

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.

Innovate or die trying
 Thinking outside the box is inside the scope of these computer plans

Plato's academy: 387 BC - 529 AD

1885 GEORGE ARCELY, TOM WILSON
1955 EMMA LEE, TOM WILSON
1985 GEORGE ARCELY, PAUL CRISPIN GLOVER
2015 EMMA LEE, DR. EMMETT L. BROWN, ALICE CHRISTOPHER LLOYD

Schools, Teachers, and Students of the 1880s

Telegraph: Flattening the world in 1860

Tom Wheeler
MR. LINCOLN'S T-MAILS
 THE TELEGRAPH OF ABRAHAM LINCOLN
 HOW HE USED IT TO WIN THE CIVIL WAR

Blogging now begins young

Eighth-grade students Tayler Bernholtz, left, Amy Lostron 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 Bleimes, USA TODAY, November 15, 2006, 12D). http://www.usatoday.com/life/2006-11-14-blogs-education_x.htm

TechTrends
Linking Research and Practice to Improve Learning
March-April 2008

Teach the Modern Way!
Examining the historical aspects of technology in education

Springer

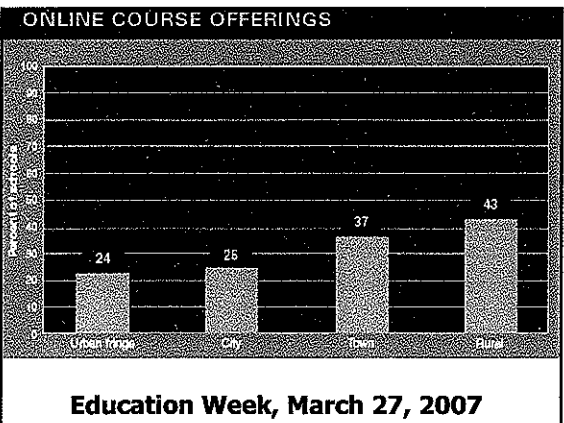
Digital and Dumber?
From by MIT STUDENT DANIEL MARRAS, TAYLOR AND FRANKLIN A. KOBAYASHI

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

By Preston Gralla on Wed, 02/14/2007 - 7:58pm

Here's the newest from Sen. Ted Stevens, the man who described the Internet as a series of tubes: It's time for the federal government to ban access to Wikipedia, MySpace, and social networking sites from schools and libraries.

ABOUT THIS BLOGGER
Preston Gralla: Preston Gralla is a contributor to Computerworld, and the author of more than including Windows Vista in a tutorial.



NACOL

eSchool News
Schools soon required to teach web safety

Free Your Laptop

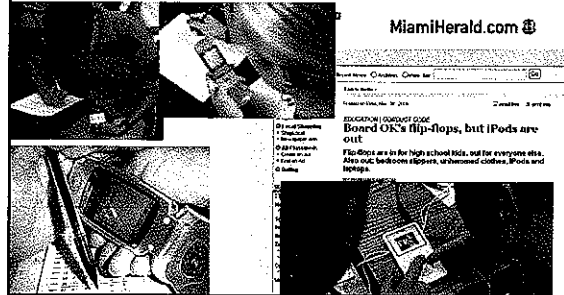
More context for U.S. schools

Connecting the Digital Dots: Literacy of the 21st Century
Barbara R. Jones-Kavalier and Suzanne L. Flannigan
Educause Quarterly (2006), 29(2)

