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From information overload to information savvy

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Learning Outcomes and Information Literacy

The Case for Collaboration

February 14, 2002
University of Washington

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From Information Overload to Information Savvy:

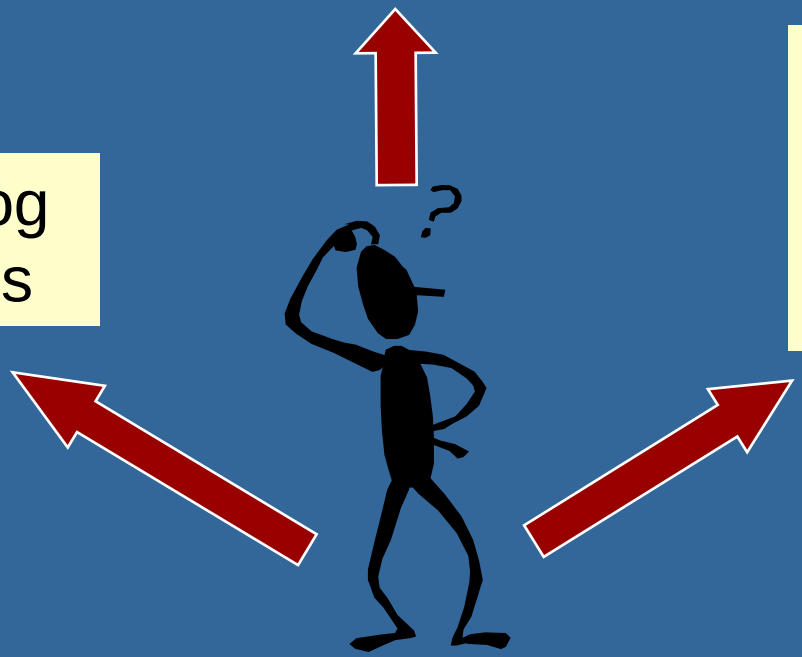
Who is teaching students students how to find, use, and analyze information effectively?

Information Seeking in 1975

Abstracts and indexes for articles

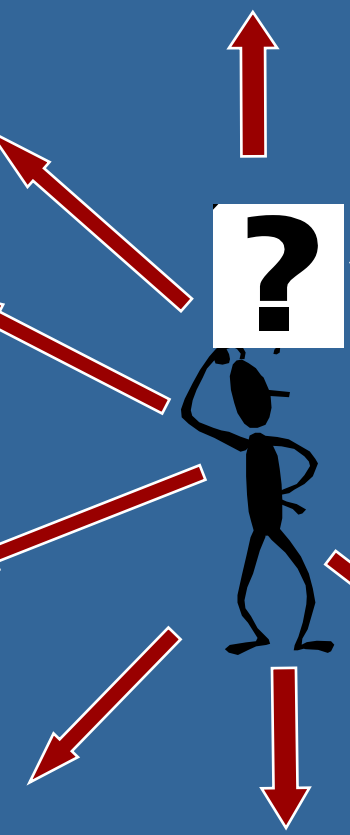
Card catalog for holdings

Reference librarian for reference books



I need information on...

Information Seeking in 1995



Web catalogs for library holdings

Local databases

Web based gateways to licensed databases

Telnet catalogs

Print Abstracts and indexes

CD ROM databases on WAN, LAN, stand-alone

Other online catalogs

WWW (search engines, meta search engines, directories, jump sites

Listservs & discussion groups

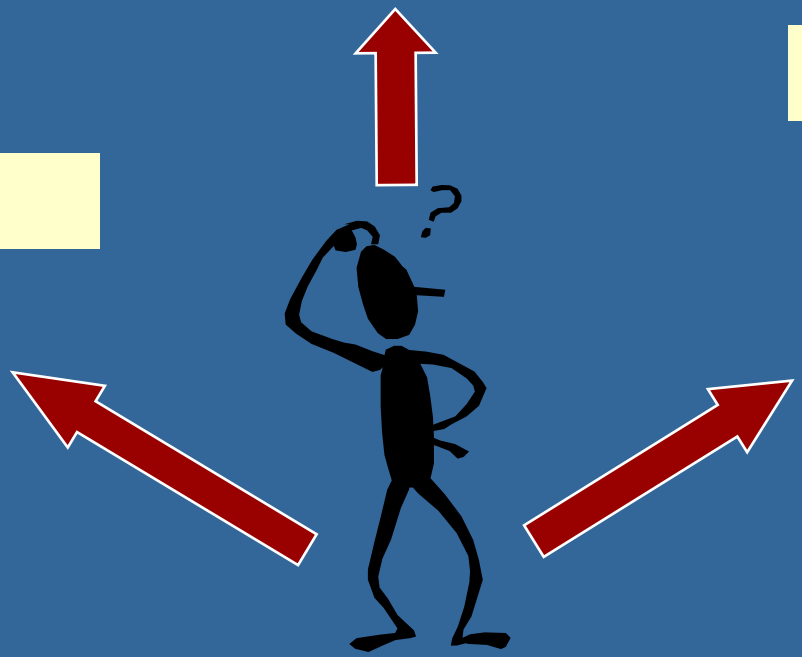
Digital Libraries

Information Seeking in 2002

Google

Chat

Yahoo



I need information on...

