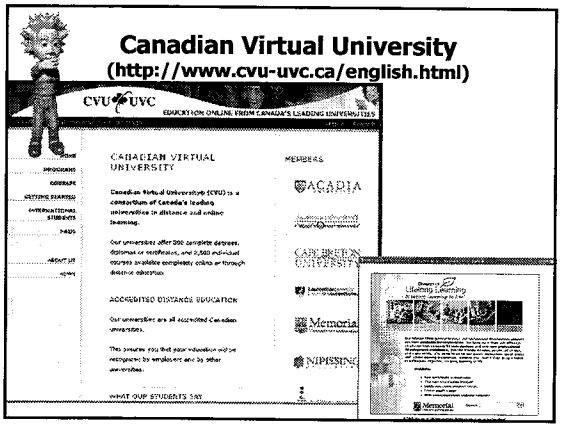


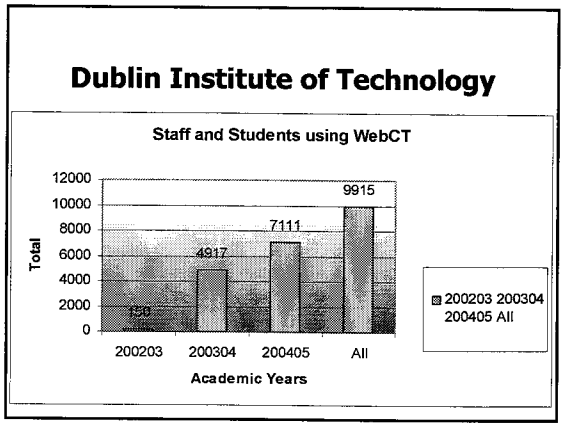

Kelley Direct Online Programs
Indiana University Kelley School of Business
Growth in Student Enrollments at KD
1000
900
800
700
600
500
400
300
200
100
0
2002-3
2003-4
2004-5
Certificate Programs
MS
Public MBA
Corporate MBA
KELLEY
School of Business
KELLEY Direct Online Programs
KD.IU.EDU
Indiana University Kelley School of Business
WWW


SUNY Learning Network (SLN)
Online course enrollments
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
106,681
66,887
53,638
39,966
25814
13021
6060
95-96
96-97
97-98
98-99
99-00
00-01
01-02
02 03
03-04
04-05
http://sln.suny.edu/

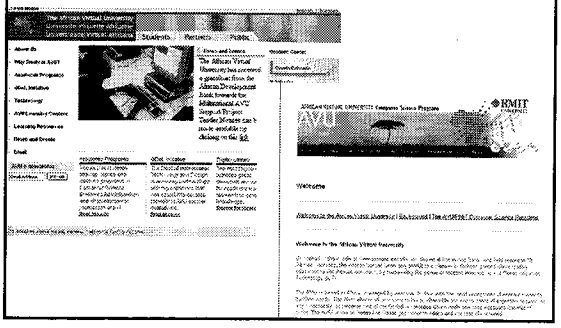

Bellevue University
Chronicle of Higher Education: February 3, 2006
One University's Growing Online Program
Percentage online


University of Pretoria
(Lazenby, 2004; Blended with WebCT)
Number of unique student users
30000
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
24160
21220
11382
6517
4573
1519
1999
2000
2001
2002
2003
2004

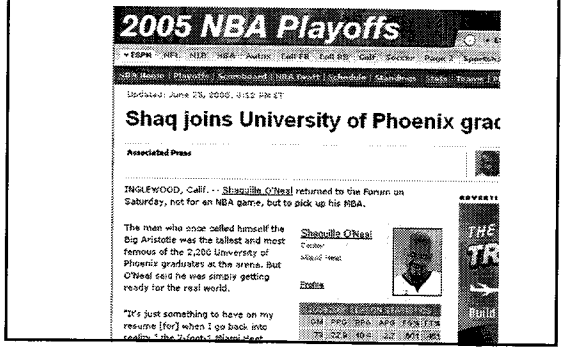

Canadian Virtual University
(http://www.cvu-uvc.ca/english.html)
CVU UVC
CANADIAN VIRTUAL UNIVERSITY
MEMBERS
ACCREDITED DISTANCE EDUCATION


Dublin Institute of Technology
Staff and Students using WebCT
Total
12000
10000
8000
6000
4000
2000
0
9915
7111
4917
200203
200304
200405
All
Academic Years
200203 200304
200405 All

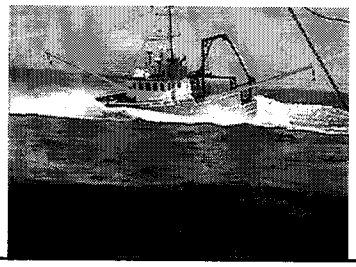
African Virtual University



Even Shaq is taking courses online!



