Literacy in a Digital World: Emerging Tools and Innovative Activities for the Twenty-First Century Learner

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Let's Think Outside the Box!
For 99 seconds share learning technologies you are using this year that you had not heard about five years ago.

 Plato's academy: 387 BC - 529 AD

Schools, Teachers, and Students of the 1880s

Telegraph:
Flattening the world in 1860
Eighth-grade students Tayler Bernholtz, left, Amy Lostroh and Kelsey Cardiff check out a weblog discussion related to the Civil War historical-fiction book 'Guerrilla Season' At South Valley Junior High School in Liberty, Mo. (Blogging now begins young USA Today, By Ashley Belmes, USA TODAY, November 15, 2006, 12D). http://www.usatoday.com/life/2006-11-14-blogs-education_x.htm

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

By Preston Gralla on Web 09/14/2007 7:46pm

Here's the latest from Sen. Ted Stevens, the guy who decided the internet is a series of tubes. It's time for the federal government to ban access to Wikipedia, and ensure schools are not slow to the internet age. This is not a stunt, but a serious move to cut off all access to Wikipedia in schools.

Education Week, March 27, 2007
Connecting the Digital Dots: Literacy of the 21st Century
Barbara R. Jones-Kavelier and Suzanne L. Flennigan
Educar Quarterly (2006), 29(2)

"These days, new media literacy technical skills catapult traditional learning methods into orbit—traditional chalkboards and overheads with pens do not occupy the same realm as current capabilities. As an example, now teachers can do a PowerPoint presentation with streaming video, instant Internet access, and real-time audio-video interaction, and they can do it with relative speed and ease."

Poll #1:
Should kids be allowed to bring mobile phones, MP3 players (iPods) to school?

The Learning World has become Open!

"STUDENT 2.0"

Photos and images from various sources.
Triple Learning Technology
Convergence of "WE-ALL-LEARN"

- A cadre of knowledge building and sharing
- Capability of tools and learning
- Availability of free content and resources
- National Resources
- Learning Culture: A move towards a culture of open access to information, international collaboration, and global sharing.

4th P? Processing Speed
Scientists develop fastest computer
June 9, 2008, H. JOSEPH HEBERT, AP

- To put the computer's speed in perspective, it has roughly the computing power of 100,000 of today's most powerful laptops stacked 1.5 miles high, according to IBM. Or, if each of the world's 6 billion people worked on hand-held computers for 24 hours a day, it would take them 46 years to do what the Roadrunner computer can do in a single day.

5th P? Pointing?
What are the new digital learning skills?
30 Ideas and Predictions!!!

1. New Reading Skills. New ways to read information (e.g., Thinner, Crisper, and Cheaper eBooks; Kindle = $400-500)

2. New Listening Skills.
Read, Listen, etc. to online books (e.g., "An International Episode" by Henry James)

3. New Research and Study Skills. Repository: Conexions (6,000+ modules, Rice Univ) & Curriki (K-12, Sun MICRO)
4. New Storage and Retrieval Skills
Terabyte thumb Drives and Magic Pens! (The Pulse from Livescribe). Second, we need new ways to record info: Smartpens: “Never Miss a Word”

5. New Creativity Skills.
Indexing Sounds in Cities with Google Maps

6. New Communication Skills
(e.g., Twitter)

Facebook’s Mark Zuckerberg, at his office in Palo Alto, Calif., is in no hurry to sell the popular social networking site. (23 years old!) Facebook could be worth as much as $6 billion today. Rear Stearns (BSC) analyst Robert Pack says. He expects privately held Facebook to post a profit of about $30 million on revenue of $140 million this year, and register a $70 million profit on revenue of $350 million in 2006. It predicts $6 billion in revenue by 2016.

8. New Information Search Skills (Stumble Upon)

Online Photo Albums, e.g., FLICKR
(Inc. Magazine, December 2006)
Use of Weblogs
1. Instructor or Tutor blog
2. Learner blog: reflections, sharing links and pics.
3. Partner blog: work on team projects or activities
4. Class blog: international exchanges, projects.
5. Revision: review and elaborate previous posts.

12. New Real World and Authentic Learning Skills (PBL, evaluation, interaction, communication, etc.)

13. New Adventure Learning Skills
(Ben Saunders, Mark Fennell, Andrew Revkin)

Art and History Exhibits

15. New Visual Learning Skills (e.g., Periodic Table of Visualization; Visual Thesaurus

Amy, 12, writes her news script. Ivan, 12, records his news report.

Trevor, 12, Adriano, 12, and Oleono, 13, listen back to the report they have recorded on an iPod.

Urras, 12, and Ivan, 12, research their news story.

Lambeth CIC technicians George Belfield edits the students' work.