A New Higher Ed Environment

This
is about

Undergraduate Education

- not about information
or
technology
or
libraries

Overview

- Higher Education and the State of Undergraduate Education
- Outcomes Assessment
- Defining Info Lit - Info Technology Competencies
- Assessment of Student Learning
- Campus Collaboration for Faculty Support

Higher Education Environment

- Competition
  - delivering education
- Demographics
  - new generations of students/researchers
- Teaching and Learning Methods
  - teach and learn in new ways
- Research
  - changing information/technology environment
- Physical Environment
  - increased need for faculty space/labs
- Accountability for Student Learning
  - outcomes assessment

Reinventing Undergraduate Education: A Blueprint for America's Research Universities

1. Make Research-Based Learning the Standard
2. Construct an Inquiry-Based Freshman Year
3. Build on the Freshman Foundation
4. Remove Barriers to Interdisciplinary Education
5. Link Communication Skills and Course Work
6. Use Information Technology Creatively
7. Culminate with a Capstone Experience
8. Educate Graduate Students as Apprentice Teachers
9. Change Faculty Reward Systems
10. Cultivate a Sense of Community

Boyer Commission on Educating Undergraduates in the Research University
http://notes.cc.sunysb.edu/Pres/boyer.nsf

Reinvention Center

http://www.sunysb.edu/Reinventioncenter/

- Increasing student participation in research and scholarly activities
- Inquiry learning
- First-Year Experience
- Outcomes Assessment
- Instructional Technology
- Information Literacy
- Interdisciplinary initiatives and issues
- Retention
- Diversity and Community
- Promoting change despite limited resources

- Faculty Issues - categories of instructors, quality of teaching
- Departments - Changing departmental culture, linking teaching and research missions, rethinking curriculum, and taking advantage of the full range of opportunities and venues that are available
- Science Education - Rethinking pedagogy, taking advantage of resources, disseminating research on teaching and learning

Reinvention Center - Northeast Region Subgroups
(from agenda for Western Region Meeting of 11/9/01

Pedagogical Strategies

Active Learning

- Inquiry Learning
- Problem-based Learning
- Project-based Learning
- Service Learning

Resource-Based Learning

And at UW

The University of Washington community must be committed at every level, from faculty to departments to colleges, to the concept of learning through inquiry. When we teach we must emphasize the process of discovery, so that our students learn how to:

•formulate good questions within a discipline

•answer those questions in ways that combine specific knowledge with the conceptual and theoretical frameworks of the discipline

•define, locate, evaluate, and experimentally create valid and compelling evidence related to the questions asked

•use the information to make cogent and valid arguments orally, numerically, graphically, and in writing

Enhancing Student Learning Task Force

http://www.artsci.washington.edu/asreports/List.htm

Outcomes Assessment

Inputs/outputs are important but not sufficient

Regional accreditors agree to increase emphasis on learning and outcomes

Assessment of outcomes is
an ongoing institutional activity ...part of a coherent institution-wide plan.

From: *Learning Outcomes and Middle States Accreditation* (Powerpoint presentation) Oswald M. T. Ratteray -- *Assistant Director for Constituent Services and Special Programs* Middle States Commission on Higher Education

Ultimate Goal of Outcomes Assessment

..to examine and enhance an institution's effectiveness

Middle States Commission on Higher Education

Framework for Outcomes Assessment

- Improve teaching and learning
- Contribute to the personal development of students
- Ensure institutional improvement
- Facilitate accountability

Some outcomes are best measured at the individual course level, while others are best measured at the institutional (college, university, of system) level ….

