Effects of interactive multimedia in distance learning

"The advancement in technology is shaping every aspect of our life, including education. One decade ago, the Internet was not critical to education. However, now, it has become an integral part of the learning process. Internet technology is having a dramatic effect on colleges and universities, producing what may be the most challenging period in the history of higher education."

Singapore and Taipei (Intel Press Release, 2006)

- Singapore, the island city-state in Southeast Asia, is about to complete a major new public/private project that will see large chunks of the 270 square mile city provided with Wi-Fi access by the end of 2008. The entire city, indoors and out, is due to be covered by 2015.
- In the coldest capital in Canada, the city residents of Iqaluit (pop. 6,000) enjoy free wireless from one free hotspot (with two more due soon to cover the suburbs), while Taipei, Taiwan (pop. 2.6 million) has a few more—over 4,000 hotspots that provide coverage for 90 percent of the city.

iPod's More Popular than Beer?

By Preston Gault on York, 2017/4/30

ABN TO BE SLUGGED

Product: iPods have cut into beer sales at all levels, with some who report a 25 percent decline in sales. At a chain of stores in downtown York, one store manager said, "People are choosing the iPod over a beer, even for a special occasion. It's a change that we're seeing across the board."

U.S. senator: It's time to ban Wikipedia in schools, libraries

By Preston Gault on York, 2017/4/30

ABN TO BE SLUGGED

Senator John Smith has introduced a bill to ban Wikipedia in schools and libraries, arguing that the site is untrustworthy and promotes unreliable information. In a statement, Smith said, "Wikipedia is not a reliable source for educational purposes. It is time for us to take action to protect our students and libraries from the misinformation on this website."

Blended Learning Part II: R2D2 on the Matrix: A Galaxy of Online Learning Style, Motivational, and Learner-Centered Examples

Dr. Curtis J. Bonk
Professor, Indiana University
President, SurveyShare, Inc.
http://mypage.iu.edu/~cjbonk/
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Nature AND Nurture: Pedagogy
Technology
Pedagogy
People, Society, Culture, etc.
Social Networking Software

- Classmates: http://www.classmates.com/
- Facebook: http://www.facebook.com/
- Friendster: http://www.friendster.com/
- Friendzy: http://www.friendzy.com/
- MySpace: http://www.myspace.com/
- Orkut: https://www.orkut.com/
- Tribes: http://www.tribe.net/
- YouTube: http://www.youtube.com/

Monday April 30, 2007, USA Today
Top 25 Things that Shaped the Internet

- 747 Million adults logged on in Jan, 2007
- 97 billion e-mails are sent each day
- Google had 500 million visitors in Dec, 2006
- USA: 1% broadband in 1998; 78% in 2007
- YouTube bought by Google for $1.7 billion
- Adobe's Flash player on 98% of machines
- There are 75 million blogs!!!
- 19 million people play MMOG!
- 173 million personalized pages in MySpace

Next Generation of Students

Tech Creates Bubble for Kids
Alejandro Gonzales, USA TODAY, Updated 6/20/2006 10:34 AM ET

Yahoo News
Love me, love my blog," as Neterati couple-surf
BY SARA LEDWITH Thu Aug 3, 8:30 AM ET

- Nick Currie and his girlfriend Shizu Yuasa (R) surf the Internet over breakfast in Tokyo in this handout photo. As the Internet evolves -- with its webcams, iPods, Instant Messaging, broadband, wi-fi and weblogs -- its image as a relationship-wrecker is changing. Now a sociable habit is emerging among the Neterati: couple-surfing. (Nick Currie/Handout/Reuters)
- "For my birthday, he upgraded my RAM and I thought it was incredibly romantic," writes Jess.

Entice Students with Technology Giveaways

Gateway MPT Tablet PC
Winning State University.

iPAQ Pocket PC: Includes The Act of Killing, a Daily Show DVD.