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

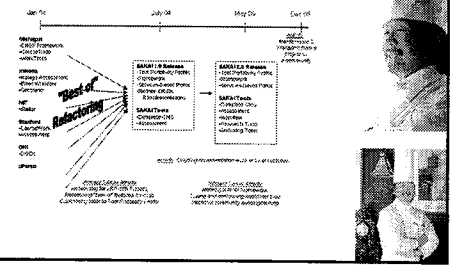


Myth #3. My school or university cannot afford online learning.

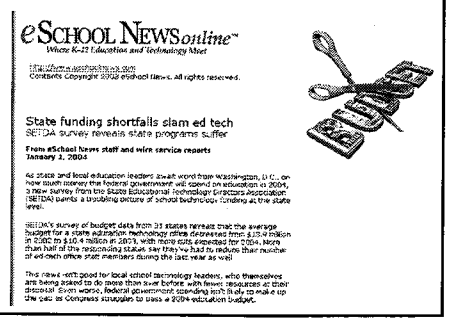
Center for Ed Tech

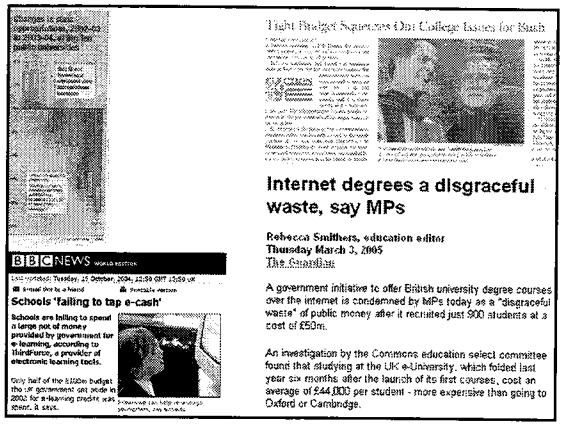
Interoperability Standards, Nov. 24, 2003
http://www.cetis.ac.uk/content2/20031124150257
http://www.sakaiproject.org/sakaiproject/

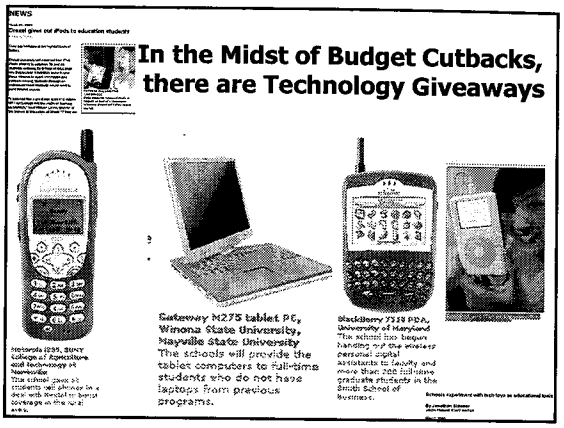
SAKAI Overview



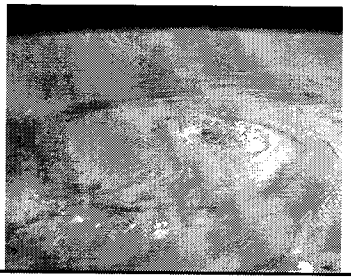
eSchool News, January 1, 2004 Average Budget Slashed from $13.9 to $10.4

