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Mellon Information Literacy Initiative Grant Report (2000-2003)

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Mellon Information Literacy Initiative Grant Overview

In 2000 Carleton received a three-year Mellon grant. We wanted to integrate information literacy into the curriculum, focusing on the discipline major. Our call for participants resulted in five departments agreeing to participate. The departments are Classical Languages (including Hebrew), Economics, English, Geology, and History. The initiative offered the library and the departments a wonderful opportunity to focus on information literacy within these disciplines.

We organized the grant into the following categories:

- **Departmental retreats** to define information literacy and discuss curricular approaches
- **Curricular grants** to redesign courses or assignments that integrated information literacy so that students were better prepared for comps
- **Assessment** of activities
- **Evaluation** of the overall project

As we look back over the three plus years, we see that all departments are enthusiastic about the initiative. Most departments began the project with skepticism because no one really knew what information literacy meant. It was not a term used in the disciplines, and the librarians did not stress the ACRL (Association of College & Research Libraries) definition and standards since they are less embraced in the liberal arts setting. Initially, the faculty also expressed concern about how to handle another curriculum requirement, but with each year this concern lessened.

Outcomes

- **Faculty participation**:
  - 2001: thirty
  - 2002: twenty-seven
  - 2003: forty-one
- Carleton's Educational Curriculum Committee has requested a report on information literacy from all departments as part of their college-wide analysis of five academic literacies: writing, speaking, information literacy, visual, quantitative (Spring 2004)
- Strengthened liaison librarian model
- Increase in reference statistics, individual and small group consultations, and personal email reference assistance
- More collaboration between faculty and librarians
- Assignments better designed to help students be prepared for their senior project
- Requirements for the Carleton Writing Portfolio now includes the ability to identify and effectively use appropriate sources
- Increased experience creating and implementing surveys and analyzing results
- Lead institution for a nine-college first year information literacy survey funded by Midwest Information Technology Center (MITC)
- Library-sponsored cross-disciplinary discussion seminar funded by the Associated Colleges of the Midwest (ACM)

Themes that emerged

- Department-based initiatives that allowed the focus to be on discipline-specific needs
- Grants allowed time to focus on student learning
- Concern over additional curriculum requirements diminished as time went on and faculty realized they were already involved in information literacy but wanted it to be more effective
- Systematic approach allowed departments to identify gaps and inconsistencies
- Development of intentional and coordinated information literacy assignments, but allowing for flexibility in the methods employed
- Sharing assignments extremely useful
- Preference by some faculty to teach information literacy skills themselves rather than ask the liaison librarian
- Students and faculty liked the subject liaison librarians model
- Problems emerged when staff changed, leading to interruptions and inconsistency
- Interdisciplinary classes more complex to support
- Cross-discipline discussions were stimulating and valuable for sharing problems, solutions, and successes

Elements of the Carleton model that emerged

- Faculty leadership
- Focus on the upper level classes
- Focus on faculty development
- Focus on individual or small group appointments with departmental liaison librarians

Recommendations

- Department-based initiatives that allow the focus to be on discipline-specific needs
- Coordinating with the timing of other events, such as departmental reviews or a Writing Across the Curriculum program, and other campus initiatives
- Allow opportunities for cross-discipline discussions
- Assist departmental liaison librarians in gaining subject expertise
- Help faculty think about being in partnership with the librarians
- Use temporary librarians to provide relief for liaisons; do not use them as liaisons
- Be prepared for unpredictable staffing situations in the departments and in the library

Year One Activities (2000-2001):

Faculty within each of the five departments met for three days during winter break in December to discuss among themselves what knowledge and skills students need to successfully major in their field at Carleton. On the third day they invited the Librarian Liaison for their department and the Head of Reference and Instruction to share the results of their discussions.

A Steering Committee was established including a faculty representative from each of the five departments, the Coordinator of the Learning and Teaching Center, the College Librarian, The

Associate Director for Academic Computing, Director of the College Writing Program and the Head of Reference and Instruction.

Four of the five departments were awarded summer curricular grants to initiate changes in courses and class assignments based on needs identified in the previous December faculty retreats.

The five departments began to diverge in their approaches as the needs identified for each field differed.

Classics faculty held a second retreat in the summer. They combined their interest in information literacy with their work in a Bush Writing Across the Curriculum grant to establish criteria for students to establish a writing portfolio of their work in the major.

In the spring the **Economics** faculty in conjunction with the Librarian Liaison and Academic Computing Coordinator for the Social Sciences surveyed graduating seniors with both a written survey and oral interviews. Newly declared majors were surveyed in the fall. These efforts were intended to establish a baseline of student perceptions of problem areas in the major. During the summer three faculty worked on changing assignments in specific courses to address the need faculty see for students to get more experience in finding suitable data to answer economics-related hypotheses.

The focus of the **English** faculty was to increase their understanding and use of computer technology, especially the Web, as a means of incorporating a greater variety of learning experiences for students. Two faculty attended workshops in using Dreamweaver software.

The **Geology** Department took a two pronged approach. Because there are few Geology courses required of all majors, one faculty member began work on a departmental web site that would provide appropriate background materials to which faculty in all Geology courses could refer students. During spring term and again in the fall term, two faculty worked with the Librarian Liaison to Geology to incorporate assignments that expanded opportunities for students to increase their information literacy skills.

The **History** Department met in a second retreat in the spring to further refine their goals for student majors. They revised the document listing the skills a student taking history courses should be expected to have and paid particular attention to 100 level courses. Various faculty worked closely with the Librarian Liaison to History to incorporate assignments into their 100 level courses that would increase student exposure to and practice in skills needed to accomplish the listed goals.

Year Two Activities (2001-2002):

In the second year of the Mellon grant, departments were beginning to incorporate changes into courses. The Economics initiative also incorporated a grant from the Minnesota Private College

Foundation to look at how students used the Economics journal database within the JSTOR collection. They reported on their findings at a regional Project JSTOR conference called Creating Partnerships, Creating Scholarship on October 19, 2001 at Plymouth MN.

Another effort at publicizing the work of the five departments was an informal panel discussion on February 12, 2002 held on campus entitled Information Literacy at Carleton as part of a Learning in a Digital World series sponsored by the Perlman Center for Learning and Teaching, the Information Technology Services department and the Laurence McKinley Gould Library.

Proposals for summer curricular grants are currently under consideration for projects that would build on the work already completed.

The **Classics** Department faculty will meet in Sept. and December to focus on the senior comprehensive project and how it relates to their desire to establish a portfolio requirement. Specifically they will look at implementing the portfolio requirement, how the comps process and the portfolio could most productively relate to each other and how information literacy is incorporated into the portfolio requirement.

The **Economics** Department will hold a department retreat during the summer of 2002 to focus on the new configuration of the two Principles of Economics classes. Principles of Macroeconomics is no longer a prerequisite for Principles of Microeconomics. The work of the retreat will be to coordinate course designs and information literacy assignments for the Principles courses. One assignment will likely focus on the use of ECONLIT, JSTOR and Social Sciences Citation Index while another will focus on teaching students the basic data sources for economics.