BlackBerry 7100G: Includes The Act of Killing, a Daily Show DVD.
Learning with iPods
(Campus Technology, Dec, 2006)

Georgia College & State University. The Department of Music and Theatre, which had foreign language speakers come in to do recordings that are helping the school's chorus. Learners singing in Korean, Portuguese, and many other languages," "Now we can listen to the diction, and make sure that we're pronouncing everything correctly."

Podcast
Learning TRENDS by Elliot Masie - September 18, 2006.
#402 - Updates on Learning, Business & Technology.

Fingertip Knowledge Podcast & Transcript:
One of my focus points these days is Fingertip Knowledge. You and I and most of our colleagues are increasingly using search engines, from Google to Corporate Intranets, to "walk" our way to the information or knowledge that we need.

Podcast (and Transcript) about the implications of Fingertip Knowledge and the Learning Field:

Podcast Questions
1. Who has listened to a podcast?
2. Who listens to a certain podcast on a regular basis?
3. Who has created a podcast?
4. Who has created a podcast?
5. Who thinks podcasting is simply more talking heads?

Wikis

Wiki Questions
1. Who regularly reads Wikipedia articles just for fun?
2. Who regularly reads Wikibooks?
3. Who seeks Wikipedia for content?
4. Who has edited or written new articles on Wikipedia or Wikibooks?
5. Who thinks it is ok for college students to cite from Wikipedia?

Instructor Technology Myths
1. Tech savvy instructors are young & loyal.
2. Can teach the same way.
3. Instructors will not share
4. Tech savvy instructors will use latest technology.
6. Technology does not improve learning.
7. Can't afford tech.
8. Must be a techie.
E-Learning Books

The Growth of the Online MBA at Indiana University

Co-operative Learning Object Exchange (CLOE) and OntarioLearn

Let's Think Outside the Box! (For 99 Seconds—what technologies that you might not think about using for learning, might students today prefer to use?)

Part II: 10 Learner-Centered Technology Ideas

<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>
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<tr>
<td>Free or Inexpensive</td>
<td>Enterprise Licenses</td>
</tr>
<tr>
<td>3. Cost</td>
<td></td>
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<tr>
<td>Instructor-Focus</td>
<td>Student-Focus</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>
Task

- Ideas definitely Can Use (Circle or write down)
- Ideas you might use (check off or write down in a separate column)
- Ideas you cannot use (cross off or put at the bottom)

Learner-Centered and Active Learning Principles
1. Authentic/ Raw Data
2. Student Autonomy/Inquiry
3. Make Relevant/ Meaningful/ Interests
4. Link to and Build on Prior Knowledge
5. Provide Choice and Challenge
6. Act as a Facilitator and Co-Learner
7. Foster Social Interaction and Dialogue
8. Embed Problem-Based and Student Generated Learning and Inquiry
9. Encourage Multiple Viewpoints and Perspectives
10. Foster Collab, Negotiation, & Reflection

1. Anchored Instruction (find anchoring event (CTGV, 1990?)

2. Cool Resource Provider Cool Stuff
   (Bonk, 2004) Capture and Videostream Lectures
   (e.g., Apreso CourseCaster)
   - Have students sign up to be a cool resource provider once during the semester.
   - Have them find additional paper, people, electronic resources, etc.
   - Share and explain what found with class via synchronous meeting or asynchronous discussion post.

3. ORL or Library Day
   (L = Cost, M = Risk, M/H = Time)
   (Bonk, 1999)

4. 99 Second Quotes
   (L = Cost, M = Risk, M = Time)
   - Everyone brings in a quote that they like from the readings
   - You get 99 seconds to share it and explain why you choose it in a sync chat or videoconference
   - Options
     - Discussion wrapped around each quote
     - Small group linkages—force small groups to link quotes and present them
     - Debate value of each quote in an online forum
5. Online Warm-ups Activities
   Just-In-Time-Teaching (JITT)
   http://webphysics.iupui.edu/jitt/jitt.html

6. One minute papers or muddiest point papers
   \( L = \text{Cost}, M = \text{Risk}, M = \text{Time} \)
   - Have students write for 3-5 minutes what was the most difficult concept from a class, presentation, or chapter. What could the instructor clarify better.
   - Send to the instructor via email or online forum.
   - Optional: Share with a peer before sharing with instructor or a class.