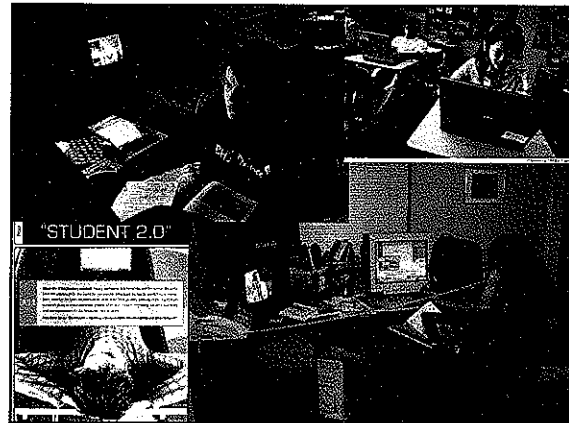
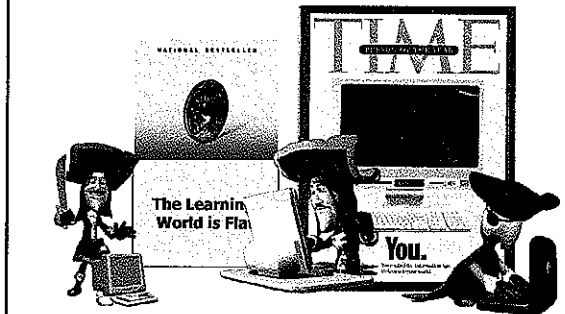
"These days, new media literacy technical skills catapult traditional learning methods into orbit—traditional chalkboards and overheads with pens do not occupy the same realm as current capabilities. As an example, now teachers can do a PowerPoint presentation with streaming video, instant Internet access,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

MiamiHerald.com



The Learning World has become Open!



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)

7. New Social Interaction Skills.

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, Bear Stearns (BSC) analyst Robert Peck 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 \$358 million in 2008. He predicts \$6 billion in revenue by 2016.

8. New Information Search Skills

(Stumble Upon)

9. New Visual Presentation Skills.

Online Photo Albums, e.g., FLICKR (Inc. Magazine, December 2006)

10. New Mobile Learning Skills. Mobile News (New York Times): A new way to take your news with you on the iPhone and iPod touch
 Connected (Part 1/2) from Abilene Christian Univ: <http://www.youtube.com/watch?v=7p8fflqp0uhU>

11. New Reflection Skills. 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 explode previous posts.
6. Nutshell: summarize themes or blogs.
7. Blog on blog: reflections on feelings, confusions.


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

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

14. New Informal Learning Skills. Art and History Exhibits

15. New Visual Learning Skills (e.g., Periodic Table of Visualization; Visual Thesaurus)
<http://www.visualthesaurus.com/>; http://www.visual-literacy.org/periodic_table/periodic_table.html

16. New Text and Audio Production skills.



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

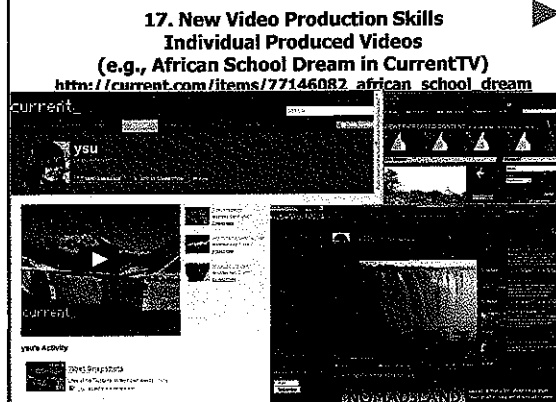
Amy, 13, writes her news script.

Ivan, 12, records his news report.


Lambeth CLC technician George Belfield edits the students' work.

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

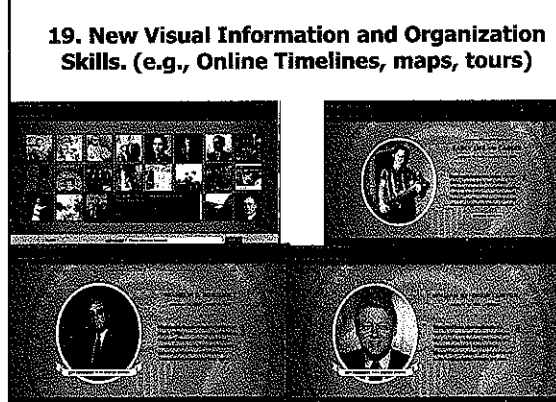
17. New Video Production Skills
Individual Produced Videos
 (e.g., African School Dream in CurrentTV)
http://current.com/items/77146082_african_school_dream