Middle States Commission on Higher Education

Framework for Outcomes Assessment

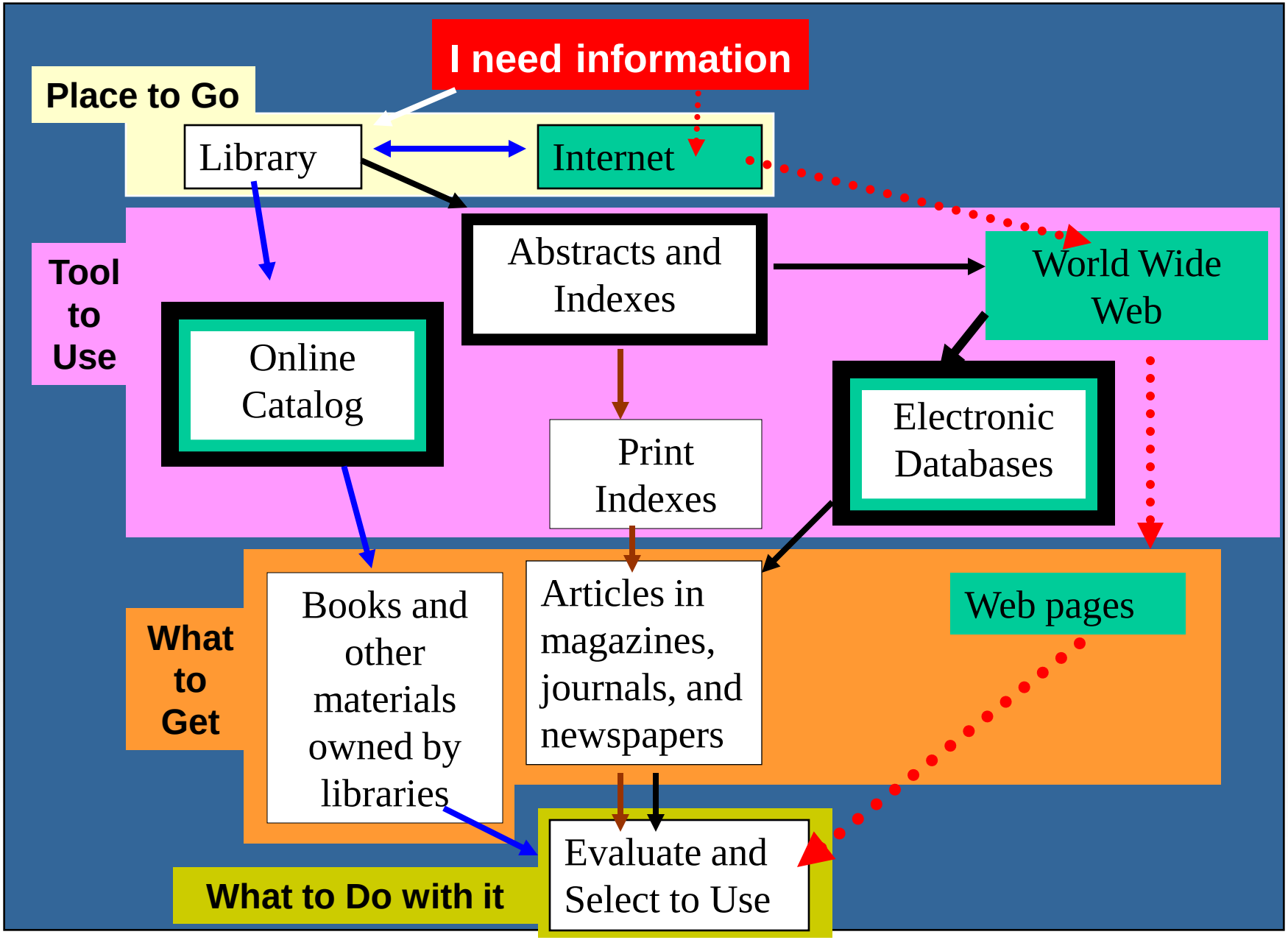
p.4

And at UW

Enhancing Student Learning Task Force

The shift of focus from teaching to learning requires that learning objectives and outcomes are clearly articulated within each class, department, and major at the University of Washington.

Describing “information savvy”


I need information
Place to Go
Library
Internet
Tool to Use
Abstracts and Indexes
World Wide Web
Online Catalog
Print Indexes
Electronic Databases
What to Get
Books and other materials owned by libraries
Articles in magazines, journals, and newspapers
Web pages
What to Do with it
Evaluate and Select to Use

Challenge of Information Environment

- More compl
- More
- Do
- D
- Co
- Cont
- Technica
- Evaluation skills

GOOGLE
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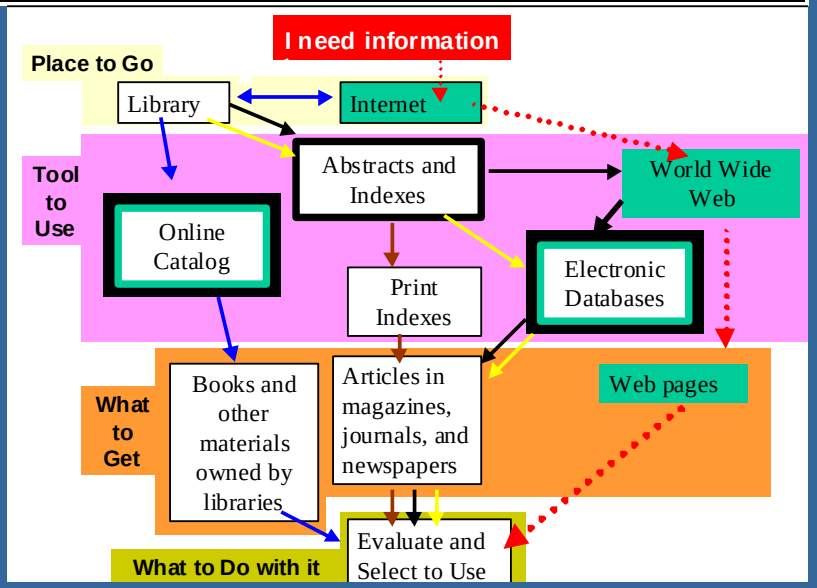
Preparing self-directed, lifelong learners