17. New Video Production Skills

Individual Produced Videos (e.g., African School Dream in CurrentTV)

https://currenttv.com/blogs/2774448083 african school dream


Using Online Video (e.g., YouTube) to Memorize Sonnets and Poems

19. New Visual Information and Organization Skills. (e.g., Online Timelines, maps, tours)


A Grain of Rice: A Bloomington man's computer vocab game feeding the world

Herald Times, Wednesday, February 6, 2008, Mike Leonard


- 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 walkthroughs of sites in the Valley of the Kings.
22. New Learning Management Skills. Moodle (400,000 registered users in 193 countries speaking 73 languages)

23. New Sharing Skills. Posting Documents on Web

24. New Research Collaboration Skills (e.g., Diigo)

25. New Language Learning Skills
Online Language Learning
(Mixxer, Livemocha, Friends Abroad)


27. New Self-testing Skills.
High School Student Self-Testing
(e.g., Calm Chemistry)
30. New Multitasking Skills

- "The skill to be valued in the twenty-first century is not the length of attention span, but the ability to multitask - to do many things well at once... [and] the ability to process visual information very rapidly." (Rushkoff, 1996:50)

What Students Need to Know: 21st Century Skills and ICT literacy;
Susan D. Patrick, President and CEO
North American Council for Online Learning

The future will demand people who can express themselves effectively with images, animation, sound, and video, solve real world problems that require processing and analysis of thousands of numbers, evaluate information for accuracy, reliability, and validity; and organize information into valuable knowledge, yet students are not learning these skills in school.

From: The Partnership for 21st Century;
www.21stCenturySkills.org
Report: are they really ready to work (2006).
http://www.21stcenturyskills.org/documents/FINAL_REPORT_PDF.9-25-06.pdf
Megabits
(p. 59 May/June 2007, Tech Trends)

"More than 60 percent of educators said that their schools are not putting enough emphasis on media literacy; and 80 percent said that they have to learn media literacy on their own..."

The results of the CIC Educator Survey, Media Literacy: A Vital and Underserved Need in Schools, can be found online at http://liconline.org/docs/CICmediaitlereport11-2006.pdf (November, 2006)

Now for 2 Minutes: Share your ideas of digital literacy with someone next to you and agree on three things maximum.

What is "ICT Literacy"?
(Brown & Dotson, May/June 2007, Tech Trends)

- Define info need
- Collect & manage info from digital environs
- Interpret into using ICT skills for comparison, analysis, & synthesis
- Evaluate info for authority, bias, & timeliness
- Communicate findings through creative use of ICT tools and resources

...using ICT tools, students can:

1. Define: Select approp research topic, frame q, identify approp resources.
2. Access: Locate and retrieve digital primary resources useful for answering the research question.
3. Manage: Organize info, summarize content, report content that answers research question.
4. Integrate: Read and interpret info using synthesis, summarization, critical thinking, perspective taking, comparison & contrast, & read and interpret multiple sources.

...using ICT tools, students can:

5. Evaluate: Make judgments on usability of info, authority of sources, bias, timeliness of the materials.
6. Create: Adapt, apply, and design a report with conclusions to the original question.
7. Communicate: Design report appropriate for audience and is clearly communicated and understood.
Ok, Million Dollar Question: What are 21st Century Skills?

If you had to give a word or phrase to describe "21st Century Skills," what would that word be?
Locate info, synthesize it,
Decision making,
Use effectively and ethically,
Communicate effectively,
Evaluate products,
Producers and consumers of visual info,
Informed critics,
Sensitive to bias and cultural differences,
Sets own goals,
Willing to make mistakes,
Comparison and contrast skills, inferencing skills,
Participates in a team, exercises leadership,
Manages technology for public good

Digital Literacy
(Bonk, June 2, 2007)
Digital literacy is the ability to browse, locate, filter, synthesize across, and eventually use information appearing in multiple formats and in a wide range of sources that can lead to communication of what one discovered as well as the production of still additional information. (Paul Gilster (1997), Digital Literacy.)

Digital Literacy
(Bonk, June 2, 2007)
Digital literacy is not only technology related knowledge, skills, and competencies, but also the critical and creative thinking skills as well as ability to engage in collaborative teams to find and solve problems in a technologically reliant society or environment.

21st Century Skills
(NCREL, Learning Point Associate, 2003)
New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources.
http://chronicle.com/free/v53/i32/2773801.htm

College students use technology constantly. They text-message friends, compile playlists for their iPods, and whizzes at updating their MySpace profiles. But when it comes to one work they are required to do in college — namely, academic research — they are not so adept. Too often, college officials say, students rely on Google or Wikipedia sources, as if oblivious to peer-review scholarship.
New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources. 
http://chronicle.com/free/v35/127/27a03801.htm

- The explosion of electronic information is fueling students' confusion, librarians say. In 1996 there were 10,000 scholarly databases online; now they exceed 18,000. The Web is teeming with more than 100 million sites, up from 18,000 in 1995. Google and Microsoft recently began archiving books and scholarly journals and making them available via their search engines. And two online, academic-oriented encyclopedias, Citizendum and Scholarpedia, are starting up...

- Among the most well known is the ICT Literacy Assessment, which was developed and is administered by the Educational Testing Service, a nonprofit group based in Princeton, N.J. "ICT" stands for "information and communication technology." The 75-minute test, offered at two levels, measures students' ability in seven areas, including organizing, evaluating, and communicating with electronic data.

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"The greatest challenge is moving beyond the glitz and pizzazz of the flashy technology to teach true literacy in this new milieu. Using the same skills used for centuries—analysis, synthesis, and evaluation—we must look at digital literacy as another realm within which to apply elements of critical thinking."

Global Digital Literacy is Vital to the Progress of Everyone!!!
Sample papers at: http://www.publicationshare.com/
Archived talks at: http://www.trainingshare.com/