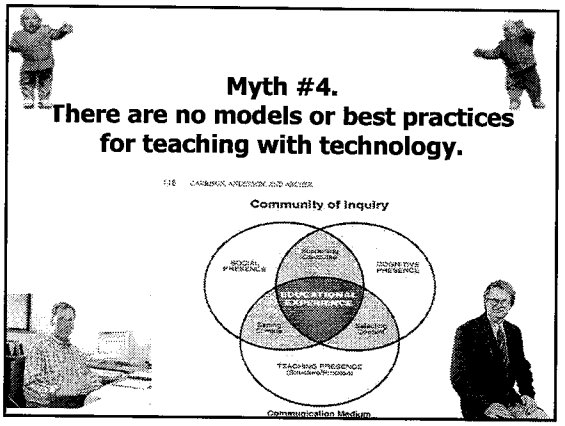






On to Storm 4: Enhanced Teaching (and Excellent Retention)
(a swirling storm)



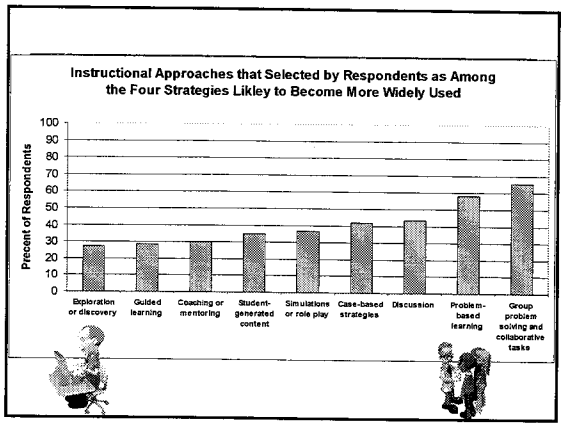


Three Most Vital Skills

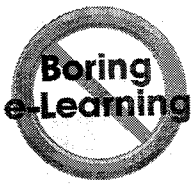
The Online Teacher, TAFE, Guy Kemshal-Bell (April, 2001)

- **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 #5.
Teachers can just teach the same way they always have.

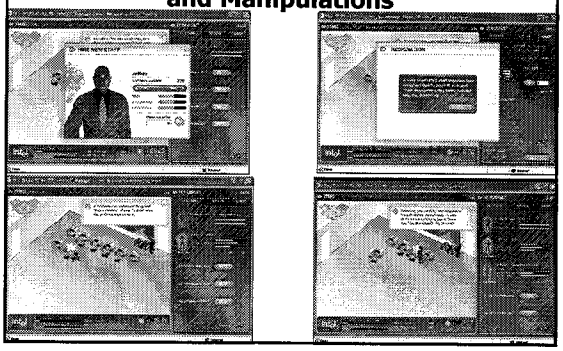


24 Online Pedagogical Examples that are not boring!

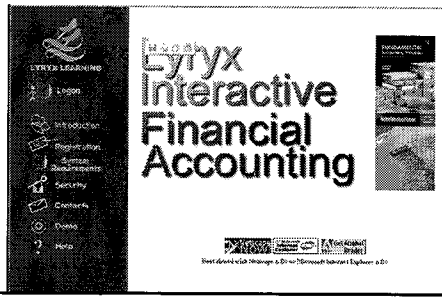


Experience. The difference.

1. Educational Simulations, Scenarios, and Manipulations

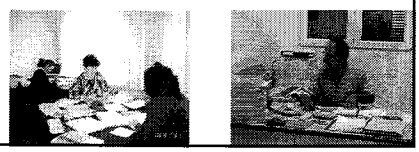


2. Financial Accounting (University of Calgary)

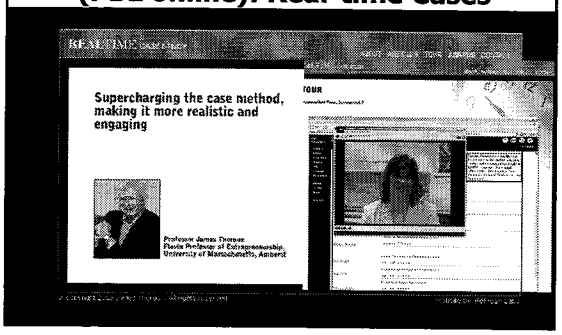


3. Link Book and Field:
Internships/Field Experience Job Interviews

1. **Instructor provides reflection or prompt for job related or field observations**
2. **Reflect on job setting or observe in field**