Information Literacy

- Conceptual
- Technical
- Critical thinking

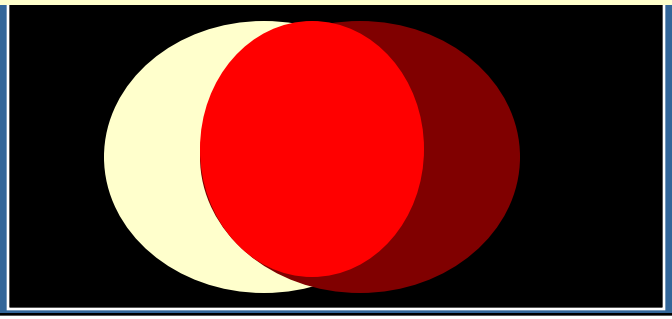


An information literate person is

"...one who is able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information."

Information Literacy and Information Technology Skills

- Basic Computer Skills
- Computer Literacy
- Technology Competencies
- Fluency in Information Technology
  - NSF - National Research Council
- http://www.nap.edu/readingroom/books/BeFIT/



The Information literate student has skills in the use of computers, but the computer literate student is not necessarily information literate

The National Agenda

- National Forum on Information Literacy
  http://www.infolit.org/members/index.html
- American Association for Higher Education
- Teaching and Learning with Technology Group
  http://www.tltgroup.org/programs/round.html
- Regional/Discipline Accreditation Groups
- Aspen Institute http://www.aspeninst.org/about/default.asp

  Information Literacy: Advancing Opportunities for Learning in the Digital Age

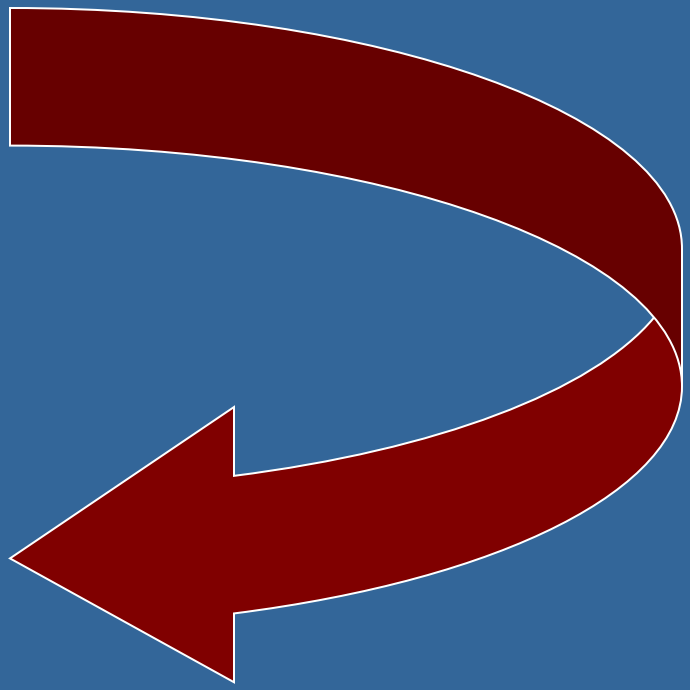
http://www.aspeninst.org/publications1/bookstore_communications_literacy.asp

- **ARL Learning Outcomes**

http://www.arl.org/stats/newmeas/outcomes/invite.html

- Funding Agencies - private and federal

Student Learning Outcomes



Developing Standards

States/State Systems -- Local -- ALA/AAHE/CHE

Information Literacy Standards

http://www.ala.org/acrl/ilcomstan.html

- **Determines the extent of the information needed**
- **Accesses needed information effectively and efficiently**
- **Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system**
- **Uses information effectively to accomplish a specific purpose**
- **Understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally**

Explores general information sources to increase familiarity with the topic

Lower level tasks

Thinking Skills

Higher level cognitive skills - more complex and abstract

Recognizes that knowledge can be organized into disciplines that influence the way information is accessed

Manipulates digital text, images, and data, as needed, transferring them from their original locations and formats to a new context

