Educational Technology:
Harnessing New Tools to Support Information Literacy

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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

Laferriere, T., Bracewell, R., & Breuleux, A. (2001) Emerging contribution of online resources and tools to k-12 learning and teaching. SchoolNet Report.

Meta-analysis of 78 studies reveled 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.
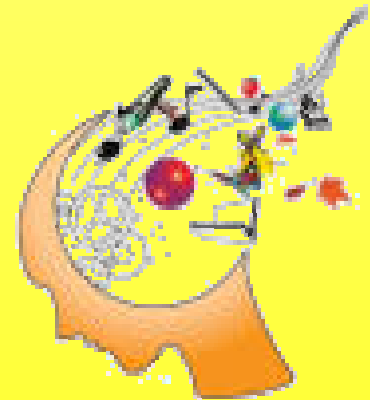
Need to Evolve?

Survey of Library use from an unpublished study at the University of Toronto
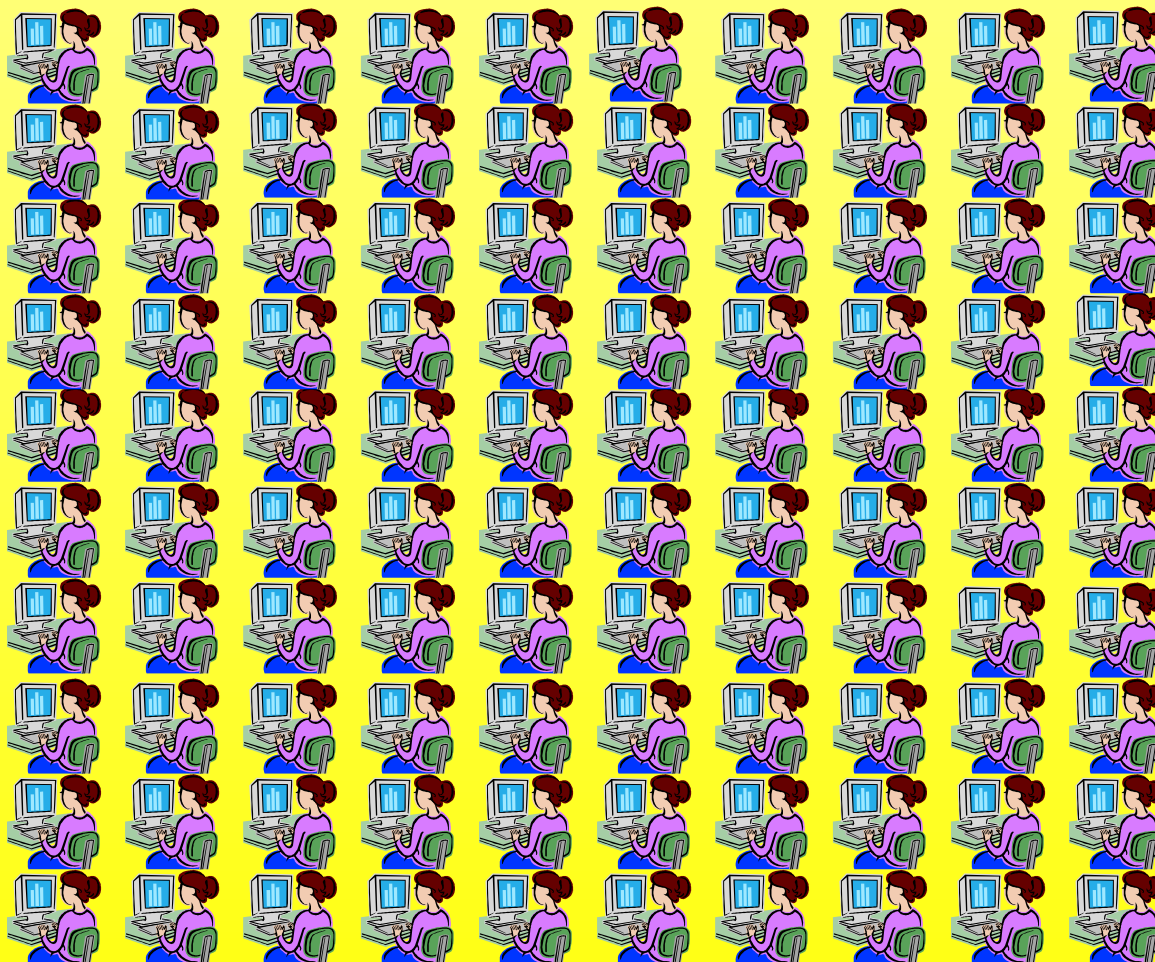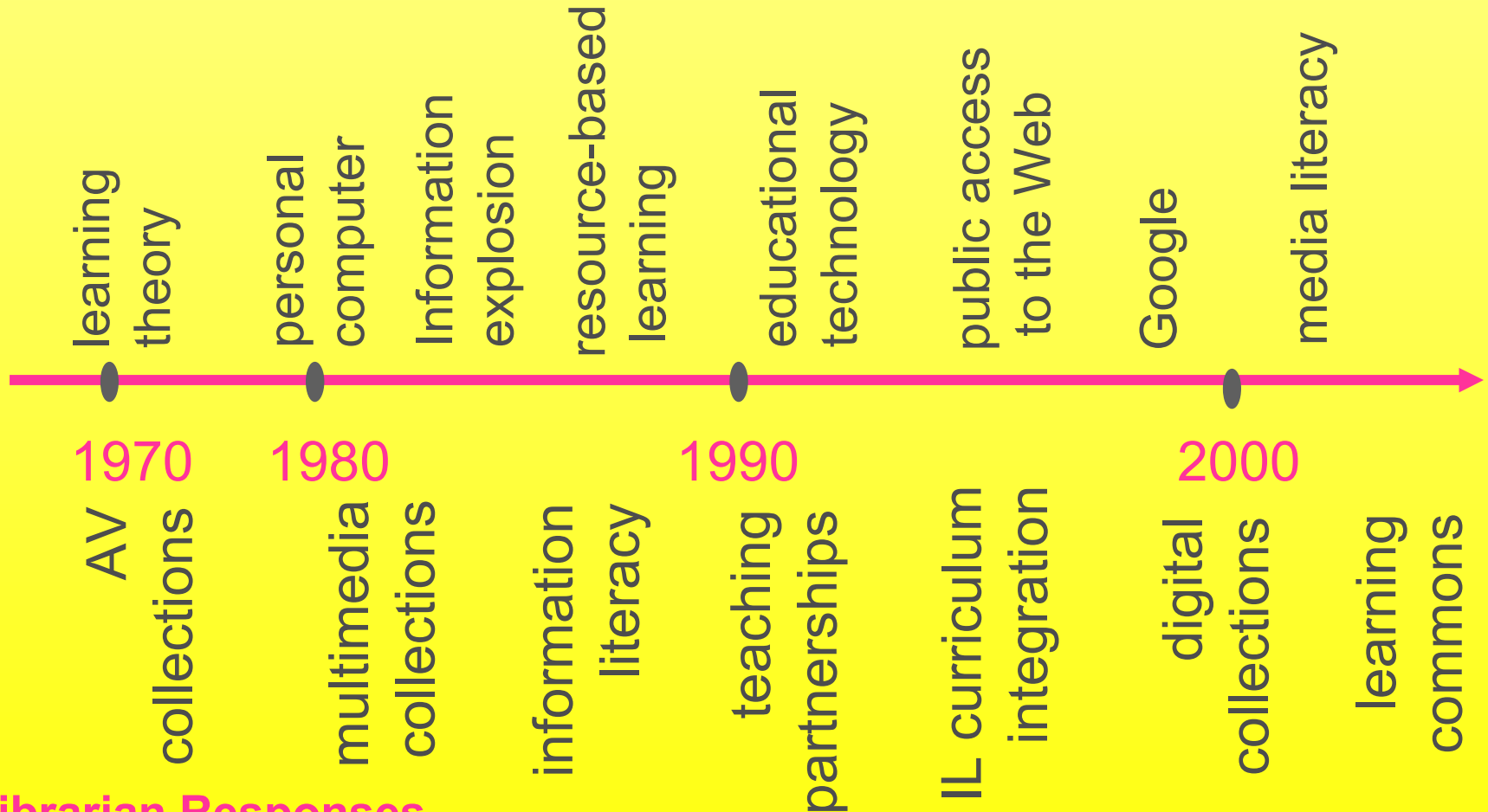
12% are near staff

27% away from staff

29% outside library

32% off-campus

Librarians Evolved a Teaching Role

Significant Events in Education

learning theory · personal computer · Information explosion · resource-based learning · educational technology · public access to the Web · Google · media literacy

1970 — 1980 ——————— 1990 ——————————— 2000

AV collections · multimedia collections · information literacy · teaching partnerships · IL curriculum integration · digital collections · learning commons

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.