The **English** Department will be looking at the Library's Special Collections to locate texts that could be useful in English courses throughout the curriculum and to work with the Special Collections Librarian to create an online catalog of these to make their existence more known to faculty and students. The goal is to increase the English majors' ability to access and evaluate on-line materials as well as increase their familiarity with primary texts.

In **Geology** the Geochemistry of Natural Waters (GEOL 370) is being revised during spring break and is open to all levels of students, from freshmen to seniors this spring term, so the students' level of preparation for the class is varied. The course assignments will be revised and a pre-test and a post-test will be administered to students to see what level of information literacy skills they develop. The results of this testing will be used to revise the course this summer for next year.

The **History** Department faculty will hold a retreat to examine the information literacy components of assignments in their 200 level courses. Building on the retreat they held last year that examined the 100 level courses, this retreat will continue the process of ensuring that students are exposed to the skills they need when they reach the 395 courses in which they write a primary source research paper. Course syllabi and assignments for 200 level courses will be shared among department members. Input will be sought from students taking 395 and 298 level courses about the information literacy training they received in 200 level courses.

Year Three Activities (2002-2003):

After three years of work on our information literacy initiative, we see changes within the departments and their assignments, and there is a closer collaboration between many participating faculty and their liaison librarian. Faculty participating in their departmental retreats have commented on how valuable that time has been. Not only have they been able to focus on information literacy, they have thought and talked about their students and what they need as a liberal arts graduate in the discipline. The Mellon Steering Committee met in Fall 2003 to share information with one another and discuss plans for evaluation and assessment. As we entered into the assessment phase, there was a feeling that not only are the faculty much more attuned to the research experiences students need, but that we are all collaborating to meet those needs.

The **Classics** faculty incorporated exercises that they had developed in 2001 into the following courses: Classics 110, Greek/Latin 204, the other 200 and 300-level courses, and both History courses. They completed their information literacy grid in relation to their new senior comprehensive project process, which they plan to implement with newly declared majors in 2003. In addition, Stacy Beckwith, professor in the Hebrew Program and associated with Classical Languages, worked independently to incorporate information literacy into assignments for her Hebrew 100, 103, and 204 classes.

The **Economics** Department decided to expand on the information literacy project that was piloted in 2001. The faculty examined their syllabi, textbooks and assignments in preparation for their 2002 retreat. They focused on implementing information literacy assignments in to the microeconomics and macroeconomics classes, which reach around 400 students. The document *Data Literacy in the Economics Major at Carleton College* was updated as a result of the discussions at the retreat. A junior and senior information literacy survey was also administered.

Two **English** professors and the Special Collections librarian met and identified over 1200 items in the Special Collection as English or American literature. The liaison librarian imported these records in to EndNote to be developed as a database accessible to faculty and students. The goal is to generate awareness and use of the Special Collections and to underscore issues surrounding editions and texts.

The **Geology** department revised the Geochemistry of Natural Waters class was revised to include an information literacy assignment and pre- and post- tests. The department met with the liaison librarians to discuss future steps. New initiatives are planned, including the submission of an EndNote library with the senior comps projects. The liaison librarian will merge the comps libraries together and analyze the number and types of sources used in the comps papers. The department also discussed integrating library instruction further into their curriculum where appropriate.

History faculty and the liaison librarian gathered and discussed the 200-level courses. They analyzed current syllabi, assignments, and projects for current examples of information literacy components. One of their major concerns is the 298 class, the research methodology seminar.

Since this varies with each professor who teaches it, they want to work toward some standardization, so that all students are exposed to certain ideas and research practices. In Winter 2003, the department and liaison library administered an information literacy survey of seniors.

The **Library** worked with faculty members to publicize the initiative this year. Members of Mellon departments and librarians talked with the campus community about disciplinary differences in information literacy at a panel sponsored by the Perlman Center for Learning and Teaching as part of the "Cutting Across: The Curriculum, the Basic Literacies, and the Big Ideas" series. Librarians worked with the Geology faculty to create a poster on information literacy strategies and assessments. The poster was presented at GSA in the Fall 2003. Liaison Librarians also continued to provide support for changes in curriculum by presenting information literacy sessions in classes and providing individual appointments for students. The library conducted a survey of first year students' information literacy in Fall 2002 and Fall 2003. The 2003 survey questions and results are at the end of this document.

Classics Department Report on the Mellon Information Literacy Initiative Grant

Mellon Information Literacy Initiative Grant

Classics

Overview

Over the past three years, the Mellon grant has allowed our department to spend a significant amount of time articulating the goals we have for our majors, and implementing a series of curricular changes that will better accomplish these goals. The department started with the question of what information literacy looked like in their major. Based on discussions about the kinds of skills and tools they wanted developed a three pronged approach to teaching and assessing information literacy.

Activities under the Grant

• Developed course grid.

Situated each of the specific skills and tools important for students to have by their senior year in particular courses. Designed assignments that specifically give students practice using a range of these tools and give them a better idea of what can be done with them.

• Instituted a Junior Skills Portfolio

This will function to document that students have the necessary skills to equip them to begin the comps process. In addition to specific assignments, the portfolio requires a reflective essay in which students explain how the assignments included show that they have achieved the stated

goal, identify which skills or tools they feel most and least comfortable with, and describe one sample search process.

• Extensively revised comps process.

Instead of students choosing their own topic for a research paper, the department will define a broad area of investigation in the context of a senior seminar and colloquium each year. Students will create a proposal based on guidelines of the major regional professional association, turn this proposal into a 20-minute conference talk, and revise their talks into a brief article for submission

• Created assessment plan

The assessment plan that comes at two points: the end of the Junior year, attached to the new Junior Skills Portfolio, and again in the Senior year, after completion of the new comps project. The bibliographies of the comps papers will be analyzed to explore several factors, including: the proportion of monographs and articles, the journals represented, the dates of sources used, and the overall number of sources consulted. The department is also planning a qualitative survey of the seniors to gather information on which reference and search tools were of the greatest help to them as they worked on their projects

Outcomes

• The grant has facilitated countless discussions about student learning, and gave the department the opportunity to create intentional and coordinated assignments, as well as to make the curriculum more cohesive.

• Built strong and productive ties to the library.

• Positive results from curricular changes in the skill level of students.

Definition of Information Literacy

Information literacy in Classics requires three things: knowing what sort of questions and problems Classicists study; understanding how and when to use any reference or search tool appropriate to addressing these questions and problems; and understanding how to evaluate the information these tools uncovered.

Analecta Technica

The Analecta Technica is a portfolio that will normally be completed by the end of the junior year. The purpose of requiring the portfolio is to ensure that students are prepared for the work they will be doing for their senior projects (seminar and colloquium).

The overall goal of the Analecta Technica is to demonstrate that students are ready to analyze and interpret elements (e.g. texts, artifacts, institutions, etc.) of the ancient Greco-Roman world

within their various contexts (e.g. political, social, linguistic, etc.) through the use of primary sources as evidence and secondary sources to situate their work in the context of the discipline. To achieve this goal, students will need to be able to locate, utilize, and cite the sources indicated above.