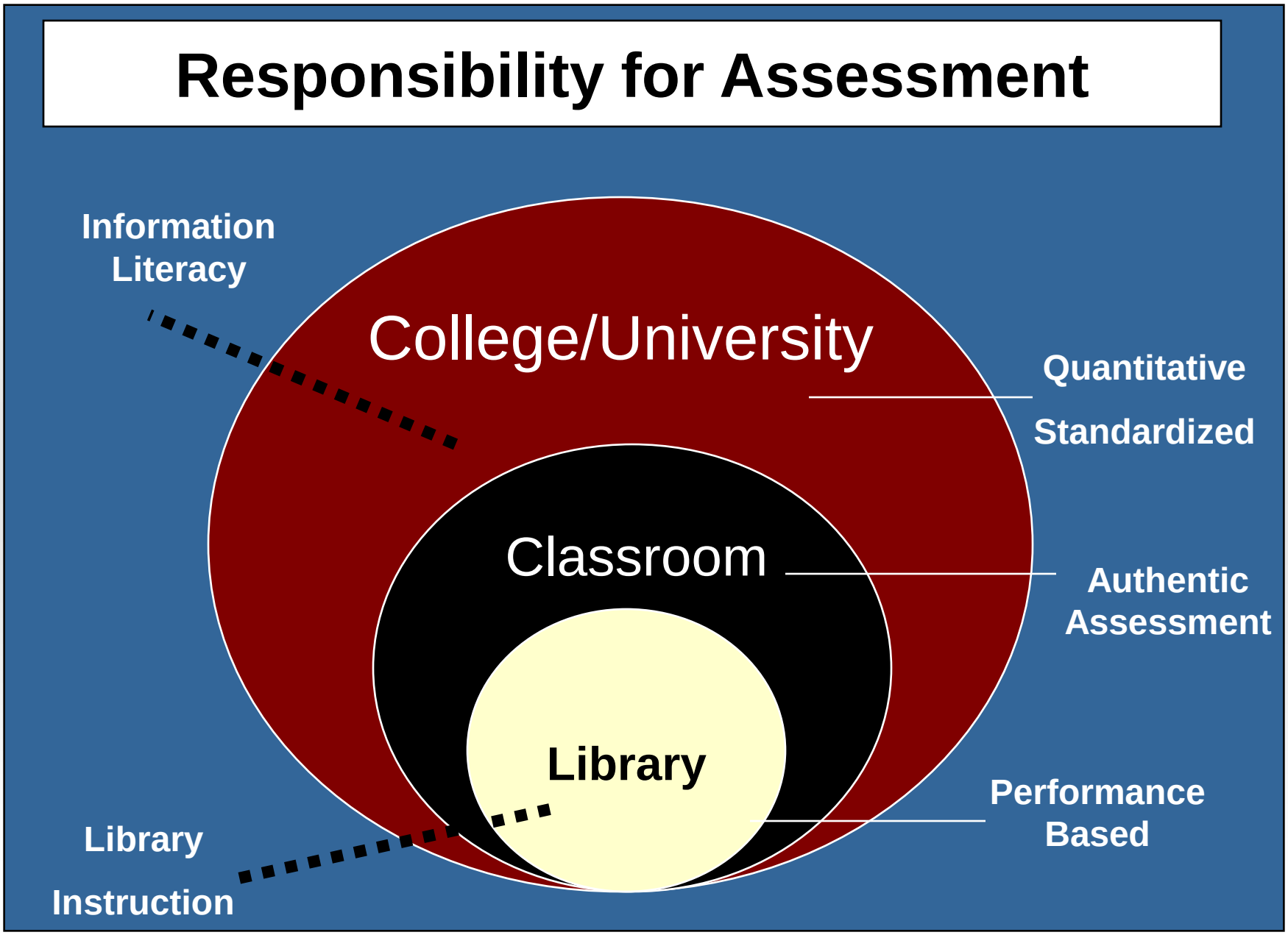
Lower level tasks

Thinking Skills

Higher level cognitive skills - more complex and abstract

Utilizes computer and other technologies (e.g. spreadsheets, databases, multimedia, and audio or visual equipment) for studying the interaction of ideas and other phenomena

Responsibility for Assessment



Information and Technology Literacy in Washington

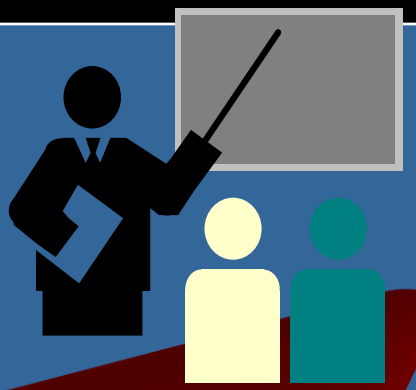
HB 2375, 2000

Develop measures to assess student learning with respect to information and technology literacy

Each discipline should articulate curriculum-specific information literacy objectives that are developmental and reflect increasing complexity in the course of study.