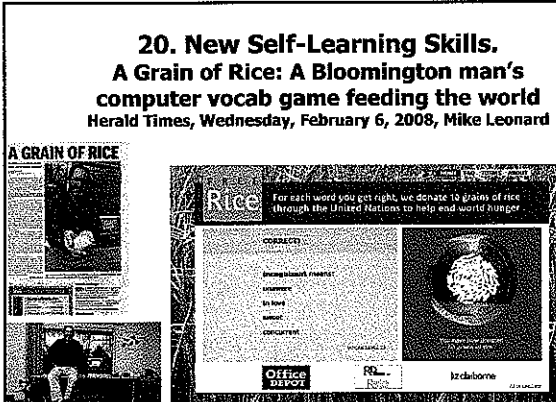
18. New Visual Language Skills.
Using Online Video (e.g., YouTube) to Memorize Sonnets and Poems



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

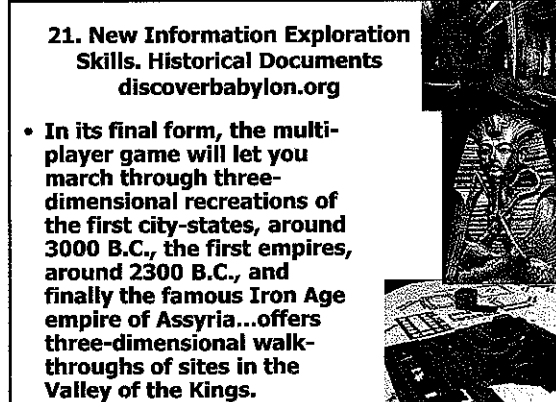


20. New Self-Learning Skills.
A Grain of Rice: A Bloomington man's computer vocab game feeding the world
 Herald Times, Wednesday, February 6, 2008, Mike Leonard



21. New Information Exploration Skills. Historical Documents
 discoverbabylon.org

- In its final form, the multi-player 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.



**22. New Learning Management Skills.
Moodle (400,000 registered users in
193 countries speaking 73 languages)**

The screenshot shows the Moodle website interface. On the left, there is a 'Community Growth' section with a line graph showing an upward trend. The text below the graph states: 'Registered users total 400,000', 'New users in the past 24 hours: 124', 'Registered users awarded a badge in the last 24 hours: 124', and 'Registered users awarded a badge monthly: 3488'. To the right of the graph is a large grid of small circular user avatars. The top of the page features the Moodle logo and navigation links.

**23. New Sharing Skills.
Posting Documents on Web
Scribd: <http://www.scribd.com/>; 21 million
unique visitors per month, May 2008**

The screenshot displays the Scribd website. The main heading is 'Publish Yourself Online'. Below this, there are several sections: 'Upload Documents', 'Share with the World', and 'Explore Our Library'. The 'Explore Our Library' section lists various document categories such as 'Business', 'Education', 'Health', 'Law', 'Science', 'Sports', 'Technology', and 'Travel'. On the right side, there is a sidebar with a search bar and a list of documents. The top of the page includes the Scribd logo and navigation menus.

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

The screenshot shows the Diigo website interface. The main heading is 'Highlight and Share the Web!'. Below this, there is a search bar and a list of search results. The results include various documents and links, each with a small thumbnail image. The top of the page features the Diigo logo and navigation links.

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

This block contains a collage of several screenshots from different language learning websites. The screenshots show various interfaces, including search bars, document lists, and user profiles. The websites shown include Mixer, Livemocha, and Friends Abroad. The top of the collage features the heading '25. New Language Learning Skills Online Language Learning (Mixer, Livemocha, Friends Abroad)'. The screenshots are arranged in a grid-like pattern, showing different aspects of the language learning experience.

**26. New Video Search Skills.
http://www.usatoday.com/tech/products/2008-10-23-youtube-tv-episodes_N.htm**

The screenshot shows a news article from USA Today. The main heading is 'YouTube expands its horizons, and its time limits for videos'. The article text discusses how YouTube is expanding its search capabilities to include full-length TV shows. The article is dated '12:48 PM OCTOBER 24, 2008' and is from the 'Technology' section. The article includes a small image of a group of people and a 'TECH' logo. The top of the page features the USA Today logo and navigation links.

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

The screenshot shows the Calm Chemistry website. The main heading is 'High School Student Self-Testing'. The website features a large chemistry diagram, likely a flowchart or reaction scheme, and a self-testing interface. The top of the page features the Calm Chemistry logo and navigation links.