Items in the portfolio must document the following skills:

- Locating (with the searching tools described below) and citing (in the format specified by the departmental style sheet) primary sources.
- Locating (with the searching tools described below) and citing (in the format specified by the departmental style sheet) secondary sources.
- Using primary sources as evidence.
- Using secondary sources to situate work in the context of the discipline

Items in the portfolio must document experience in **all** of the following **tools in boldface** as well as **any three others**:

Reference Tools

Basic Reference Tools for the Languages:

- **Lexicons**
- **Grammars**
- Thesaurus Linguae Graecae (TLG)
- Indices Verborum

Basic Reference Tools for Texts:

- **Commentaries**
- TLG

General Reference Tools:

- **Oxford Classical Dictionary (OCD)**
- **Perseus**
- Pauly Wissowa, The New Pauly

Specific Reference Tools:

- History: Cambridge Ancient History, (also Perseus)
- Mythology: Lexicon Iconographicum Mythologiae Classicae (LIMC)
- Art and Archaeology: Princeton Encyclopedia of Classical Sites, (also LIMC, Perseus)
- Geography: **New Barrington Atlas**

Search Tools

General Library organization and search engines (exercises/library session provided by Heather Tompkins)

Search Tools specific to Classics:

- **L'annee Philologique**
- **TOCS-IN**
- **Purposeful, physical browsing of shelves**
- **Footnotes and bibliographies of published works**
- Citation indexes

Subject-oriented search tools:

- Nestor
- Diotima
- Published subject bibliographies
- Bryn Mawr Classical Review

COURSE GRID FOR SITUATING PORTFOLIO REQUIREMENTS

Courses	Skills	Tools
Classics 110	1, 2, 3	3a; 4d; 5
Classics 112	3	4b
Classics 114	3	7b
Greek History	1, 2, 3, 4	4a, c and d
Roman History	1, 3	◆
Greek/Latin 103	◆	1b
Greek/Latin 204	◆	1a, 3b
200-level language courses	1, 3	2a
300-level language courses	2, 4	6a and b

Thus the portfolio should include:

- the check-off sheet showing courses taken that require use of specified tools and skills 1 and 2 (as specified in the grid above);
- assignments that document use of the remaining required tools not encountered in courses taken thus far
- papers or other assignments documenting skills 3 and 4
- a brief reflective essay (1-2 pages) addressing the large goal. This essay should explain how the items you have chosen to include demonstrate the required skills and tools, where in our departmental curriculum you had opportunities to practice

them, and which ones you feel you may need more practice with. You should also briefly describe for us a sample one of the search processes you have undertaken.

History Department Report on the Mellon Information Literacy Initiative Grant

Overview

Following the direction indicated by the initial discussions of the initiative, History has taken very seriously the idea of a disciplinary basis for the definition and exploration of information literacy; beginning by writing a fundamental outline of "Skills and Goals for Students of History" that has provided the basic structure for subsequent discussions. History then used the grant as an opportunity to review and improve the ways in which these skills are learned and taught at the various levels in the curriculum.

Activities Under the Grant

Skills and Goals Outline
The department's first project under the Mellon grant was to write the outline of "Skills and Goals for Students in History." Written by a sub-committee and approved by the whole department (and emended from time to time in subsequent years), the outline represents the department's understanding what skills and kinds of understanding of the discipline we expect a student of history to develop.

Workshops
The History department focused a great deal of attention on a yearly workshop, funded by the Mellon grant, including:

- 100-level courses (June 2001)

Discussed the need to create a collaborative relationship between librarian and students, the importance of focusing of "habits of mind" regarding research and disciplinary knowledge, and the use of the "Skills and Goals Outline."

- 200-level courses and History 298 (June 2002)

Issues explored included: how students learn to frame and narrow topics, how and when they become acquainted with a sub-discipline of history and its literature, and how to relate teaching them to understand debates within the literature with teaching them to search for materials on their own.

- 300-level courses, comps process, and assessment plan (June 2003)

Discussion of courses focused on the two major genres of historical writing that the department expects majors to be able to produce as seniors, the research paper and the literature review. Discussed the Information Literacy Questionnaire and Rubric for evaluating Comps Bibliographies.

Preparation of Materials
The history department identified several activities for continued, on-going sharing of materials and information.

- Planned for the creation of a binder for the purpose of sharing assignments. Among the faculty, the sharing of assignments and ideas for teaching strategies was one of the most important aspects of all our meetings and discussions.
- Planned for the creation of materials to introduce students to information literacy as a goal of the History Department, including a web- and student-friendly version of the "Skills and Goals Outline," and revising materials on the department website on citing sources.
- Created "Information Literacy Questionnaire" and "Rubric for Evaluating Comps Bibliographies" and expect to use these on an on-going basis, with continuing revision as we learn more about the process.

Outcomes

The History department report highlighted four outcomes of the Mellon Information Literacy Initiative:

- For all students, but especially for beginners or newcomers to a discipline or to a sub-discipline, explicit instruction in expectations and techniques is crucial.
- Assignments that focus on teaching the methods of historical inquiry and research can be designed so that they are interesting for the students, accessible and helpful for both more and less experienced students, and closely integrated with the course material and projects. Sharing such assignments among the faculty helps to create a common teaching culture and sparks productive new ideas as commonalities and divergences are discovered and explored. The assignment - its creation and implementation - seems like an over-looked, but crucial, key to teaching information literacy.
- A close working relationship with a librarian to whom the students turn readily is ideal in fostering a culture of library use and consultation with positive results for the students' work and work habits
- The kinds of connections that are so present among the sub-disciplines within history will also be prove vital for creating connections among the disciplines more broadly. The labs for discovering new and creative exchanges of ideas will be interdisciplinary courses when the pressure to construct workable assignments will forge new connections and approaches.

Skills and Goals for Students of History

Revised June 2003
Revisions marked in **Bold**

Basic

I. Ability to formulate and answer historical questions on the basis of documentation from the period

A. Skills

1. ability to read primary sources accurately and critically
2. ability to ask and identify historical questions
3. ability to assess the authority of primary source evidence in print and electronic form
4. ability to present, orally or in writing, reasoned, documented arguments based on the understandings in #s 1-3

B. Implementation

1. class discussion of primary documents
2. reading responses (Caucus or hard copy)
3. papers
4. individual conferences
5. modeling in lecture by faculty

II. Ability to use secondary sources to enlarge dossier of sources, perspectives, and questions

A. Skills

1. recognize an argument in a secondary work
2. distinguish evidence/fact/information from argument
3. recognize historical contingency of "fact" (e.g. dates are "fact" in modern period but highly contested in ancient history)
4. read a bibliography and find the works listed therein
5. assess the authority of print and electronic secondary sources

B. Implementation

1. class discussion
2. papers and other written assignments
3. modeling in lecture by faculty
4. class and library instruction (esp. for II.A.4 and 5)