Retooling the Curriculum

- Assignments
- Courses
- Curriculum



Define
student learning outcomes,
generally and in a discipline,
including information literacy

- teaching and learning environment changing
- information environment complex
- pedagogy changing
- outcomes articulated at all levels
- information literacy outcomes threaded through curriculum
- responsibility for learning is shared
- what about assessment?

From *Learning Outcomes* to *Authentic Assessment*

The *Learning Outcomes* Approach

*Learning outcomes are **integrated**:*

- ***knowledge***
- ***abilities***
- ***attitudes***

Needed to function successfully in society

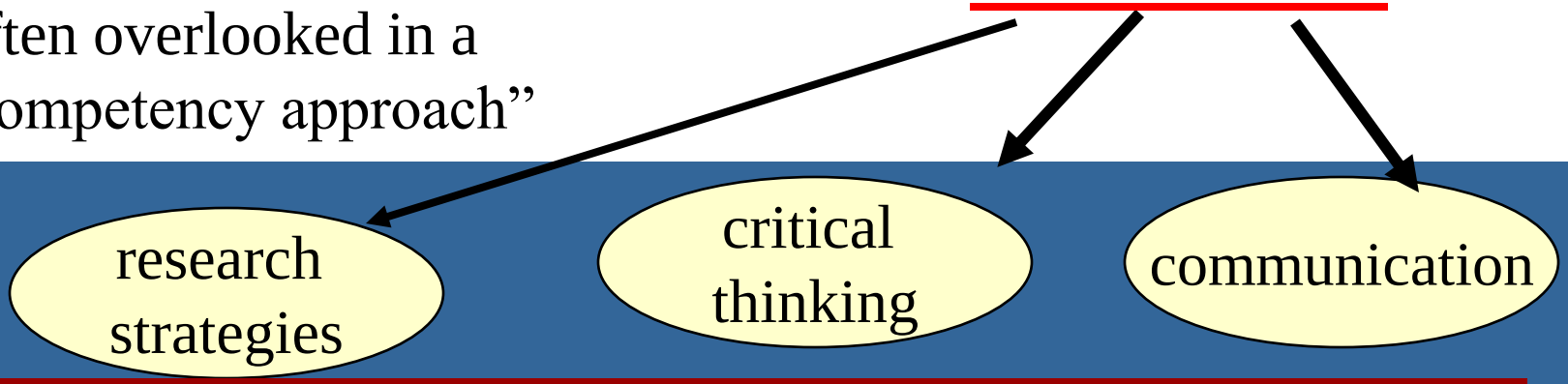
Mark Battersby and the Learning Outcomes Network, Centre for Curriculum, Transfer, and Technology, Vancouver, BC
So, What's a Learning Outcome Anyway? ERIC Document 430-611

What students should be able to do, not what knowledge they possess

Learning Outcomes and Competencies

Both focus on what the student should be able to do

Competencies are skills based. A learning outcomes approach "differs from competency based approaches in its emphasis on integration and the development of more general abilities that are often overlooked in a competency approach"



Mark Battersby and the Learning Outcomes Network, Centre for Curriculum, Transfer, and Technology, Vancouver, BC
So, What's a Learning Outcome Anyway? ERIC Document 430-611

Learning Outcomes and Authentic Assessment

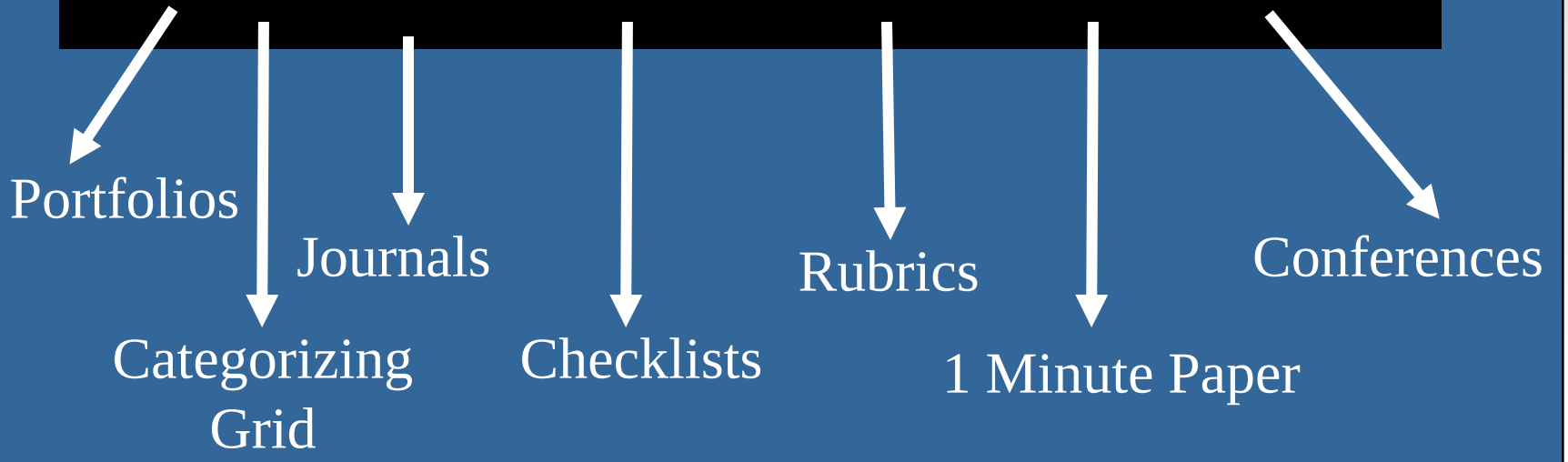
- Assessment is the means for learning-not just the method of evaluation
- Learning facilitated by doing, creating and using -- assignments are the key to learning
- Simulate situations in which students would make use of knowledge, abilities and values
- Develop "useable knowledge" not "testable knowledge"