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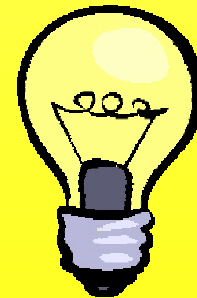
Resource Specialists

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Develop Collections

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

Search Guides	Digital Collections	Multimedia
Images: Art, Graphics, Photographs	Learning Object Repositories	Webcasts & Podcasts
Websites & Virtual Field Trips	Image Libraries	Music & Audio
Videos & Multimedia	Primary Sources	Technology Tools

Make Library Portals

THE CHRONICLE OF HIGHER EDUCATION

Information Technology

From the issue dated March 21, 2003

New Allies in the Fight Against Research by Googling

Faculty members and librarians slowly start to work together on courseware

By SCOTT CARLSON

Ronald J. Granieri is doing what he can to keep his history students out of the quagmire of misinformation known as the World Wide Web. Two years ago, when he started using Blackboard's software

New Allies in the Fight Against Googling …

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

Use Presentation Software

… to demonstrate concepts visually

Boolean AND

television

violence

television   violence

television and violence
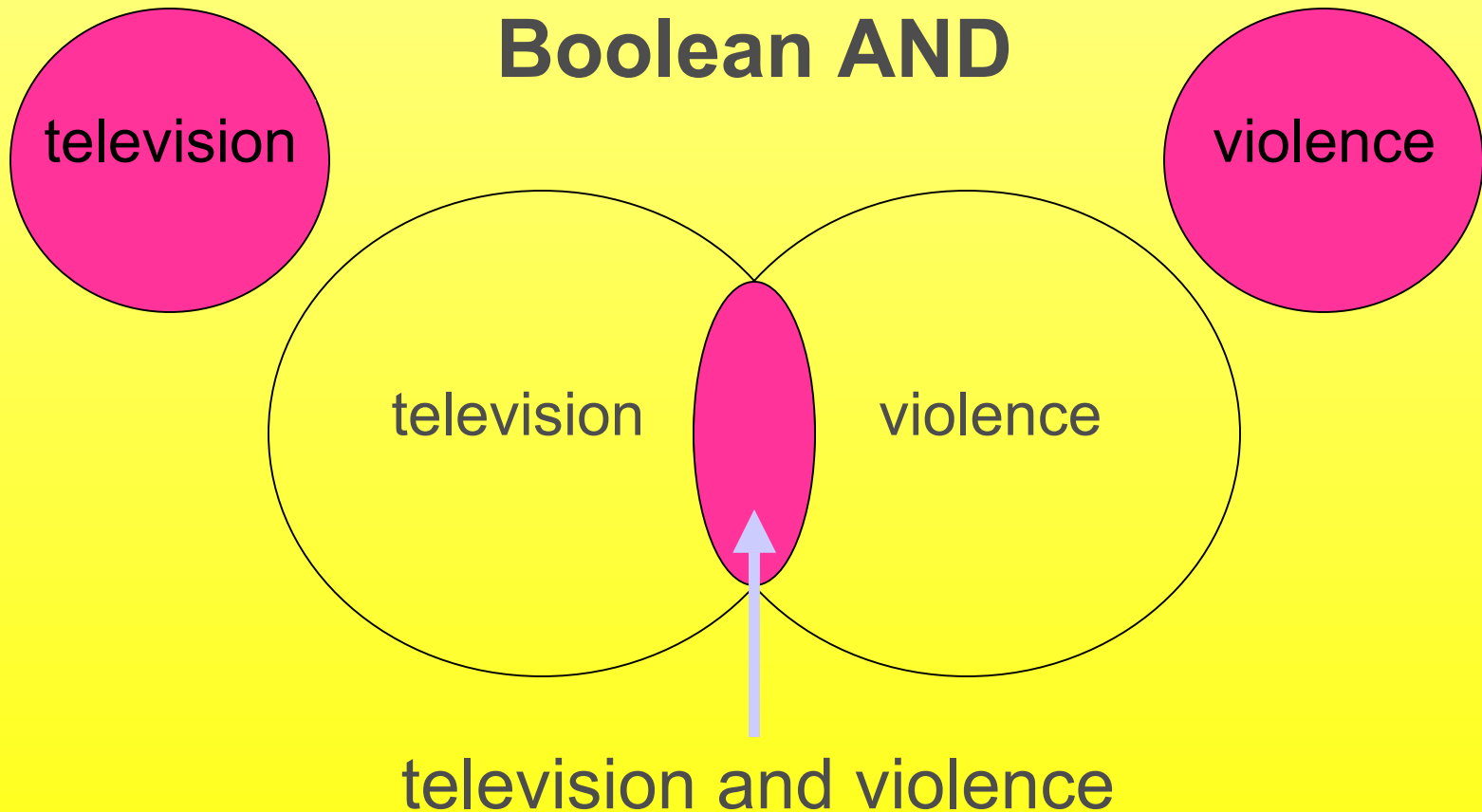
Design Interactive Tutorials

