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

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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/article.php?id=A45

- 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/article.php?id=A45

- 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.

1955

I'm a librarian

Schools of the 1880s
Students of the 1880s

Technology of the 1980s

Radio Shack TRS-80 Model III
- Introduced: 1975
- Price: $395.00 (1980s dollars)
- CPU: 8080A, 2.25 MHz
- RAM: 4K, 8K max
- Ports: Cassette tape, expansion, serial
- Display: 12-inch B/W monitor, 64 x 40 text
- Storage: 0, 1, or 2 hard/170 floppy drives
- External cassette @ 525/1533 baud
- OS: CP/M in ROM, TRS-DOS on disk

Technology of the 1980s

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 Learning
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

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

Who is afraid of the word "Podcast"?

"Just the word 'podcast' scares a lot of teachers away," Ms. Schrock said. "There are a lot of misconceptions."

"All you need is a computer, access to the Internet and a microphone that you can buy at Toys 'R' Us," Mr. Warlick said. "I listen to podcasts on my computer." (NY Times, Jan 25, 2006)

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Risk</td>
<td></td>
</tr>
<tr>
<td>Easy to Embed</td>
<td>Extensive Planning</td>
</tr>
<tr>
<td>2. Time</td>
<td></td>
</tr>
<tr>
<td>Free or Inexpensive</td>
<td>Enterprise Licenses</td>
</tr>
<tr>
<td>3. Cost</td>
<td></td>
</tr>
<tr>
<td>Instructor-Focused</td>
<td>Student-Focused</td>
</tr>
<tr>
<td>4. Student-Centered</td>
<td>Low</td>
</tr>
</tbody>
</table>
Myth #3.
I must have a technology background to use effectively.

Three Most Vital Skills
The Online Teacher, TAFE, Guy Kemshead-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.

Differences between Boomers and Gen Xers

Skills Needed to Teach Online in 2010

Michigan Retires Laptop Giveaway Program

1-to-1 computing can be educational possibilities that aren't what each student does, but it can be a little bit more of what each student does, is also educational possibilities that aren't what each student does, but it can be a little bit more...
Myth #5. Technology is not appropriate for at-risk students.

Myth #6. Online courses will not meet Indiana standards.

Students and Teachers, From K to 12,
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

Spartanburg School District 3

Using Scavenger Hunts

BrainPop (movies, experiments, timelines, activity pages)

(C Gina Koch Hidalgo, FETC Pages, 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!!

Boring e-Learning

Experience. The difference.

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

Online Drill (perhaps 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

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

Educational Applications

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

K-12 WillowWeb

Radio WillowWeb
Listen

Kizooks!
Welcome to the KIZOOKS website
ORDER HERE NOW and get a Kizooks Website!

WHEN YOU ASK FOR SOMETHING, BE SURE TO TAKE A LISTEN!
Myth #8.
Technology in the classroom is simply about playing games.

Online Jeopardy Game
www.km-solutions.bis/caa/quiz.nig

Click 'Clear' to enter a different answer or click the 'line' arrow to proceed.

Quiz

Real World: Internships and Field Experience Job Interviews

Virtual Worlds/Virtual Reality/MMOG

Creativity
Kindness
Strength
Personality
Wisdom
Guest Atlantis

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).
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)

Videocasts
(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.

Computer Grading

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

Online quality is inferior.

Online Learning Course Quality Compared to Traditional Instruction

Myth #13. Students will cheat more online.
The Evil House of Cheat

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

Instructial Approaches that Selecte by Respondents as Among the Four Strategies Likely to Become More Widely Used

Many Professional Development Programs

Teacher Professional Development in Technology Integration (the TICKIT Program)
(Bonk, Ehman, & Yamagata-Lynch, in press, AACE Journal)
http://www.isb.edu/~tickit

TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology
**TICKIT WebQuest: Read Cases and Apply for Home Loans**

"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"

**Project type**

<table>
<thead>
<tr>
<th>Number of projects (132)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webquest</td>
</tr>
<tr>
<td>Electronic newsletters</td>
</tr>
<tr>
<td>Web editing &amp; publishing</td>
</tr>
<tr>
<td>Online conferencing, collab, and discussion (includes email and phone)</td>
</tr>
<tr>
<td>Virtual tours</td>
</tr>
<tr>
<td>Computer apps (Excel, PP, Word, Internet)</td>
</tr>
<tr>
<td>Book review</td>
</tr>
<tr>
<td>Brochure construction</td>
</tr>
<tr>
<td>Electronic portfolio</td>
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</tbody>
</table>

**The TICKIT Project**

"Welcome to Miss Stone's GALAXY OF STARS, where everyone is shining bright as we BLAST OFF TO FIRST GRADE!!"