III. Understanding of concepts of intellectual honesty and proper crediting of others' works

A. Skills

1. use of footnotes:

- know structure and production of scholarly materials in print and electronic forms
- use and understand Chicago Manual of Style form for footnotes and bibliographies
- know when and how to footnote others' works
- be able to follow up ideas and questions using citations as doors

2. use of manuals and dictionaries

B. Implementation

1. class and library instruction
2. discussion
3. papers and other written assignments

IV. Familiarity with library resources

A. Skills

1. know major divisions of library collection (books, journals, reference works, ILS, Special Collections, microforms, College archives) and be familiar with physical locations
2. know library staff available to help with different areas/aspects
3. know basic finding aids: Muse, Sage, World Cat, a periodical database (course specific)
4. **have a basic vocabulary for finding aids (e.g. can distinguish database from catalog)**

B. Implementation

1. library tours/visits
2. reference instruction
3. specific assignments (designed in collaboration with library staff)
4. brief presentations/comments in class

Advanced (= mastery of skills listed under "Basic" plus the following)

I. Move from concept to implementation (i.e., developing a research project)

A. Skills

1. ability to narrow a broad topic through bibliographic research and reading
2. ability to formulate an original thesis statement

3. recognition of the limitations and possibilities of the available information for the topic

B. Implementation

1. staged research papers

- sufficient background reading
- annotated bibliography
- individual conferences
- discussions (especially in History 298, 395, Comps seminar)

II. Take responsibility for utilizing a greater body of historical knowledge (i.e. situating yourself in a pre-existing field or body of literature)

A. Skills

1. thorough bibliographical search and reading, including **familiarity with terminology of information storage and retrieval**
2. planning own work in dialogue with scholarship
3. use of large electronic and text databases
4. use articles/monographs and synthetic texts in their proper places (i.e., recognize different uses of scholarship)
5. be aware of different voices in the text

B. Implementation

1. staged research papers

- sufficient background reading
- annotated bibliography
- individual conferences
- discussions (especially in History 298, 395, Comps seminar)

III. Achieve greater theoretical sophistication

A. Skills

1. recognize and understand contribution of disparate fields of history to an area of history (e.g. comparative methodologies)
2. understand contribution of other disciplines to an area of research

B. Implementation

1. this is the special focus of History 298
2. more advanced development of skills listed under "Basic" II

English Department Report on the Mellon Information Literacy Initiative Grant

Summary

The English department used a two-tiered approach to information literacy: faculty development, and student learning and outcome. The department structured the grant to help them explore what might be common among various literary studies and to allow faculty to develop their own particular approaches to information literacy. Their definition of information literacy came from exploring its meaning within the context of classes in the English department curriculum.

Outcomes:

- Faculty discussions of possible definitions for information literacy, the current state of faculty and student knowledge, and goals for the future.
- Three members of the faculty attended a Dreamweaver course to learn website creation.
  - One professor used Dreamweaver to create web pages for a winter 2002 course.
- Exploration of ways to use the library more fully.
  - Two members of the faculty worked with librarian, Kristi Wermager, to examine Special Collections, catalog the books and use on-line databases to study publication history.
  - Liaison librarian, Mollie Freier, created an EndNote library of the Special Collections catalog.
- Faculty were introduced to EndNote as a tool for research and teaching.
- Consulted with Jackie Lauer-Glebov, assistant director for institutional research, to create assessment documents.
- Worked with Mollie Freier to introduce students to library, reference and web resources.
- Explored use of the Collab network system
  - Network was used for sharing student work, assignments and course materials
  - Creation of discussion sites, including one for Information Literacy that is available to the entire department.
- Creation of a document defining information literacy in the English curriculum.
- Creation of class assignments to develop students' information literacy and planning course models for the future.

Successes:

- Grant allowed for faculty development and reflection
- Development of classroom application and assessment.
- Broadened awareness of available resources such as EndNote and Special Collections.
- Definition of Information Literacy that allows for fuller integration into the curriculum in the future.

Definition of Information Literacy

Literacy is, of course, central to our work in English. We study primary texts that are, in themselves, aesthetic and historical objects; we teach close reading and effective writing through examining literary texts that are read and reread over time. These books are the foundation of scholarly discussion because they demonstrate aspects of human life embodied in the humanities, publication history, the role of the book as aesthetic and economic object, cultural context, and other ever-changing studies. Information literacy in English is grounded, therefore, in literary texts; ideally it should combine knowledge or varied methods needed to access and evaluate primary texts (and, when possible, rare or special editions of the books themselves) with knowledge of the newest technologies involved in accessing on-line resources and evaluating those resources. Students will develop knowledge and skills in literary techniques, literary history, and scholarship and research.

Economics Department Report on the Mellon Information Literacy Initiative Grant

Overview

The Economics department outlined two ways in which the Mellon Information Literacy Grant was successful. It raised awareness of information literacy issues, which resulted in an alteration of assignments and courses to better meet the challenges of the information age and improve student facility with data and other information sources. The grant also, unexpectedly, served as a platform for wider curricular changes.

Activities Under the Grant

Information and data literacy are key components of the economics major. Perhaps this is no more evident than in the capstone experience of the Comprehensive Paper (or "comps").

Discussions of information literacy began with the comps process. The department participated in the following activities under the grant:

- Identified skills students needed before senior year to be successful in their independent research.
- Examined curriculum to determine when it would be appropriate to teach these skills.
- Revised or created assignments or shifted emphasis of courses to address information literacy goals.
- Created plans for annual department conversation about successes and failures in information literacy.

Outcomes

The department identified the following two suggestions as the most important they would give to other institutions considering information literacy initiatives:

- *Engage in the information literacy discussions in a broad curricular context, working to make information literacy an organic part of course work rather than "tacking it on" as an additional objective.*
- *In order to increase the pace of change and to facilitate the identification of cross-departmental conceptions of information literacy, it is probably best to drive the initiative from the department level.*

Other points raised by the department about the initiative:

The importance of the reference librarian.
It is important that the reference librarians have a clear sense of what the department's goals are and how they see library assignments fitting in to the larger curricular aims. Increasingly, the availability of data on the Internet has reduced the role of reference librarians (for better and worse) in many of our assignments. As technological changes cause innovations in assignments and the way students complete them, it is even more important that the department and library staff are on the same page.

The ongoing nature of assessment.
As technology changes, old problems quickly disappear while new, unimaginable problems emerge. Efforts to address one problem can exacerbate other difficulties. Efforts to improve student facility with any one source may be wildly successful, but there is a need to continue assessment to see how this improvement is impacting other elements of informational literacy.

The importance of other departments in the discussion.
There is value of conversations between departments as they take on information issues in their own departments because oftentimes other departments have already created innovative means for handling the problems we face. Due to differences in disciplinary norms, there are times when another discipline is struggling enormously with a problem that is only just emerging in a different field.