4. Real World Problems (PBL online): Real-time Cases

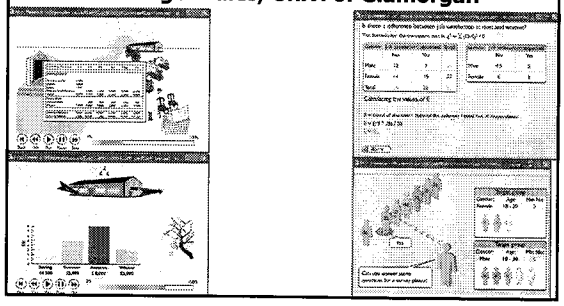


5. Apprenticeship: Electronic Guests & Mentoring

6. Teacher as Guide: Math Emporium of Online Tutorials and Testing (Virginia Tech, Robert Olin)

7. Flash Visuals and Animations (e.g., Statistics, Cash Flow, news, etc.)

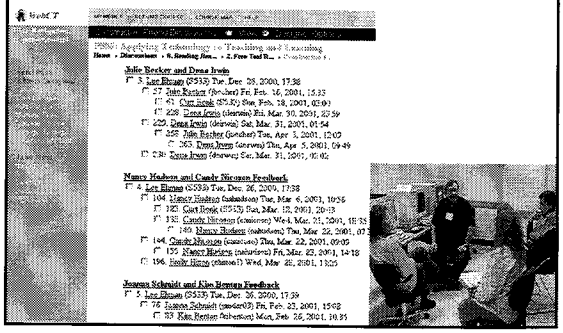
eCollege Wales, Univ. of Glamorgan



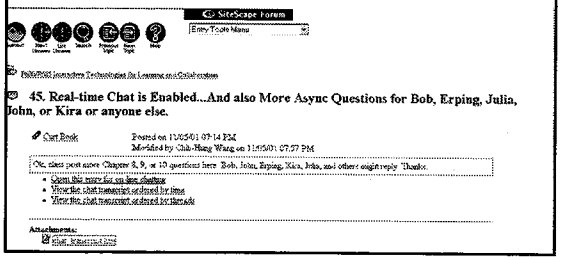
8. Exploration and Demonstration: Virtual Fieldtrip

(Trinity College example)

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



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



11. Online Role Play of Scholars, Personalities, or Famous People

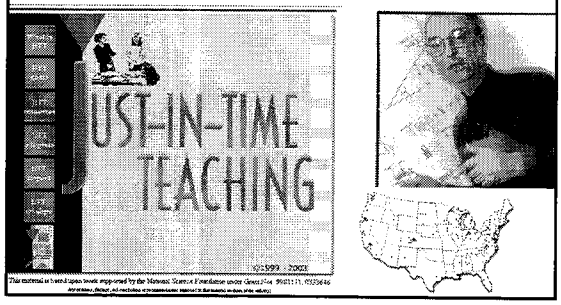
- Enroll famous people in your course
- Students assume voice of that person for one or more sessions

24.3. I am so wise...so listen — Aristotle — 11/25/03 05:49 PM

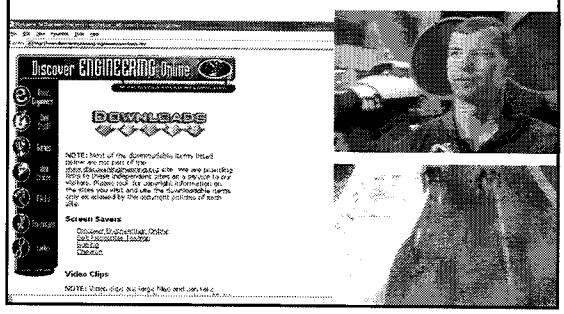
> - Training Magazine might have a a little bit of a bias too. Also, I h boring instructional animations and videos. Classroom or e-learnin a good audiotape - they can all be good for learning. Cost-effectiv to go away as an issue, so we might as well face it instead of sayin learning is better than another - because it costs more! How did y of the Huns? Didn't you compare prices on spears and horses bef global conquests?