Mark Battersby and the Learning Outcomes Network, Centre for Curriculum, Transfer, and Technology, Vancouver, BC
So, What's a Learning Outcome Anyway? ERIC Document 430-611

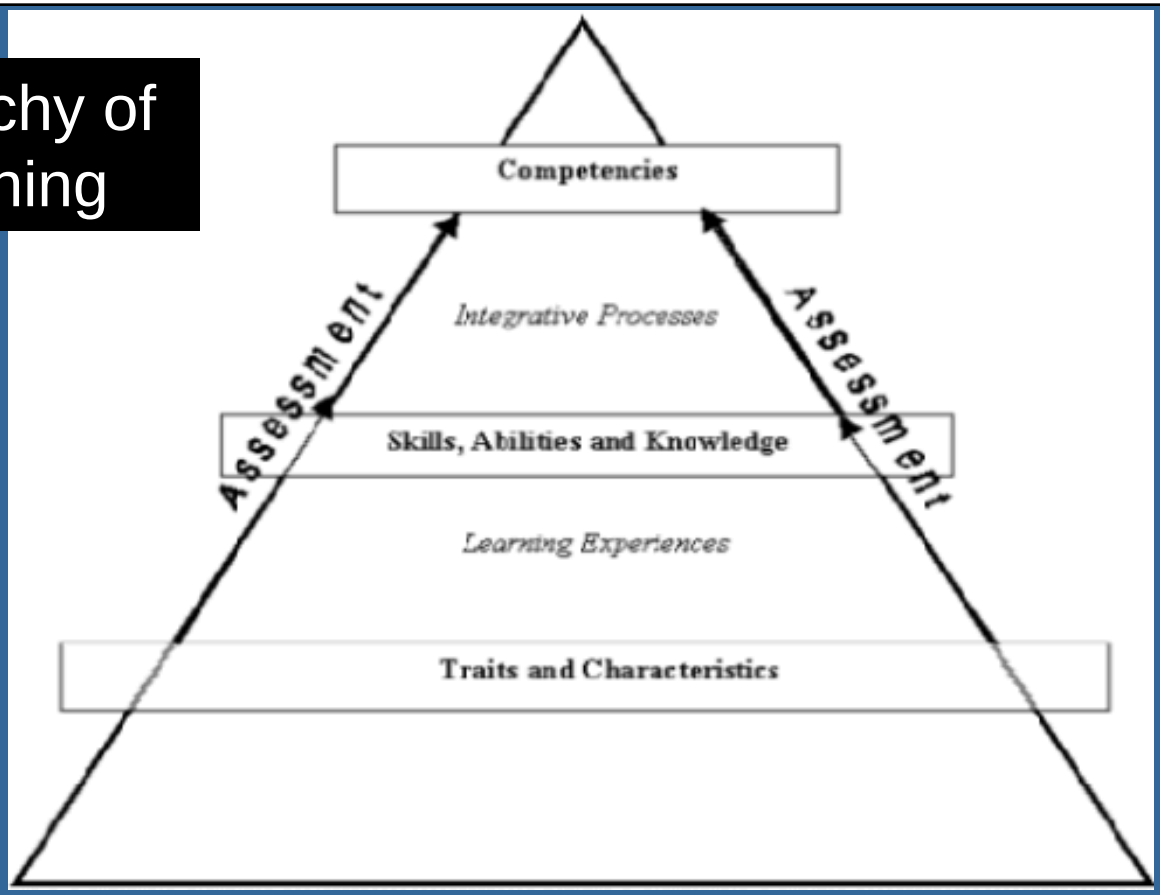
Assessment Techniques

Performance-based --linked to student's performance

Authentic Assessment



Heirarchy of Learning



U.S. Dept. of Education, Office of Educational Research and Improvement (OERI), National Center for Education Statistics (NCES). Data Ramifications of Competency-Based Initiatives. Interim Report of the Working Group (December 1999)

