Emerging Educational and Challenges of Instructional Design

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Four Storms are Approaching

I. Emerging Technology
II. Escalating Demands
III. Erased Budgets
IV. Enhanced Teaching

Some are scared of the storm!!!

I'm a librarian

Technology in 1980

Preservice Teachers in Talent PT3 Project
Teacher Professional Development in Technology Integration (the TICKIT Program)
(Bank, Ehrman, & Yamagata-Lynch, in press, AACE Journal)
http://www.iub.edu/~tickit

TICKIT: Teacher Institute for Curriculum Knowledge about Integration of Technology

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 Lrn
10. Course Management Systems
11. Peer-to-Peer Collaboration
12. Reusable Content Objects
13. Videoconferencing, 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

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Portfolios</td>
<td>20</td>
</tr>
<tr>
<td>Assistive Tech</td>
<td>18</td>
</tr>
<tr>
<td>Simulations and Games</td>
<td>16</td>
</tr>
<tr>
<td>Digital Libraries</td>
<td>14</td>
</tr>
<tr>
<td>Peer-to-Peer Collaboration</td>
<td>12</td>
</tr>
<tr>
<td>Reusable Content Objects</td>
<td>10</td>
</tr>
<tr>
<td>Videoconferencing</td>
<td>8</td>
</tr>
<tr>
<td>Virtual Worlds/Reality</td>
<td>6</td>
</tr>
<tr>
<td>Wearable Computing</td>
<td>4</td>
</tr>
<tr>
<td>Wireless Tech: Tablet PCs, Handheld Devices</td>
<td>2</td>
</tr>
</tbody>
</table>

Skills Needed to Teach Online in 2010

Trend #1. Course Management Systems
Trend #2: Wireless Technology

Trend #3: Mobile Technology

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: Blogging

Trend #6: Electronic Books

Trend #7: Wikis

(Wikipedia; Jimmy Wales, Founder)
Trend #8: Podcasting and Coursecasting (Adam Curry; www.dailysourcecode.com)

Trend #9: Virtual Worlds/Virtual Reality/MMOG

Trend #10: Synchronous Conferencing

Trend #11: Computer Grading
(From the New York Times, May 19, 2004. Location: Semantic)

Trend #12: Collaborative Tools

Trend #13: Internet Phone Service (e.g., Skype)
#14. Free Online Journals and Resources (e.g., Public Library of Science)

Basic Acoustics of Musical Instruments

Speakers of basic instruments:
- Oboe: Cino Tempesta, Gianluca Zocchi, Marco Pica
- Bassoon: Mario Longo, Gianfranco Zocchi, Marco Pica
- English horn: Mario Longo, Gianfranco Zocchi, Marco Pica

Trend #15. Open CourseWare

OOPS: Open-source OpenCourseWare Prototype System
The Foundation of Fantasy Culture and Arts

Trends #16. Social Networking Web 2.0 (the read/write web)

Squidoo!!! (Sharing a lens...)

17. Wearable Computing
Trend #18. Online Exams and Homework
USA Today 11/25/03

Trends #19. Tablet PCs Finally Taking Off

Trend #20. Educational Simulations, Scenarios, and Manipulations

Trend # 21. Flash Visuals and Animations and Interactive News
eCollege Wales, Univ. of Glamorgan

Trend # 22. Virtual Fieldtrips
(Trinity College example)

Trend # 23. Asynchronous Conferencing
Trend #24. Web-based Surveys
(e.g., WebSurveyor, Zoomerang, SurveyShare, SurveyMonkey)

Trend #25. E-Portfolios

Trend #26. Open Source Software
Interoperability Standards, Nov. 24, 2003

Trend #27. 3-D Visualization & Laboratory Software

Trend #28. MindMapping Software

Trend #29. Video Streamed Lectures
What about negative technologies?

Social Networking Problems

Stop Badware.org!!!!!
(Chronicle of Higher Ed, January 26, 2006)

MIT Media Labs Device Signals if You Are Being Annoying
(April 4, 2006)
Monty Python Spam Song


What can we say about emerging technology then???

- It is everywhere!!!!!!!!!

- Resistance is futile!!!!!!!
Chronicle Careers

I am already hearing the sounds of a faculty meeting. Someone just said, "The faculty has a right to be unhappy. They work hard." A group of faculty members are standing up, waving their hands, "We won't be satisfied!"

A hand-painted sign above the door says, "Keep the 'Hunters' in the Harem!"

As a bureaucrat, I am sympathetic. But, if SAC/Student Affairs means that I'll have to write "What is your level?" in the margin of another undergraduate paper, then sign me up for my terminal project. At a higher rate than the most hard-earned theoretical knowledge.

My relationship with the Internet began a decade ago, as a graduate student, when a career counselor told me I should have a personal Web page on which to advertise any "accomplishments and availability." As a small-order broker, the academic job market is not ideal, she told me. I persuaded me not to focus my career interest. My university did not provide computer training, so I took a one-credit course at a community college.