24.3.1. Again my opinion - e-learning is NOT cost-effective and is NOT value for money, and does NOT equate good quality — Attila the Hun

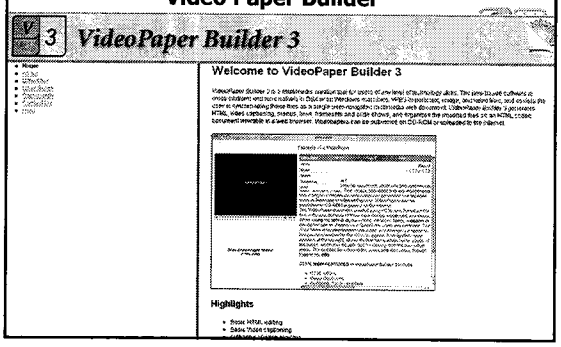
12. Just-In-Time-Teaching (JiTT) http://webphysics.iupui.edu/jitt/jitt.html



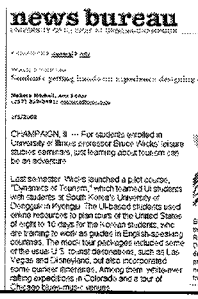
13. Video Library of Concepts, Cases, or Experts



14. Grounded Research and Production. Video Paper Builder

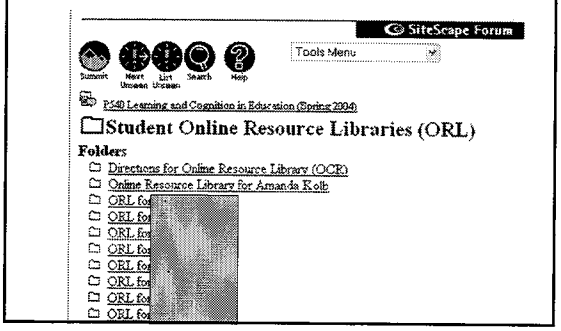


15. Cross Cultural Exchanges and Goal Driven and Product Based: PBL: Tourism Mock Tours

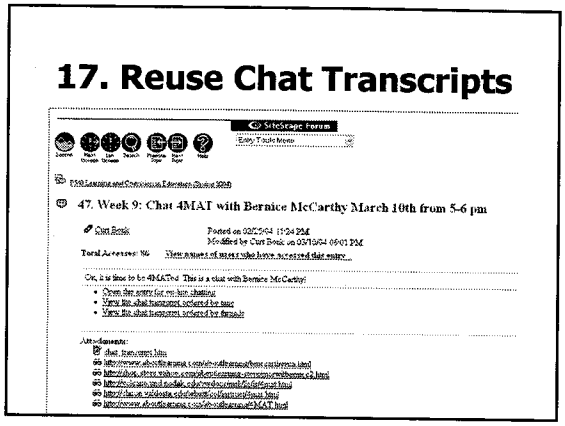


Dynamics of Tourism: students from IU and South Korea use online resources to plan tours and create mock tour packages.

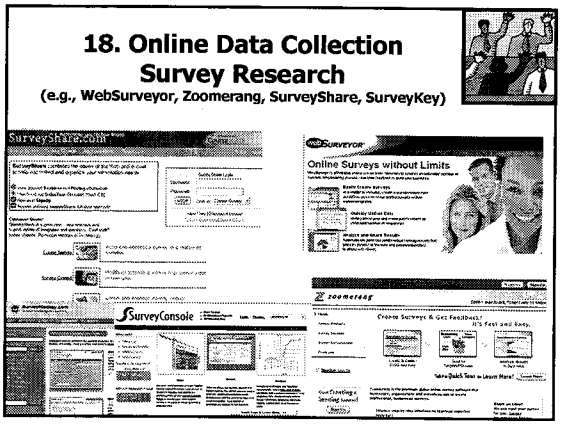
16. Online Resource Libraries



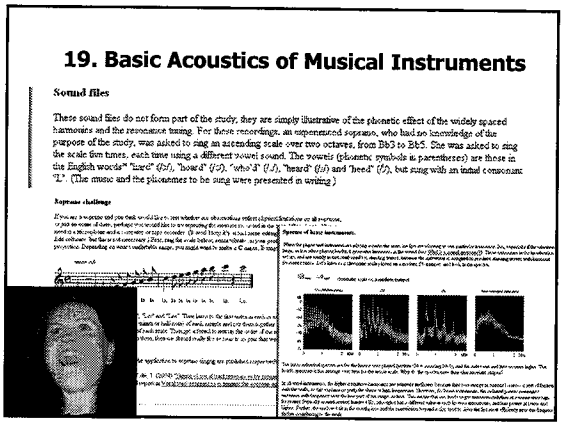
17. Reuse Chat Transcripts



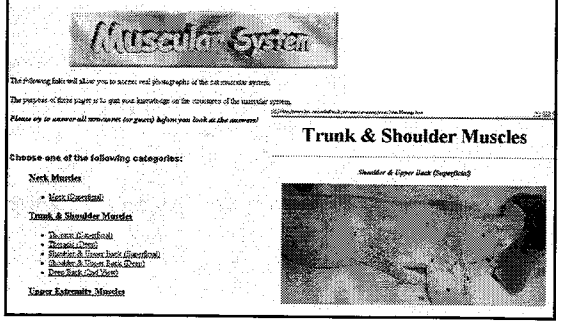
18. Online Data Collection
Survey Research
(e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyKey)