http://www.nces.ed.gov/npec/papers/cbi0.html

Campus Collaboration for Faculty Support

Some topics

information literacy and technology

teaching methods

designing assignments

syllabi in support of developmental learning

authentic assessment

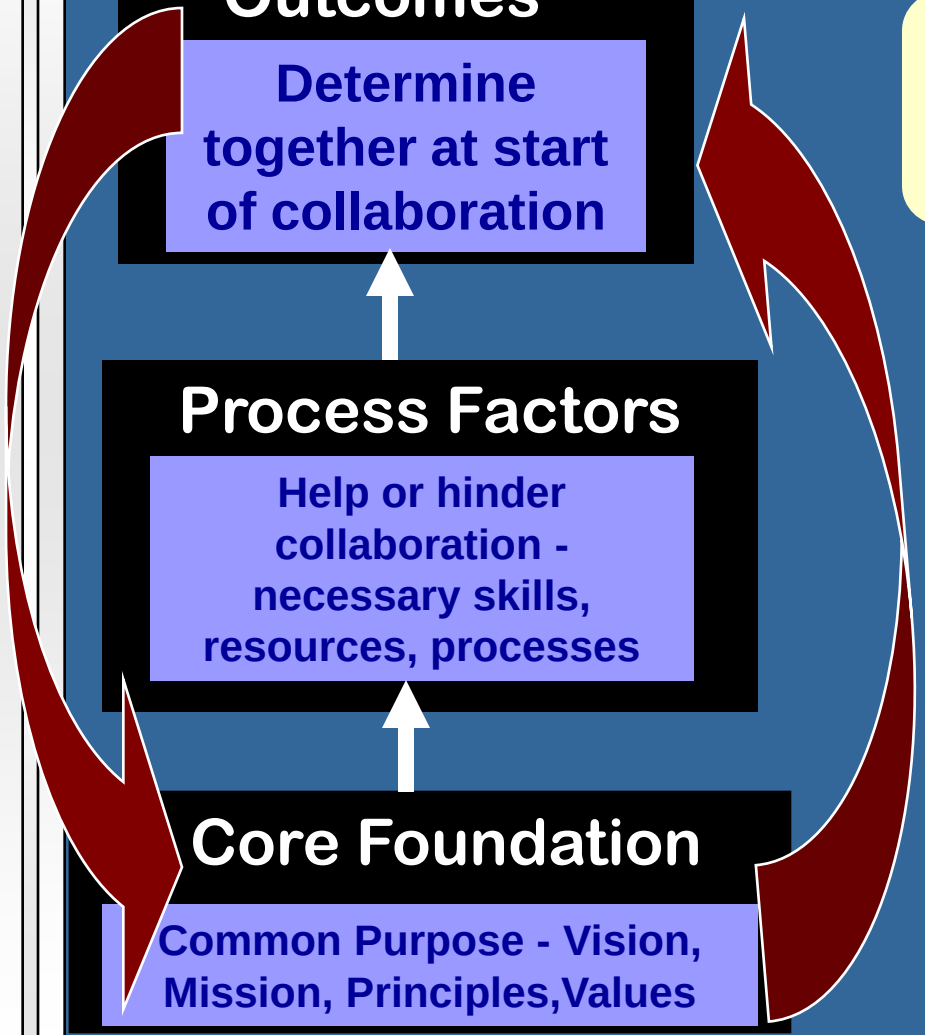
Making Connections

- Networking
- Cooperation or Alliance
- Coordination or Partnership
- Coalition
- Collaboration

Linkages

http://crs.uvm.edu/nnco/cd/subfra.htm

Collaboration Framework



How we know it worked

How we can do it

What we want to do

Impact Measures-Indicators

Individuals

Policy Development

Systems Development

Resource Development

Sustaining the Collaboration

- Aligned with values/culture
- Mutually beneficial
- Common vision
- Leadership shared
- Results Obvious
- Institutionalized

Respond to Faculty Need

- Motivating Students: Using Information Technology and Critical Thinking Strategies to Engage Students in Course Content
- Power Assignments: Developing Discerning Learners
- Teaching for Transfer: Reflection on Learning as the Key to Long-term Retention
- Academic Honesty: Plagiarism, Cheating and Information Literacy
- Assessing Student Learning Outcomes

In Sum

- ➔ **Teaching and learning strategies are changing**
- ➔ **Outcomes assessment is the way to demonstrate student learning**
- ➔ **Environment demands new set of skills and abilities (information literacy) framed within discipline**
- ➔ **Information literacy standards detail student learning outcomes (generally)**
- ➔ **Responsibilities for student learning are shared**
- ➔ **Campus collaboration for faculty support needed**