28. New Browsing Skills. Online Portals & Resources (Civil Rights Digital Library and Amistad, history, science, literatur)

The image shows two overlapping screenshots of news websites. On the left is the MSNBC website with a 'Newsweek' logo and a headline 'Alive and Online'. On the right is a page from the Amistad project, featuring a photograph of a person and the title 'Amistad phalides'.

29. New Multimedia Learning Management Skills (Animations, Video Clips, Audio, Pictures, Web Resources, etc.; e.g., DNA from the Beginning)

The image shows a multimedia learning interface. On the left, there are several small video thumbnails. On the right, there is a large graphic titled 'DNA from the BEGINNING' showing a DNA double helix structure. Text on the page reads: 'RNA was the first genetic molecule. RNA was very likely the first molecule to be able to replicate itself. In the primordial soup, a single-stranded RNA molecule could do a template.' Below the text is a portrait of a man and a navigation bar with buttons for 'Introduction', 'Amistad', 'Amistad', 'Amistad', 'Amistad', 'Amistad', 'Amistad', 'Amistad'.

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)

The image contains an illustration titled 'Multitasking' showing a person sitting at a desk with multiple computer monitors. To the right is a globe. Below the globe is the text: 'A characteristic of the 21st century everyday life'.

Neomillennial Learning Styles

Planning for Neomillennial Learning Styles: Implications for Investments in Technology and Faculty
Chris Dede, Harvard University, Educause, 2005

- Fluency in multiple media--value all types of communication, activities, experiences, not a single best medium
- Actively seek, collect, and synthesize experiences, rather than absorb a single best source
- Active learning and collective reflection
- Non-linear and associated webs of learning
- Co-design of learning experiences for individual needs and preferences not pre-customized

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_9-29-06.pdf

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

- Information and communication skills;
- Thinking and problem-solving skills;
- Interpersonal and self-direction skills;
- Global awareness;
- Financial, economic, and business skills; and
- Civic literacy.

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_9-29-06.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://i.ciconline.org/docs/CICmedialitreport11-2006.pdf> (November, 2006)

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Media literacy is a key 21st Century skill because it provides a framework and method to think critically about the media and technologies students and adults use for information and entertainment. Media literacy means knowing how to access, understand, analyze, evaluate and create media messages on television, the Internet and other outlets. It also means knowing how to use these and other technologies safely, productively and ethically.



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)

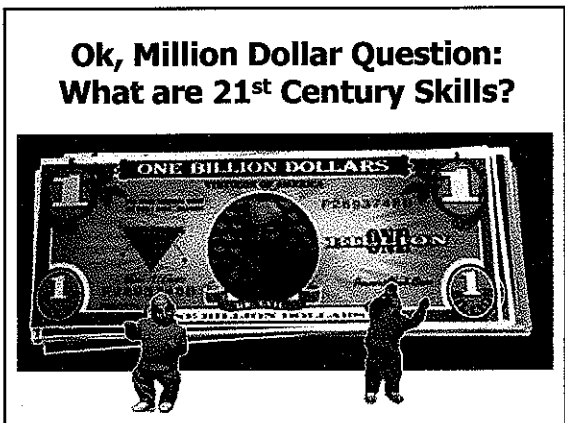
- Define info need
- Collect & manage info from digital envirs
- Interpret into using ICT skills for comparison, analysis, & synthesis
- Evaluate info for authority, bias, & timeliness
- Communicate findings through creative use of ICT tools and resources

...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.



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,
 Participate in a team, exercise leadership,
 Manage 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)

21st Century Skills

Digital-Age Literacy

An uneasy change, for skills needed to navigate the complexities of life after change. In the reading, writing, and calculating skills were considered basic. Only in recent years has the p... have been, developing a wide range of literacy (National ICT Literacy Panel, 2004) also used to mean proficiency in science, technology, and culture, as well as good citizenship.