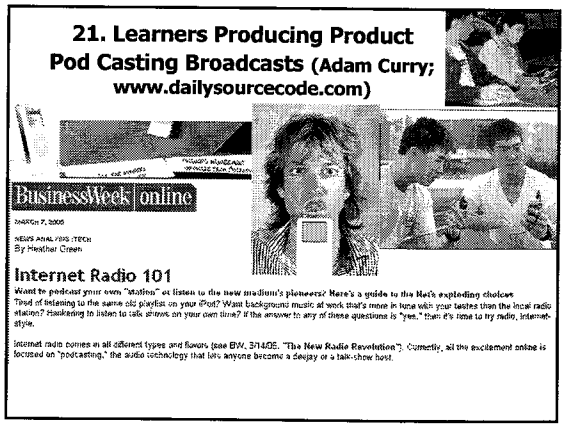
19. Basic Acoustics of Musical Instruments



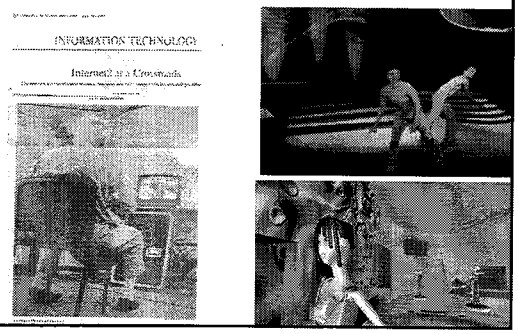
20. Tests Online
(e.g., resources for self study in anatomy)



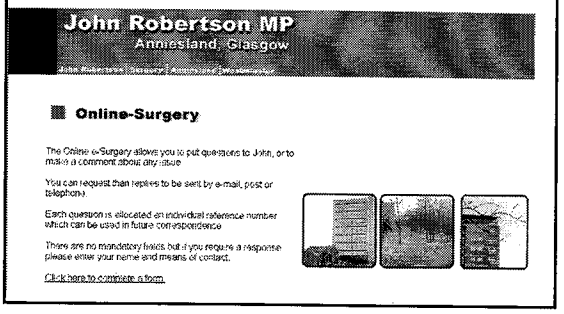
21. Learners Producing Product
Pod Casting Broadcasts (Adam Curry; www.dailysourcecode.com)



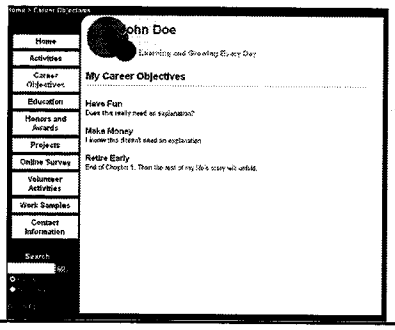
22. Online Modeling: Watch Expert Performances (Music, Cyber Fashion Shows, etc.)



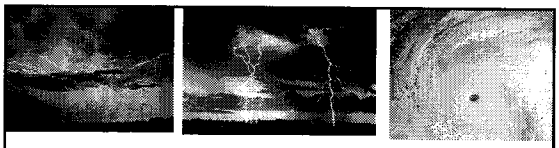
23. Virtual Surgery



24. Electronic Portfolios

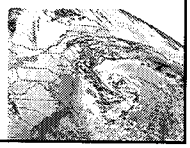
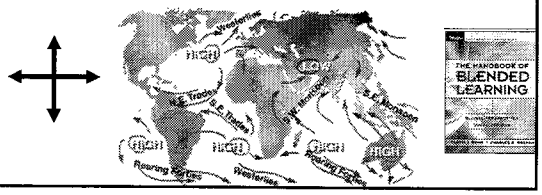


The End...Remember



Recap of the Perfect E-Storm....

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



Any questions, comments, or concerns?