The importance of full department involvement.
Information literacy cannot be taught in a three-week unit. The area is too broad and the learning too incremental for this approach. Furthermore, many information skills build on earlier skills. For information literacy gains to be realized, the department must commit itself to somewhat coordinated changes throughout the curriculum from introductory courses through advanced courses in the major.

Definition of Information Literacy

Information literacy is the ability to find, evaluate, present, and use existing knowledge to a) understand the existing knowledge, b) make a persuasive argument and/or c) create new knowledge.

Outline of Skills/Courses

Principles Courses	**Intermediate Courses (200s)**
Use of EconLit	Identification of seminal works (using the Social Sciences Citation Index)
Use of JSTOR	Identification of research questions
Identification of publicly available data sets	Organization of a literature review that leads to a research question
Organization of a literature review	Determination of whether data exist to answer a research question
Location of summary articles in *Journal of Economic Perspectives, Journal of Economic Literature,* and *American Economic Review* (May Papers)	Deeper, critical reading of articles in leading journals (e.g. *Journal of Political Economy, Quarterly Journal of Economics, Review of Economics and Statistics, Review of Economic Studies* , and top field journals).

Geology Department Report on the Mellon Information Literacy Initiative Grant

Overview

Work on the Mellon Information Literacy Grant began with a department retreat in December 2000 with Charlie Priore, Carleton Science Librarian. The retreat resulted in a draft statement of information literacy in Geology. That statement has been refined during the remaining 3 years of the grant.

Further department discussions during the grant period have confirmed information literacy as a major skill area for the department. Each faculty member has committed, in his or her own way, to pursuing this goal in classes for the major.

Activities under the Grant

- Discussion of information literacy skills and incorporation in geology curriculum at full department meetings. Faculty acknowledged the tension between the goals of information literacy and the goal to have students collect and interpret their own data. When students collect and interpret their own data, they bring a better sensibility to the task of reading the primary literature.
- Discussions of expectations for information literacy in comps proposals and execution with seniors and juniors.
- Worked with reference librarians, Charlie Priore and Colleen McFarland to develop a survey instrument to assess geology students' information literacy skills at the beginning of an Introductory Geology course. Results from September 2002 include:

- Most students can distinguish from a list of magazines and journals which articles are appropriate for a search of scientific literature on tectonics.
- Fewer than half of the students were confident that they knew how and when to cite outside sources.
- One-quarter of the students said they were "very confident" in their ability to use an academic library.
- Most students said they would begin doing research either by "searching the library catalog" or "asking a faculty member for help"
- A student researcher, funded by the Mellon grant, completed a study of all 2003 comps papers and selected papers from previous years (2000, 1995, 1989, 1984, and 1979). Preliminary results include:
  - Average number of sources cited is fairly constant in the four earlier years (from 19 to 27 per paper) and is markedly higher in 2003 (38 per paper).
  - The percentage of total cited sources represented by journals has increased from about 48% in 1979 through 2000 to about 64% in 2003.
  - Citations of journal articles acquired electronically went from zero in 1995 to 23% of total sources in 2000 and 17% of total sources in 2003.
  - Many students make errors in citations, including non-correspondence between text and references cited, lack of crucial information in citations, and incorrect formatting and spelling.

Outcomes

- Specific information literacy objectives and assignments incorporated into geology courses. Assignments were developed and revised for Mineralogy, Petrology, Introductory Environmental Geology, Geomorphology, Sedimentary Geology and Tectonics.
- EndNote instruction is offered to all senior geology majors each winter term as part of the Senior Seminar.
- Information literacy, related library instruction, and assignments requiring searching literature and data are most common in the non-intro courses. The 200-300 level courses will be the focus of information literacy initiatives.
- Clarified expectations for literature references in the comps proposal.
- Beginning with the class of 2003, geology students submit their papers as .pdf documents with EndNote libraries that incorporate the References Cited section.
- Students wrote informal reflection pieces about what they learned from specific information literacy assignments. Students in several Geomorphology classes commented that the assignment using Web of Science was difficult but ultimately valuable.

Definition of Information Literacy in Geology

Information-literate geologists should be proficient at using the full range of information sources in the discipline, including:

- Monographs and books

- Periodicals
- Government documents, including print, microfilm and microfiche (published and unpublished)
- Topographic, geologic and other kinds of maps
- Field guides
- Reference materials
- Electronic materials, including:
- Web-based bibliographic tools
- Web searching
- Data

Information-literate geologists should be able to search and locate these documents, manage the results of the searches, and also learn to evaluate the sources they locate.

Information-literate geologists should be able to frame a research question, determine whether or not it is answerable and determine where one would get the information to answer it, through literature or new research. An example of an unanswerable question in geology because of lack of data is: How does the sea-bottom topography of the Gulf of Maine change after each storm and trawling event?

The need to use outside data and documents (to put one's own research into context and acknowledge prior work) drives information literacy. Information-literate geologists should use established procedures to cite and acknowledge sources of information.

Information literacy is one of the six major skill areas for Carleton geology majors (the others are "Engaging the World," "Interpretation and Critical Evaluation," "Documentation and Communication," "Quantitation," and "Experimentation and Simulation"). Information literacy in geology also helps students to understand how the profession of geology works.

Library Report on the Mellon Information Literacy Initiative Grant

Activities Under the Grant

The library conducted a survey of first year students' information literacy in Fall 2002 and Fall 2003. The 2003 First-Year Student Survey and the Survey results are available to view.

Definition of Information Literacy

Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

- *Information Literacy Competency Standards for Higher Education* from the Association of College & Research Libraries (ACRL)

In liberal arts colleges, librarians and faculty assist students in developing a sophisticated relationship with information by fostering appropriate expectations for information sources, effective search strategies, critical evaluation of information sources, and respect for the intellectual work of others. Students who are information literate can:

- Ask intelligent and creative questions
- Identify information sources
- Locate and access information sources successfully
- Judge the quality, relationship, and relevancy of information sources to their questions
- Determine the strengths and weaknesses of information sources
- Engage critically with information sources to interpret and integrate divergent points of view
- Use information sources ethically

- *MITC First-Year Information Literacy in the Liberal Arts Assessment Project*, written by members of the committee, including Carleton librarians. 2003

Carleton College Gould Library First Year Survey

In Fall 2003 the Library conducted a survey of first year students, focusing on the students' experiences using libraries and conducting research.

Survey Questions

(1) During the past year, what kinds of libraries have you used?

	Never	Sometimes	Frequently
Public	1	2	3
High School	1	2	3
College / University	1	2	3

(2) During the past year, why did you use a library? >

	Never	Sometimes	Frequently
School-related research	1	2	3
Personal research	1	2	3
Pleasure reading	1	2	3
Checking out videos and CDs	1	2	3
Socializing	1	2	3

(3) How often did you use these kinds of research resources during your senior year in high school?

