

Knowledge Literacy and Library Instruction

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Current Library Instruction

- ✓ Focuses on information cycle –how information develops over time
- ✓ Emphasizes library print resources
- ✓ Minimizes the Web as resource
- ✓ Minimizes exchange of information
- ✓ Designed for research papers, not KM environment in business world
- ✓ May not meet needs of millennials

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Knowledge Literacy Cycle

- ✓ Focuses on fluid information
- ✓ Values the individual as knowledge repository
- ✓ Emphasizes exchange of information
- ✓ Encourages working in groups
- ✓ Often web based, suits needs of millennials

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Knowledge Cycle: Fluid - Shared

- ✓ Raw data
- ✓ Information – data in context
- ✓ Analyze information –spot trends, place in perspective, compare sources
- ✓ Incorporate new information into your tacit knowledge base
- ✓ Exchange this knowledge with others to create new explicit knowledge

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Focus of Instruction

What information skills do workers need in the knowledge management environment?

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Information Needs

- ✓ What kind of information is needed
- ✓ Why is it needed (how will end user apply it)
- ✓ Where information is located
- ✓ Who has the needed information
- ✓ When is it needed
- ✓ When is it available
- ✓ How to transfer tacit information to others (cooperative learning)

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Why Use the Web?

- ✓ Available 24/7
- ✓ Rapid updates
- ✓ Fluid content
- ✓ Web 2.0 software encourages information exchange
- ✓ Variety of information for all needs
- ✓ BUT...

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Disadvantages of the Web

- It's MESSY
- Difficult to evaluate and assess bias
- Things disappear
- Difficult to do precision searches
- Traditional important resources often buried
- All time is NOW (historically important resources may be missing)

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Problem: Transfer the Web Environment to Classroom Instruction

How do we proceed?

What Should Students Learn?

- ✓ How to use the web to find information
- ✓ How to evaluate this information and place it in context
- ✓ How to recognize bias (hidden agendas)
- ✓ How each piece of information contributes to the final knowledge
- ✓ How to exchange this information in a group situation
- ✓ How to ethically use the information

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Pedagogical Methods

- ✓ **Constructivist Education** – Students learn by hands-on practice on the Web
- ✓ **Cooperative Instruction** – Students learn to collaborate -work in groups with librarian/instructor and each other

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Expected Outcomes

Students learn:

- How to coordinate schedules
- How to work in steps and in sequence towards final product
- How each contribution strengthens final product
- How to incorporate feedback from peers into final product
- Why government resources work for KM

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Why Government Information?

- ✓ Government information has been online for a long time, free to public
- ✓ Documents librarians have much tacit info on web structure to add to class:
 - Why things disappear
 - Which source is authentic
 - How to make Search Engines work for you
 - How to evaluate web info

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Documents Sources Can...

- ✓ Provide different points of view, all high quality (different agencies)
- ✓ Introduce students to government resources which may be different than traditional "journal articles"
- ✓ Technical reports, primary resources,
- ✓ Annual reports, raw data, laws, hearings, patents, etc.

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And

- ✓ Government information is controlled by several good search engines on the web, including:
 - GPO Access
 - USA.gov
 - Science.gov
 - StatUSA
 - Google U S Government (specialized)
 - And many state and federal agency websites

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Outcome for students

- ✓ Students learn about important Web resources
- ✓ Students learn about agency structure, important when seeking good resources
- ✓ As students learn agency structure, they learn web structure
- ✓ Students benefit from librarian's tacit knowledge of web and of government organization

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And...

- ✓ Increase critical thinking skills by exposure to high quality web pages
- ✓ Increase understanding of bias (not a bad thing!)
- ✓ Learn to navigate structure of the "messy" web for quality resources
- ✓ Learn about quality resources to consult for all information needs.
- ✓ Learn to work in groups

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Lesson Plan

Objectives

Students

- ✓ Learn about Web organization/structure
- ✓ Compare information sources for quality, comparing government agency web pages with Google search results
- ✓ Practice contributing to a group project, conducting research toward a joint goal
- ✓ Learn to take advantage of librarian's tacit knowledge of the web as a research tool.

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Best Practices for Cooperative Instruction

Design assignment so

- ✓ Everyone does similar things--one bad apple won't spoil the presentation
- ✓ Group size is manageable—3-4 people
- ✓ Students understand tasks-- "what to look for" is spelled out
- ✓ Each student report to the class--some will not blow off work
- ✓ Student assess strengths, weaknesses of the methods/sources they used, and tell others.