Digital-Age Literacy includes the following:

- **Basic Literacy:** The capacity to read and understand of both written and oral communication and to use it in the digital age.
- **Technical Literacy:** Knowledge and understanding of the essential concepts and principles of ICT, and cultural skills, and economic productivity.
- **Research Literacy:** The ability to identify research problems, resources, sources, a database, assess the consequences of change in research conditions and public programs, and to apply results.
- **Technological Literacy:** Knowledge about what technology is, how it works, what it can do, and how to use it to achieve specific goals.
- **Global Literacy:** The ability to recognize, use, appreciate, and overcome barriers and risk that are associated with, decision-making, communication, and learning.
- **Information Literacy:** The ability to evaluate information across a range of media, products, and services, and to use it effectively, and to accept the responsibility that it entails.
- **Media and Cultural Literacy:** The ability to understand and appreciate the traditions and values of the culture of the future.
- **Digital Literacy:** The recognition and understanding of opportunities arising from digital technologies, and the ability to use them to create, communicate, and participate in the global community.

Academic Achievement




<p>Digital-Age Literacy</p> <p><small>Basic, Technical, Research, and Information Literacy</small></p> <p>Academic Achievement</p>	<p>Inventive Thinking</p> <p><small>Adaptability, Managing Complexity, and Self-Direction</small></p> <p>Academic Achievement</p>
<p>Effective Communication</p> <p><small>Learning, Collaboration, and Interpersonal Skills</small></p> <p>Academic Achievement</p>	<p>High Productivity</p> <p><small>Planning, Planning and Managing for Success</small></p> <p>Academic Achievement</p>

21st Century Learning

Academic Achievement

New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources
 Chronicle of Higher Education, Andrea Foster, March 9, 2007
<http://chronicle.com/free/v53/i27/27a03801.htm>

- College students use technology constantly. They text-message friend compile playlists for their iPods, and whizzes at updating their MySpace profiles. But when it comes to one k work they are required to do in coll namely, academic research — they inept. Too often, college officials sa students rely on Google or Wikipedi sources, as if oblivious to peer-revie scholarship.

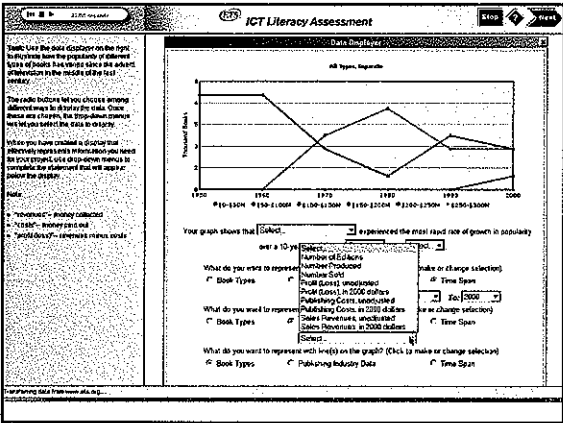
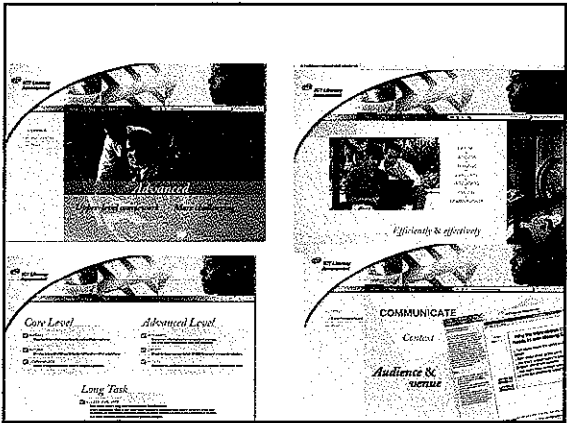




New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources
 Chronicle of Higher Education, Andrea Foster, March 9, 2007
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- The explosion of electronic information is fueling students' confusion, 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, Citizendium and Scholarpedia, are starting up...

New programs teach undergraduates how to use the Internet and the online card catalog in search of the best sources
 Chronicle of Higher Education, Andrea Foster, March 9, 2007
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- 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.



Connecting the Digital Dots: Literacy of the 21st Century
 Barbara R. Jones-Kavalier and Suzanne L. Flannigan
 Educause Quarterly (2006), 29(2)

"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/>