7. Jigsaw
   \( L = \text{Cost}, M = \text{Risk}, H = \text{Time} \)
   - Form home or base groups of 4-6 students.
   - Student move to expert groups—discussion ideas in a chat.
   - Share knowledge in expert groups and help each other master the material in an online forum.
   - Come back to base group to share or teach teammates.
   - Students present in group what learned.

8. Six Hats (Role Play):
   (from De Bono, 1985; adopted for online learning by Karen Belfer, 2001, Ed Media) \( L = \text{Cost}, M = \text{Risk}, M = \text{Time} \)
   - White Hat: Data, facts, figures, info (neutral)
   - Red Hat: Feelings, emotions, intuition, rage...
   - Yellow Hat: Positive, sunshine, optimistic
   - Black Hat: Logical, negative, judgmental, gloomy
   - Green Hat: New ideas, creativity, growth
   - Blue Hat: Controls thinking process & organization
   Note: technique was used in a business info systems class where discussion got too predictable!

9. Concept Mapping Tools

10. Exploration and Demonstration:
    Virtual Fieldtrip, Tours, Timelines
Top Reasons for Dropping Out (Deosnews, May 2004; Frankola, 2001)

- Lack of time
- Lack of management oversight
- Lack of motivation
- Lack of student support
- Individual learning preference
- Poorly designed course
- Substandard/Inexperienced instructor

Three Most Vital Skills
The Online Teacher, TAFE, Guy Kemshel-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)
Intrinsic Motivation

"...innate propensity to engage one's interests and exercise one's capabilities, and, in doing so, to seek out and master optimal challenges (i.e., it emerges from needs, inner strivings, and personal curiosity for growth)


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So, I reflected on this for a moment...

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TEC-VARIETY Model for Online Motivation and Retention

1. Tone/Climate: Psych Safety, Comfort, Belonging
2. Encouragement, Feedback: Responsive, Supports
3. Curiosity: Fun, Fantasy, Control

4. Variety: Novelty, Intrigue, Unknowns
5. Autonomy: Choice: Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactive: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Excitement
9. Tension: Challenge, Dissonance, Controversy
10. Yields Products: Goal Driven, Products, Success, Ownership

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1. Tone/Climate:

A. Coffee House Expectations
   1. Have everyone post 2-3 course expectations
   2. Instructor summarizes and comments on how they might be met

B. Public Commitments: Have students share how they will fit the coursework into their busy schedules

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2. Encouragement, Feedback, etc.:

A. Critical/Constructive Friends, Email Pals...
3. Curiosity, Fun: A. Games
e.g., Online Jeopardy Game
Games2Train: The Challenge; Thiagi.com

4. Variety, Novelty:
A. Video Streamed Lectures & Expert Commenting

5. Autonomy, Choice:
A. Clickers; Innovation is but one click away...

5. Autonomy, Choice:
B. Multiple Topics
- Generate multiple discussion prompts and ask students to participate in 2 out of 3
- Provide different discussion “tracks” (much like conference tracks) for students with different interests to choose among
- List possible topics and have students vote (students sign up for lead diff weeks)
- Have students list and vote.

6. Relevance: Meaningfulness:
A. Authentic Data Analysis
Jeanne Sept, IU, Archaeology of Human Origins; Components: From CD to Web
- A set of research q’s and problems that archaeologists have posed about the site
- A complete set of data from site & background info
- Students work collaboratively to integrate multidisciplinary data & interpret age of site
- Interpret of ancient environments
- Analyze artifacts/fossils from site

7. Interactive, Collaborative:
A. Panels of Experts: Be an Expert/Ask an Expert: Have each learner choose an area in which to become expert and moderate a forum for the class. Require participation in a certain number of forums (choice)
B. Press Conference: Have a series of press conferences at the end of small group projects; one for each group
C. Symposia of Experts
7. Interactive, Collaborative: 
D. Discussion: Starter-Wrapper (Hara, Bonk, & Angeli, 2000)
1. Starter reads ahead and starts discussion and others participate and wrapper summarizes what was discussed.
2. Start-wrapper with roles—same as #1 but include role for debate (optimist, pessimist, devil's advocate).
E. Alternative: Facilitator-Starter-Wrapper (Alexander, 2001)
Instead of starting discussion, student acts as moderator or questioner to push student thinking and give feedback.