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Teacher Preparation

Prepare for the assignment by

- ✓ Providing information about federal/state agencies (multiple agencies, multiple points of view)
- ✓ Introducing government search engines
- ✓ Choose appropriate Websites
- ✓ Providing students the assignment sheet and grading rubric
- ✓ Checking their ability to use PowerPoint, other presentation software.

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Teaching Materials

- ✓ Brief description of selected Web resources
- ✓ Assignment sheet with grading rubric
- ✓ Project worksheet for students to use, each one turns in project sheet.
 - Duties assigned to:
 - Results, log of what they searched
 - Pros and cons of the resource they used
 - Evaluation of their source

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Students Brainstorm

With assigned topic, students confer on

- ✓ How much info is out there on your topic?
- ✓ One topic can be addressed several ways
- ✓ Different disciplines, different points of view (bias)
- ✓ *Librarian input: Information on popular Web sources may not replace government information*

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Process of Assignment

Students will

- ✓ Work in groups of 3-4 with a list of recommended databases
- ✓ Report on their findings to the class
- ✓ Submit signed peer reviews: teacher collates comments and returns anonymous comments to students.

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Topic – Implications of Older Workers in Work Force

- ✓ **Brainstorm to develop topics**
- ✓ Use government search engines to locate issues (health, labor, education, experience, retention), & agencies involved. Each student takes one Website:
- ✓ Statistics on aging www.agingstats.gov
- ✓ Bureau of Labor Statistics www.bls.gov
- ✓ Science.gov www.science.gov
- ✓ Give one Google U.S. Government www.google.com/ig/usgov

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Evaluating Web Information (1)

Criteria: Can you easily find out about the

- ✓ **Authority/Reputation of Information provider**
 - What are the author's (or sponsor's) credentials—journalist, professional, professional association, government agency, company employee, interested person?
- ✓ **Currency of information**
 - Has the page been updated reasonably recently?

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Evaluating Web Information (2)

Quality of Information

- ✓ Is the information supported by documented facts/statistics?
- ✓ Is the coverage superficial, or in-depth?
- ✓ Is the source objective? Is there an attempt to give a balanced point of view, or is the information and opinion biased--even propaganda?
- ✓ Is the language clear?
- ✓ Are there citations or links to reliable resources?

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Step1: Analyze Needs

- ✓ Who are the customers? (Teacher, class, group, individual student)
- ✓ How much information do students need (how big is the project)?
- ✓ What information do they need (what kinds, from what sources)?
- ✓ When do they need the information?
- ✓ Where do they find the information (or whom do they ask?)

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Step 2: Do the Project

- ✓ 1. Students assign parts of project to individuals (Instructor provides worksheet)
- ✓ 2. (Required) Get needed information from suggested sources, including asking a librarian
- ✓ 4. Make a timeline, set meeting times/mechanisms to report back to group
- ✓ 5. Prepare to Submit (write up the report, prepare presentation)

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Step 3: Make the Report

Report includes

- ✓ The answers/solutions
- ✓ Which source(s) worked best
- ✓ Which method was easier
- ✓ What source they could use without help (or at home on computer)
- ✓ Which directions were hard to follow (directions from instructor or from database, catalog)

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Project Assessment

- ✓ Which resources produced more relevant results?
- ✓ Was there more overlap among the sources when the search was narrowed?
- ✓ Which sources provided more background?
- ✓ Which sources provided more statistics?
- ✓ Which resources would they recommend?

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Student's Product

- ✓ Brief written report or presentation summing up findings and recommending improvements
- ✓ Participation in peer review—students use the grading rubric to assess their assignments and those of others; submit signed comments
- ✓ Teacher collates comments and forwards them (without signatures) to the group evaluated.

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Teacher's Assessment

- ✓ Analysis shows that students took time and care with project.
- ✓ All group members participated in project.
- ✓ Presentation was well-organized and covered important points, including search features and where to find "Help".
- ✓ Student handouts were clear and organized.
- ✓ Other students, teacher thought the presentation informative.

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Information Sources

Suggested readings

- "Criteria for Evaluating Information Resources: Electronic & Print". (n.d.) [State U. of NY at Oswego Library]. Accessed 15 March 2007 at www.oswego.edu/library/ref/eval_info.html.
- Harris, Tom. (2007). Collaborative Research and Development Projects—A Practical Guide, Pp. 49-75. New York, NY: Springer-Verlag. Online version accessed at OSU Library: <http://www.knovel.com/knovel2/Toc.jsp?BookID=1759&VerticalID=0>

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