Poll #2. Which technology will impact you the most this decade?

a. Wireless
b. Tablets
c. Online homework and grading
d. Reusable learning objects
e. Massive multiplayer online gaming
f. Videoconferencing

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

Prefers online to traditional!

Students prefer online courses

On the Web for a better learning experience.

Difficulties in discovering

On the Web for a better learning experience.

Difficulty in discovering

On the Web for a better learning experience.
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 Schworz, September 16, 2004.


Julie E. Young, Executive Director, Florida Virtual School (2003)

Enrollment History

Julie E. Young, Executive Director, Florida Virtual School (2003)

Indiana Univ (8 campuses): Spring 2005
Students: 88,413 loaded; 78,549 logged in (88%)
Faculty: 7,014 loaded; 5,441 logged in (78%)
Courses: 22,419 loaded; 9,206 active (41%)

Growth in Student Enrollments at KD
Illinois Virtual Campus
Enrollment in online classes tops 80,000 for Fall 2004 semester

http://www.ivc.illinois.edu/pubs/enrollment/Fall_04.html

University of Illinois at Springfield
http://onlin.euis.edu/info/

SUNY Learning Network (SLN)
Online course enrollments

http://sln.suny.edu/

Dublin Institute of Technology
Staff and Students using WebCT

The OUM
Enrollment Growth at the OUM

Open University of Israel
(overall enrollment growth)
### Open University of Israel (overall enrollment growth)

<table>
<thead>
<tr>
<th>%</th>
<th>Studying in a course with website</th>
<th>Students</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>465</td>
<td>31,003</td>
<td>1998</td>
</tr>
<tr>
<td>19%</td>
<td>6,163</td>
<td>32,297</td>
<td>1999</td>
</tr>
<tr>
<td>61%</td>
<td>20,294</td>
<td>33,033</td>
<td>2000</td>
</tr>
<tr>
<td>73%</td>
<td>25,596</td>
<td>35,100</td>
<td>2001</td>
</tr>
<tr>
<td>85%</td>
<td>31,337</td>
<td>36,758</td>
<td>2002</td>
</tr>
<tr>
<td>96%</td>
<td>36,993</td>
<td>38,728</td>
<td>2003</td>
</tr>
<tr>
<td>99%</td>
<td>38,765</td>
<td>39,249</td>
<td>2004</td>
</tr>
<tr>
<td>99%</td>
<td>39,935</td>
<td>40,248</td>
<td>2005</td>
</tr>
</tbody>
</table>

### University of Pretoria (Lazenby, 2004; Blended with WebCT)

![University of Pretoria](image)

### Even Shaq is taking courses online!

#### 2005 NBA Playoffs

**Shaq joins University of Phoenix again**

Associated Press

HOLLYWOOD, Calif. — Shaquille O'Neal returned to the Phoenix Suns on Tuesday after an 11-month absence to make him eligible for the NBA.

"I've never missed an NBA game," said O'Neal, who was in the midst of a TV show commitment.

"It's just something to work on," he said. "I'm not going to let up on my game."}

#### We’re in the Midst of Storm 3: Erased Budgets

![Storm 3: Erased Budgets](image)

### In the Midst of Budget Cutbacks, there are Technology Giveaways

![Technology Giveaways](image)

### Coming with Multiple Machines

![Multiple Machines](image)
Poll #3. What technology would you want for free?

a. Video iPod  
b. Cell phone with iPod  
c. Blackberry or Treo  
d. Laptop

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

Instructional Approaches that Selected by Respondents as Among the Four Strategies Likely to Become More Widely Used

- Personalized Learning
- Learning in a virtual world
- Constructivist strategies
- Cooperative learning
- Group problem solving and collaboration

10 Online Pedagogical Examples that are not boring!

Boring e-Learning

Experience. The difference.

Online PowerPoint?
George Siemens  
(Sept 30, 2002, eLearnspace.org)  
Instructional Design in E-Learning  
"Unfortunately, the role of instructional design (ID) in elearning is often misunderstood - due to the perceived complexity of the process and to poor understanding of the pedagogical requirements of elearning. To a large degree, ID is the process whereby learning, not technology, is kept at the center of elearning development."

Six Elements of Effective e-Learning Design  
(Brown & Voltz, 2005, IRRODL)  
1. Activity  
2. Scenario  
3. Feedback  
4. Delivery  
5. Context  
6. Impact  
- cover issues across all disciplines involved in e-learning design, but particularly focus on learning as the driving motivation

The End...Remember

It's Over...  
Final Poll. Ok, then, who wants more???  
A. Yes  
B. No  
C. Not sure

Sorry...it is the end!!!

"Your skeletal remates"  
maximum barrage  
doze that of your brain.  
Think about it.