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**Findings**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TICKIT</td>
<td>Applic</td>
<td>t</td>
<td>Sig</td>
<td>Effect Size</td>
<td></td>
</tr>
<tr>
<td>1. Technology Integration</td>
<td>74.68</td>
<td>36.35</td>
<td>7.66</td>
<td>.000***</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>2. Technology Limitations</td>
<td>11.68**</td>
<td>10.79</td>
<td>-3.383</td>
<td>.002**</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>3. Technology Resistance</td>
<td>4.27*</td>
<td>7.01</td>
<td>-2.14</td>
<td>.032*</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>4. Computer Proficiency</td>
<td>15.51</td>
<td>15.84</td>
<td>4.644</td>
<td>.000***</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>5. Learner-centered Instruction</td>
<td>10.39</td>
<td>12.40</td>
<td>5.138</td>
<td>.000***</td>
<td>1.01</td>
<td></td>
</tr>
</tbody>
</table>

*Significant level for TICKIT group
**Significant level for Applic group
***Significant level for both groups

The 't' for each comparison varies due to incomplete data. We used post-hoc delusion of missing data (Completers n=168; Applicants n=128 to 20)

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**Myth #15. We can just wait it out—it will go away**
Prefer online to traditional!

Students prefer online courses

- A million American high school students are currently taking Internet courses in 2004-05
- 571,000 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

- 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.

Keeping pace with K-12 online learning

<table>
<thead>
<tr>
<th>State</th>
<th>Presence Program</th>
<th>Online Program Activity</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Yes</td>
<td>Moderate</td>
<td>Varies</td>
</tr>
<tr>
<td>Colorado</td>
<td>Yes</td>
<td>High</td>
<td>Minimal</td>
</tr>
<tr>
<td>Florida</td>
<td>Yes</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Iowa</td>
<td>Yes</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Illinois</td>
<td>Yes</td>
<td>High</td>
<td>Minimal</td>
</tr>
<tr>
<td>Michigan</td>
<td>Yes</td>
<td>Low</td>
<td>Minimal</td>
</tr>
<tr>
<td>Missouri</td>
<td>No</td>
<td>Moderate</td>
<td>None</td>
</tr>
<tr>
<td>Ohio</td>
<td>No</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>No</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Texas</td>
<td>No</td>
<td>Moderate</td>
<td>None</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Yes</td>
<td>Moderate</td>
<td>Minimal</td>
</tr>
</tbody>
</table>

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

Table 1: State Sponsored Virtual High School Enrollment Growth

<table>
<thead>
<tr>
<th>K-12 Virtual Initiative</th>
<th>Launch Year</th>
<th>Launch Year Enrollment</th>
<th>Enrollments in 2001/02</th>
<th>Avg. Annual Enrollment Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida Virtual High</td>
<td>1997</td>
<td>77</td>
<td>10,000</td>
<td>165%</td>
</tr>
<tr>
<td>Illinois Virtual High School</td>
<td>2001</td>
<td>409</td>
<td>1,232</td>
<td>201%</td>
</tr>
<tr>
<td>West Virginia Virtual High School</td>
<td>2000</td>
<td>300</td>
<td>1,200</td>
<td>100%</td>
</tr>
<tr>
<td>E-School (Hawaii)</td>
<td>1997</td>
<td>96</td>
<td>500</td>
<td>39%</td>
</tr>
<tr>
<td>Michigan Virtual High School</td>
<td>2000</td>
<td>77</td>
<td>7,282</td>
<td>125%</td>
</tr>
</tbody>
</table>

Source: School data and Edventures research, September 2003


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

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

Virtual Tours and Timelines

Virtual Tour of Oxford

Welcome to the Oxford University of Oxford!

This virtual tour is a celebration of the rich history and culture of the city of Oxford. It features a variety of sites and attractions, including the University of Oxford, the Bodleian Library, and the Ashmolean Museum. The tour is designed to provide an immersive and educational experience for visitors of all ages.

Virtual Fieldtrips

Visualization & Laboratory Software

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

What can we say about emerging technology then???

- It is everywhere!!!!!!
- Resistance is futile!!!!!!!
#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

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

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

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!!!