	Never	Sometimes	Frequently
Library books	1	2	3
Textbooks or class materials	1	2	3
Encyclopedias	1	2	3
Web sites	1	2	3
Print magazine or journal articles	1	2	3
Magazine or journal articles from a full-text database or e-journal	1	2	3

(4) During your senior year in high school, how often did you ask for research help at a library reference desk? (circle one)

Never	1-3 times	4-6 times	7-10 times	more than 10 times

(5) In determining whether an information source is appropriate for your research, how important are the following qualities:

	Not Important	Important	Essential
Accessible on the Web	1	2	3
Available in print in the library	1	2	3
Written by a noted or knowledgeable author	1	2	3
Short and to the point	1	2	3
Free of jargon and technical language	1	2	3
Contains scholarly research	1	2	3
Contains current information	1	2	3

(6) What is the best way to find a scholarly journal article on a given topic? (circle one)

(a) Page through print volumes of academic journals

(b) Search a general Web search engine like Google or Yahoo!

(c) Search a print index or periodical database

(d) Search the online library catalog

(7) During your senior year in high school, how many papers did you write that included a bibliography or list of references? (circle one)

0	1-3	4-6	7-10	more than 10

(8) During your senior year in high school, how many papers did you write that included footnotes, endnotes, or in-text parenthetical citations? (circle one)

0	1-3	4-6	7-10	more than 10

(9) How confident do you feel that you know *how* to cite others' work when writing a research paper?

Not at all confident	Somewhat Confident	Very Confident
1	2	3

(10) How confident do you feel that you know *when* to cite others' work when writing a research paper?

Not at all confident	Somewhat Confident	Very Confident
1	2	3

(11) Examine the following citation:

Faull, Katherine M. "Self Encounters: Two Eighteenth-Century African Memoirs from Moravian Bethlehem." In *Cross-Currents: Germany, Africa and America in the Modern World,* edited by C. Aisha Blackshire-Belay, Leroy Hopkins, and David MacBride. New York: Camdenhouse, 1998.

This is a citation to: (circle one)

        a book   a journal article   a portion of a book

(12) Examine the following citation:

DeWoody, J. A. 1999. Nucleotide Variation in the p53 Tumor-Suppressor Gene of Voles from Chernobyl , Ukraine. *Mutation Research*. 439 (12):25-36.

This is a citation to: (circle one)

        a book   a journal article   a portion of a book

(13) You retrieve the following information from a database search:

TI: The Cuban Revolution's Evolving Identity

AU: Erisman, H Michael

SO: *Latin American Politics and Society* , 2002, 44, 1, Spring, 145-153

In what issue of *Latin American Politics and Society* will you find this article? (fill in the blanks)

Volume: _____

Number: _____

(14) Read the following passage from Sigmund Freud's *Interpretation of Dreams* :

Generally speaking, we are not in a position to interpret another person's dream if he is unwilling to furnish us with the unconscious thoughts which lie behind the dream-content, and for this reason the practical applicability of our method of dream- interpretation is often seriously restricted. But there are dreams which exhibit a complete contrast to the individual's customary liberty to endow his dream-world with a special individuality, thereby making it inaccessible to an alien understanding: there are a number of dreams which almost every one has dreamed in the same manner, and of which we are accustomed to assume that they have the same significance in the case of every dreamer. A peculiar interest attaches to these typical dreams, because, no matter who dreams them, they presumably all derive from the same sources, so that they would seem to be particularly fitted to provide us with information as to the sources of dreams.

Circle the *paragraph or paragraphs* that should contain a citation to Freud's *Interpretation of Dreams*

(A) Although Freud deemed most dream analysis impossible without knowledge of the individual dreamer's unconscious thoughts, he defended generalized interpretations of common dreams. "A peculiar interest attaches to these typical dreams," Freud wrote, "because, no matter who dreams them, they presumably all derive from the same sources, so that they would seem to be particularly fitted to provide us with information as to the sources of dreams."

(B) Although Freud deemed most dream analysis impossible without knowledge of the individual dreamer's unconscious thoughts, he defended generalized interpretations of common dreams. He believed these seemingly universal dreams held promise for study and interpretation because, he presumed, they arise from the same source, regardless of the dreamer's psyche.

(15) How confident do you feel in your ability to use academic library resources to conduct college-level research?

Not at all confident	Somewhat Confident	Very Confident
1	2	3

(16) A professor assigns you a research paper about a completely unfamiliar topic. How would you begin your research? Please rank your *top three* choices in order of importance *(1 is the most important).*

_____ Search library catalog

_____ Search general full text database

_____ Search subject-specific database

_____ Search the Web using Google or another search engine

_____ Browse library books

_____ Consult encyclopedia or other reference resource

_____ Ask professor for advice

_____ Ask librarian for advice

_____ Ask friends for advice

(17) If you needed to find out whether Carleton's library held the book *King Leopold's Ghost,* which would you search? (circle one)

    Web search engine   Online Library catalog   Periodical Database

(18) If you needed to find a journal article on Baroque architecture, which would you search? (circle one)