8. Engagement: 
B. Student Self-Testing (e.g., Calm Chemistry)

9. Tension, Challenge, etc.: 
A. Online Role Play of Famous People, Mock Trial, Debates, etc.
- Enroll famous people in your course
- Students assume voice of that person for one or more sessions

10. Yields Products: Concept Maps, Video Papers, Virtual Timelines, Digital Movies

99 seconds: What have you learned so far?
- Solid and Fuzzy in groups of two to four
Part IV. Addressing Learning Styles

Poll 1: Which learning style do you prefer?
- a. Read (Auditory and Verbal Learners)
- b. Reflect (Reflective Learners)
- c. Display (Visual Learners)
- d. Do (Tactile, Kinesthetic, Exploratory Learners)

Kolb (1984)
- According to Kolb, effective learning involves four phases:
  - from getting involved (Concrete Experience) to
  - listening/observing (Reflective Observation) to
  - creating an idea (Abstract Conceptualization) to
  - making decisions (Active Experimentation).
- A person may become better at some of these learning skills than others; as a result, a learning style develops.

The R2D2 Method
1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

1. Auditory or Verbal Learners
- Auditory and verbal learners prefer words, spoken or written explanations.
1a. Online Tutorials, Help, Announcements, Q&A, and FAQs

1b. Instructor and Learner Podcasts

"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)

1c. Language Learning (ChinesePod—learn Mandarin)

Educational Applications of Podcasting (Essex, 2006, Leftwich, 2007)
1. Recordings of lectures (Coursecasting)
2. Supplemental textbook or entire book
3. Student projects
4. Interviews
5. Language lessons
6. Oral reports
7. K-12 classroom interactions
8. Downloadable library of resources
9. Recordings of performances

2a. Use of Weblogs (especially English writing class)

2. Reflective and Observational Learners

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives
Blogging Questions

1. Who has a blog? Any for a specific class?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
5. Who thinks it is an utter waste of time to blog?

2b. Reuse Blog or Chat Transcripts

2c. Online Expert Video Reflections
(e.g., E-Reading First Ohio; reflect, share, and compare)

3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.

3a. Animations, Video Clips, Audio, Pictures, Web Resources, etc.

3b. Vodcast for Medical Training
(e.g., "SonySite on the small screen: The Bothell-based company uses podcasts for its ultrasound scanner training."
3c. Expert Mentoring Online in Art and Design
(COFA Online, Omnium Project, Creative Waves—online
graphics and photomedia project)

3d. Historical Documents
discoverbablyon.org

- In its final form, the multiplayer game will let you
  march through three-dimensional recreations of
  the first city-states, around 3000 B.C., the first empires,
  around 2300 B.C., and finally the famous Iron Age
  empire of Assyria...offers three-dimensional walk-
throughs of sites in the Valley of the Kings.

3e. Online News Multimedia
(New York Times reporter Andrew Revkin
continues doing compelling multimedia work.)

4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be
  engaged in the learning process are
  role play, dramatization,
  cooperative games, simulations,
  creative movement and dance,
  multi-sensory activities,
  manipulatives and hands-on
  projects.

4a. Romantic Poetry Project
(Professor Mike Phillipson, English at Bowdoin College)

4b. Wikibook Creation and Collaboration
Next up: The MATRIX!!!!!!!!!!

- Mobile
- Auditory
- Thought-stimulating
- Reflective/Real-World
- Visually Interactive
- eXtremely Hands-on

It is both Nature AND Nurture as well as PEOPLE! Technology is just part of the Equation

Try the R2D2 Method!!!
Try TEC-VARIETY!!!
Sample papers at: http://www.publicationshare.com/
Archived talks at: http://www.trainingshare.com/