Educational Technology: Harnessing New Tools to Support Information Literacy

Dr. Corinne Laverty
Queen’s University, Kingston, Ontario, Canada

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Outline

• What is educational technology and how is it influencing learning?

• Why should librarians evolve a new role using educational technology?

• Examples of how we can use educational technology to support information literacy development.

• Questions?
Educational Technology

Educational Technology ... is the use of technology to support the learning process.

Examples of technology in learning:
• Digital multimedia resources (e.g. images, video, audio)
• Presentation tools (e.g. PowerPoint)
• Online information sources (e.g. books, articles, websites)
• Web course tools (e.g. WebCT)
• Communication tools (e.g. listservs, blogs, chat, wikis)
Research on Educational Technology


Meta-analysis of 78 studies revealed 14 overall observations on how new technologies effect the learning process and the immediate environment in which they are introduced.
Research Observations

When students use educational technology it …

- Stimulates development of intellectual skills (problem solving, learning how to learn, creativity).
- Improves development of various skills and attitudes.
- Increases interest in learning and attention span.
- Stimulates search for more information on a subject.
- Promotes cooperation.
- Contributes to more thorough assimilation of ideas.
Research Observations

When teachers use educational technology it …

• Promotes use of diverse instructional resources.
• Facilitates cooperation among colleagues.
• Promotes examination of learning styles and outcomes.
• Encourages teacher-student interaction.
• Fosters view of learning as a continuous research process.
• Highlights student learning strengths and difficulties.
Our Net Generation

Marc Prensky (see Digital Natives, Digital Immigrants, 2001) characterizes today’s students as digital natives who:

- Want to receive information at light speed.
- Like to parallel process and multi-task.
- Prefer their graphics *before* their text.
- Prefer random access through hypertext.
- Function best when networked.
- Thrive on instant gratification and frequent rewards.
- Expect information systems to work like Google.
Need to Evolve?

Survey of Library use from an unpublished study at the University of Toronto

12% are near staff
27% away from staff
29% outside library
32% off-campus

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Librarians Evolved a Teaching Role

Significant Events in Education

1970
- AV collections
- learning theory

1980
- personal computer
- multimedia collections
- information explosion

1990
- information literacy
- teaching partnerships
- IL curriculum integration

2000
- public access to the Web
- Google
- digital collections
- learning commons
- media literacy

Librarian Responses

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Librarians Support Student Learning

- Use of online learning tools
- Assignment design
- Teaching experience
- Information technologists
- Presentation skills
- Understand the research process
The Librarian Connection

Educational technology offers opportunities for new roles, partnerships, and teaching methods:

- Develop digital collections for teaching and learning.
- Experiment with technology to enhance library learning.
- Create partnerships with others who are exploring technology.
Resource Specialists
Develop Collections

... of online multimedia resources and how to find them.

<table>
<thead>
<tr>
<th>Search Guides</th>
<th>Digital Collections</th>
<th>Multimedia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Images: Art, Graphics, Photographs</td>
<td>Learning Object Repositories</td>
<td>Webcasts &amp; Podcasts</td>
</tr>
<tr>
<td>Websites &amp; Virtual Field Trips</td>
<td>Image Libraries</td>
<td>Music &amp; Audio</td>
</tr>
<tr>
<td>Videos &amp; Multimedia</td>
<td>Primary Sources</td>
<td>Technology Tools</td>
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Make Library Portals

New Allies in the Fight Against Googling …

Design template for addition of library resources on course web pages.

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Use Presentation Software
... to demonstrate concepts visually

Boolean AND

television

violence

television and violence

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Design Interactive Tutorials

Experiment with video screen capture:
Tutorial on Keyword Searching using Macromedia Captivate
Use Learning Objects

... a digital reusable learning unit on specific content.

CORIL
Cooperative Online Repository for Information Literacy

O-Space
ospacescholarsportal.info

PRIMO
Peer-Reviewed Instructional Materials Online Database
(Formerly Internet Education Project)

MERLOT
Multimedia Educational Resource for Learning and Online Teaching

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Why should I bother with this tutorial?

Glad you asked.

Plagiarism is a big deal, and it's not something you want to find out about the hard way.

It could get you dismissed from the university!

Researching ethically is also researching efficiently; not only will you learn how to avoid plagiarism, but you'll also pick up some good research tips too.
Meet Emma, a second year biology student. Emma has been assigned a research paper on a current biology topic and has chosen to write about genetically modified foods. Her professor has warned her class about plagiarism and she needs to know more information before she begins.
QUOTING

A quotation uses exactly the same words and puts them in quotation marks. Here's what a quotation looks like with a proper in-text reference in APA style:

"It is therefore not surprising that the russet Burbank appeared on the market as the first transgenic potato, engineered to contain Bacillus thuringiensis (Bt) toxins derived from a common soil bacterium" (Kneen, 1999, p. 105-106).

References
Online Course Development

Teaching and Learning in an Online Environment

- Course Description
- Study Modules
- Discussions
- Techy Terms
- Need Help?
- Student Homepages
- Personal Mail
- Readings & Resources
- Whiteboard

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Information Literacy Requirements

Required for 125 online course instructors.

Completion Time: five hours

Unit Objectives:

1. Review the qualities of an information-literate learner and how information literacy supports and enhances the learning process.
2. Experience a personal information-finding task using Google as context for the unit.
3. Develop strategies for finding Web resources that support an online course.
4. Develop and integrate appropriate information literacy activities into an assignment targeted for an online course.
Example of a Learning Technology Team

Scenario: Jenny teaches a 2nd-year Shakespeare class of 100 students. How can educational technology make her lectures more interesting?

- Contrasting videos of modern performances
- Images and photographs of staging and costumes
- PowerPoint as an organizational tool in lectures
- Virtual field trip to the Globe Theatre
- Audio files of selected speeches
- Library portal to research tools
Components of Learning Commons

Reference and Instruction Services
Virtual Commons

Liaison with Faculty and TAs

Partnerships with Support Groups

Collaborative spaces
E-classroom

Workstations – Wireless -- Laptop lending

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Information Literacy Development

- Curriculum Design
- Assignment Mapping
- IL Objectives
- Scaffolding
- Resource Selection
- Tool Choreography
- Tracking
- Information Collection
- Information Management
- Synthesis and Reflection
- Evaluation
- Writing

Learning Partners
- Faculty
- TAs
- Learning Strategies
- Librarians
- Librarians
- Peer Mentors
- Writing Centre

Research Process

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“The time was when a library was very like a museum, and a librarian was a mouser in musty books, and visitors looked with curious eyes at ancient tomes and manuscripts.

The time is when a library is a school, and the librarian is in the highest sense a teacher, and the visitor is a reader among the books as a workman among his tools.”

Melvil Dewey, “The Profession,”
*The American Library Journal*
Volume 1, Number 1, 5-6. 1876
Questions