    Web search engine   Online Library catalog   Periodical Database

(19) To retrieve books about Charles Dickens, the best search would be: (circle one)
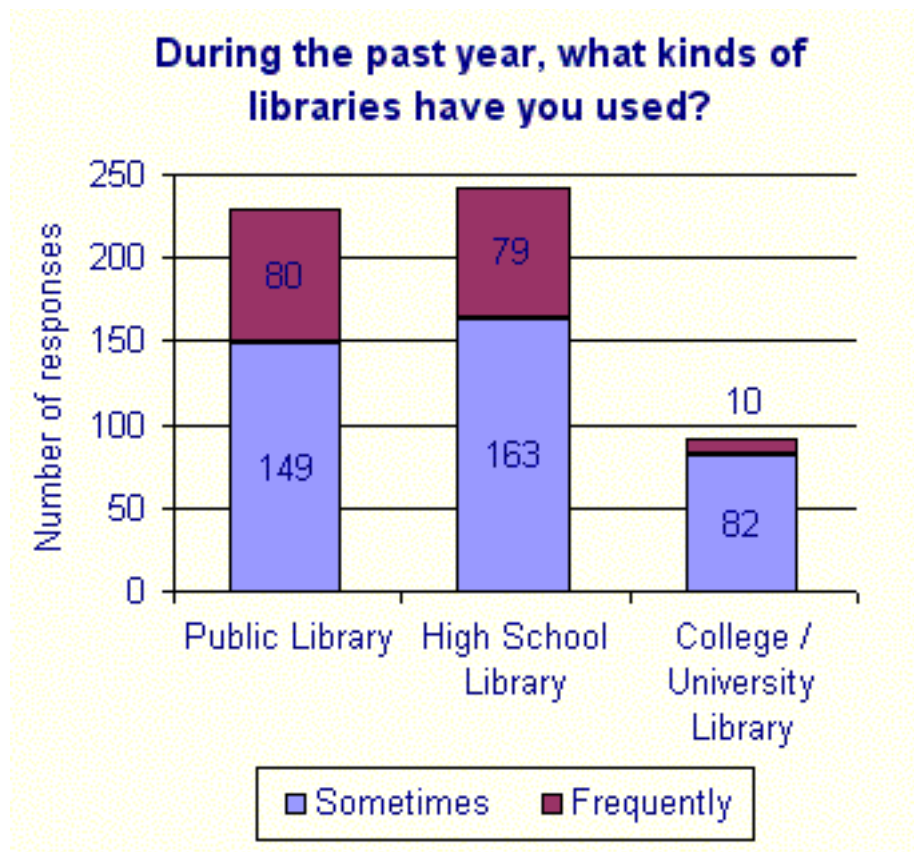
    Title = Dickens   Author = Dickens   Subject = Dickens
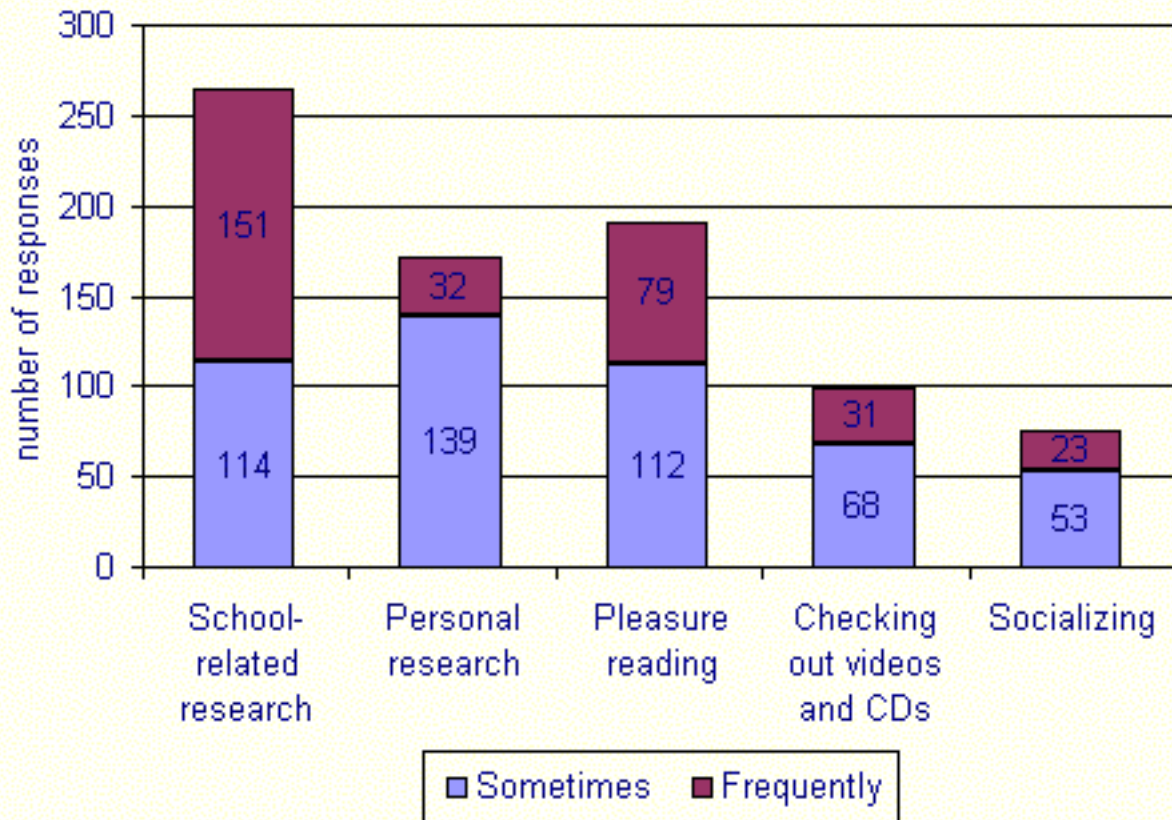
First Year Student Survey Results

The charts below show the results of the library's survey of first year students, which focuses on students' past experiences with libraries. The survey was conducted early fall term, 2003.

- *Past Use of Libraries and Sources*
- *Starting the Research Process and Asking for Help*
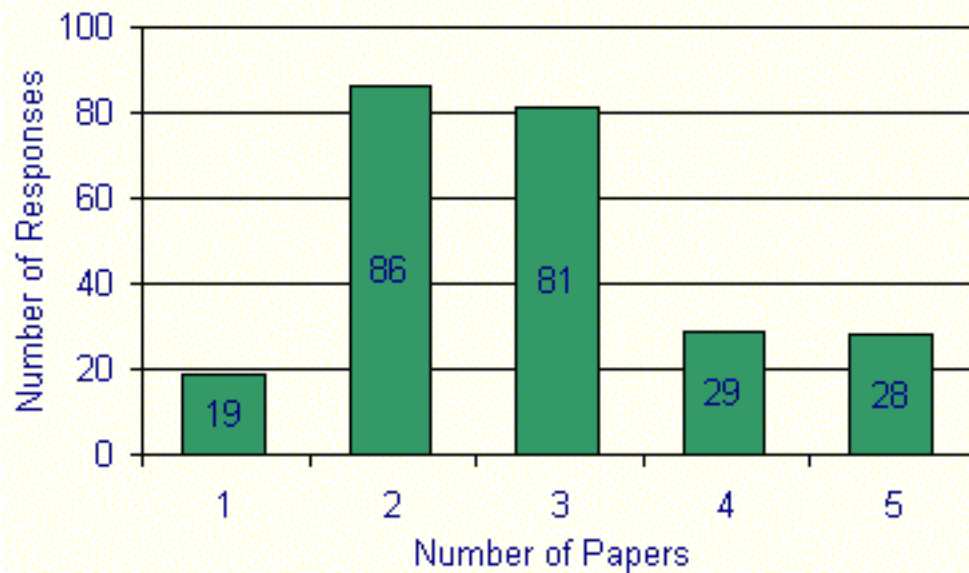- *Searching for and Choosing a Source*
- *Citing Sources*

## Past Use of Libraries and Sources

During the past year, what kinds of libraries have you used?

Public Library: Sometimes 149, Frequently 80
High School Library: Sometimes 163, Frequently 79
College / University Library: Sometimes 82, Frequently 10

During the past year, why did you use a library?

number of responses

School-related research	Personal research	Pleasure reading	Checking out videos and CDs	Socializing

- 151 (Frequently, School-related research)
- 114 (Sometimes, School-related research)
- 32 (Frequently, Personal research)
- 139 (Sometimes, Personal research)
- 79 (Frequently, Pleasure reading)
- 112 (Sometimes, Pleasure reading)
- 31 (Frequently, Checking out videos and CDs)
- 68 (Sometimes, Checking out videos and CDs)
- 23 (Frequently, Socializing)
- 53 (Sometimes, Socializing)