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

Use Learning Objects

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

CORIL

O-Space
ospace.scholarsportal.info

Cooperative Online Repository for Information Literacy
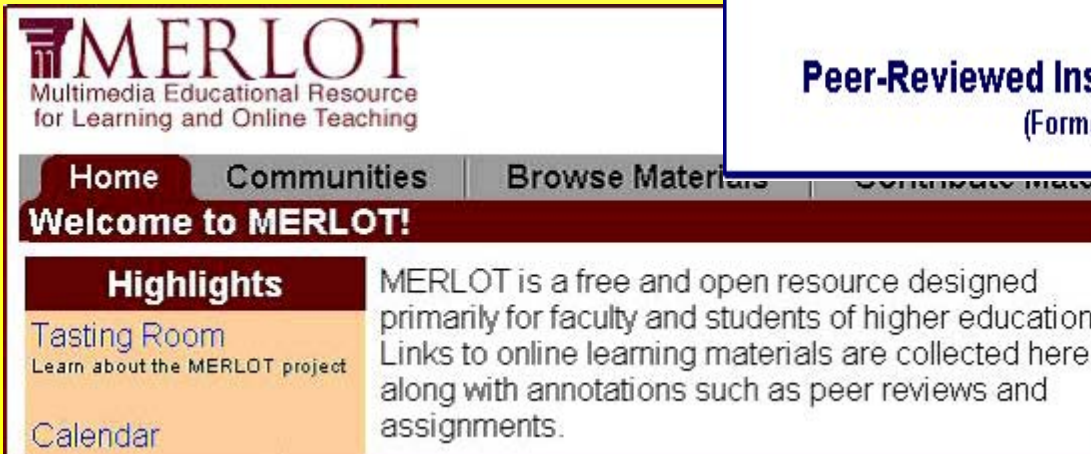
... a service of the

Ontario Scholars Portal
www.scholarsportal.info

PRIMO
ALA ACRL IS

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

MERLOT
Multimedia Educational Resource
for Learning and Online Teaching

Home	Communities	Browse Materials	Contribute Mater

Welcome to MERLOT!

Highlights

Tasting Room
Learn about the MERLOT project

Calendar

MERLOT is a free and open resource designed primarily for faculty and students of higher education. Links to online learning materials are collected here along with annotations such as peer reviews and assignments.

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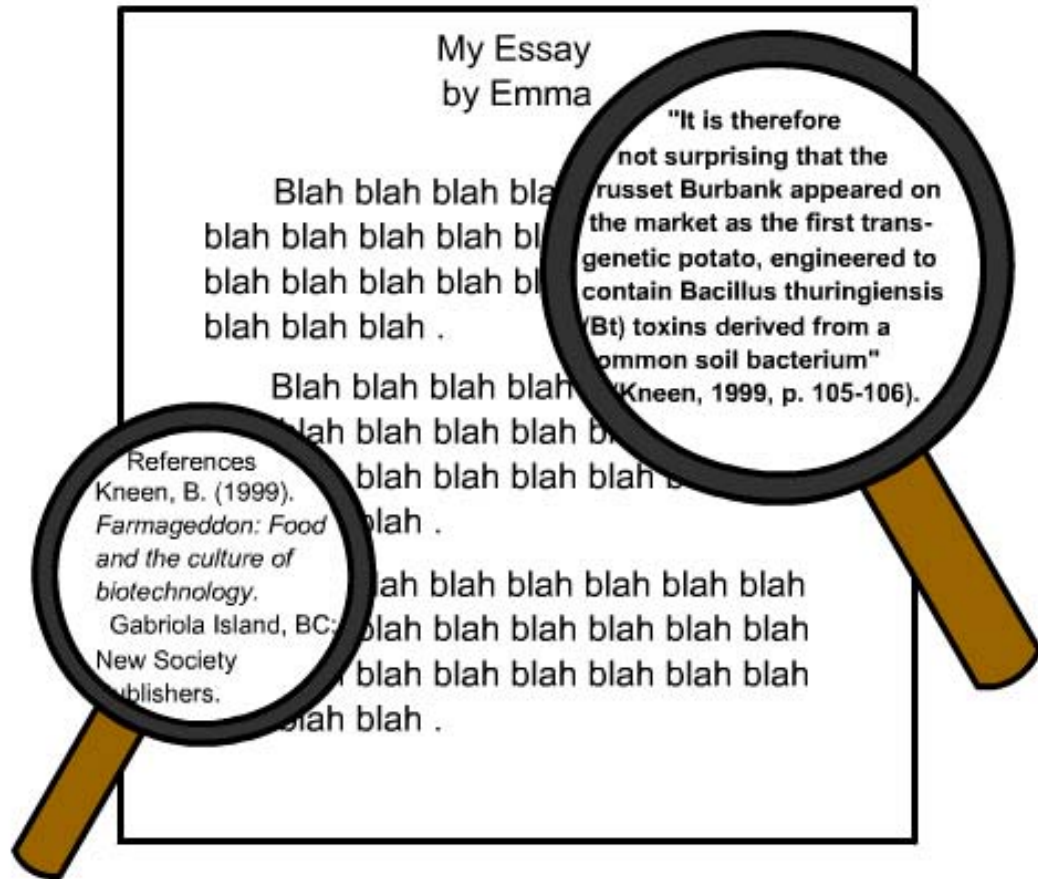# Example of a learning object on plagiarism.

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.

Dylan — Arts
Emma — Science
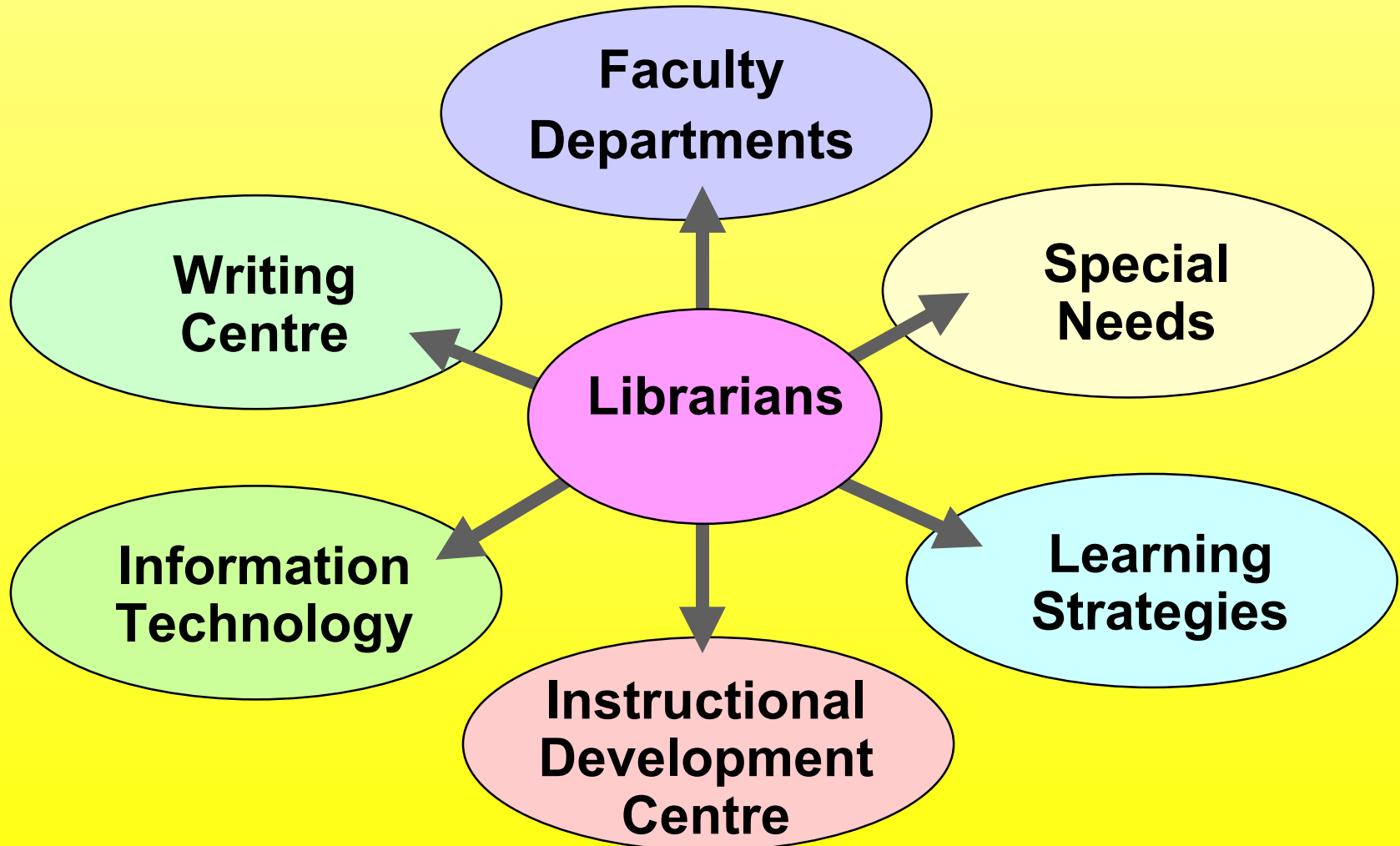Tyler — Professional Studies
Maiko — Undeclared
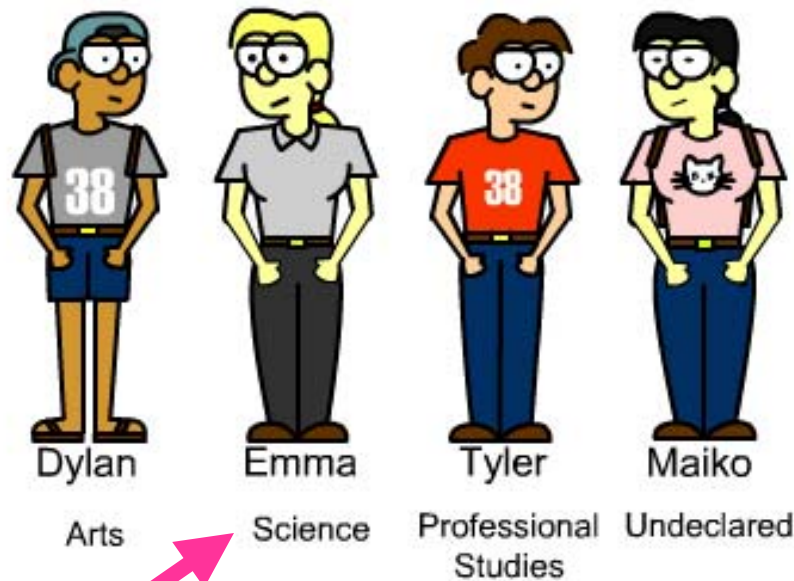
QUOTING

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:

My Essay
by Emma

Blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah .

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

Blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah .

References
Kneen, B. (1999). *Farmageddon: Food and the culture of biotechnology.* Gabriola Island, BC: New Society Publishers.

blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah .

Librarians Collaborate

Faculty Departments

Writing Centre

Special Needs

Librarians

Information Technology

Learning Strategies

Instructional Development Centre

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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

Information Literacy Requirements

Required for 125 online course instructors.

Learning Technology Teams

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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

Research Process

Learning Partners

<u>Curriculum Design</u>
Assignment Mapping
IL Objectives

Faculty
TAs
Learning Strategies
Librarians

<u>Scaffolding</u>
Resource Selection
Tool Choreography

Librarians
Peer Mentors

<u>Tracking</u>
Information Collection
Information Management

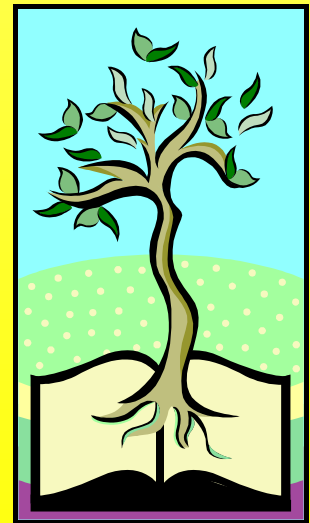<u>Synthesis and Reflection</u>
Evaluation
Writing

Faculty
TAs
Writing Centre

History Repeats Itself

"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

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Questions

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