Legend: ■ Sometimes ■ Frequently

During your senior year in high school, how many papers did you write that included footnotes, endnotes, or in-text parenthetical citations?
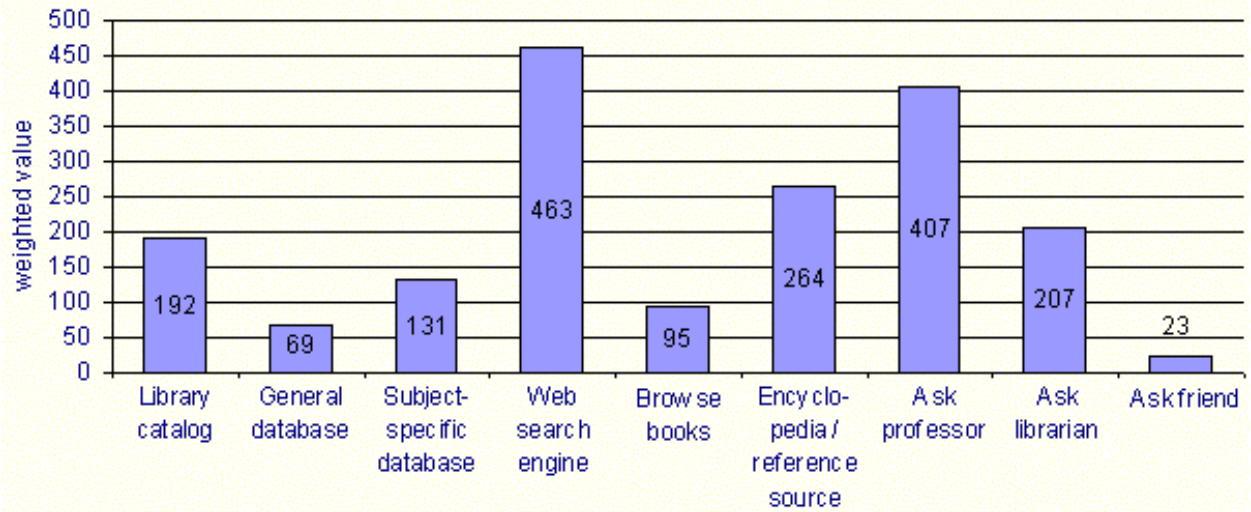

# How confident do you feel in your ability to use academic library resources to conduct college-level research?
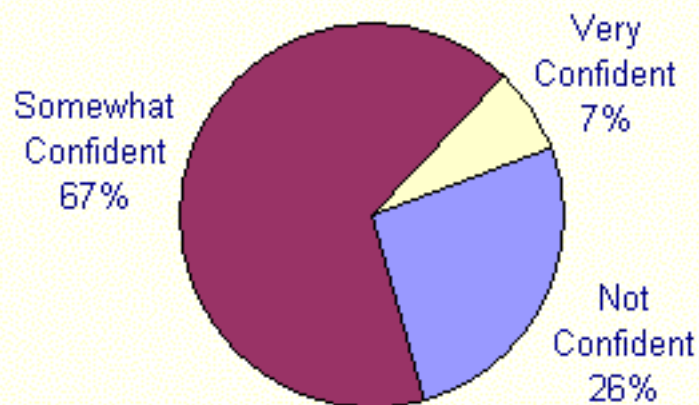
Starting the Research Process and Asking for Help

A professor assigns you a research paper about a completely unfamiliar topic. How would you begin your research?
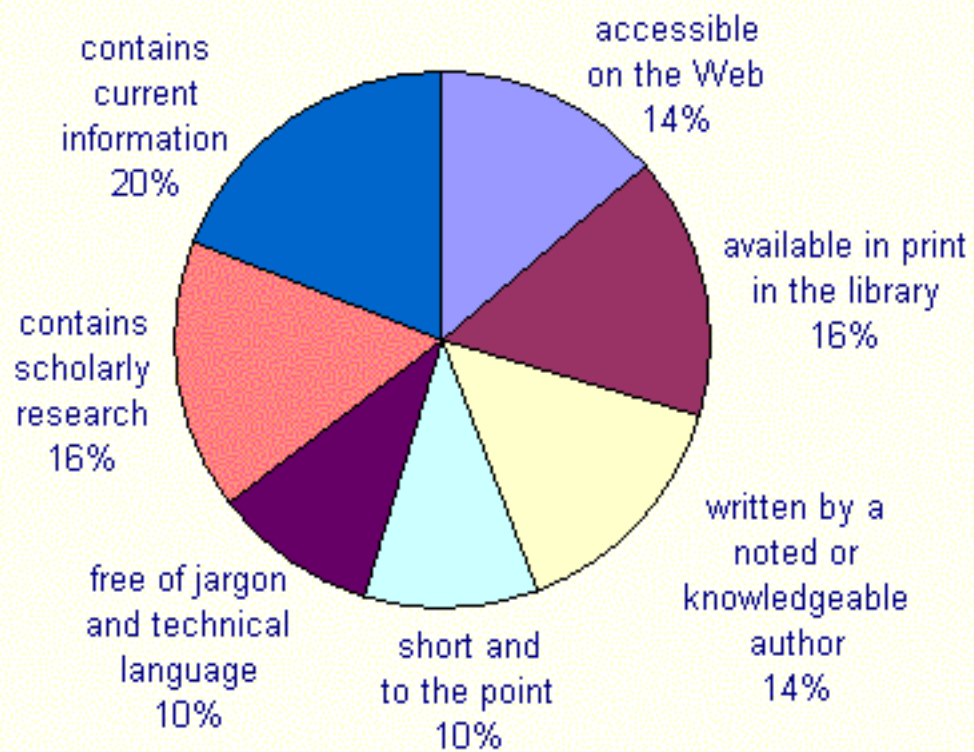### (weighted response)

Category	Weighted value
Library catalog	192
General database	69
Subject-specific database	131
Web search engine	463
Browse books	95
Encyclopedia / reference source	264
Ask professor	407
Ask librarian	207
Ask friend	23

During your senior year in high school, how often did you ask for research help at a library reference desk?

(Number of Responses)

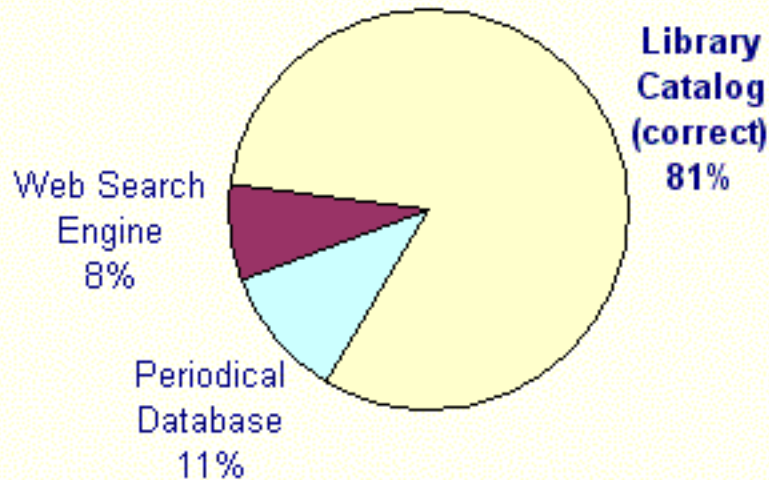|	
Never	28
1-3 times	137
4-6 times	62
7-10 times	22
more than 10 times	16
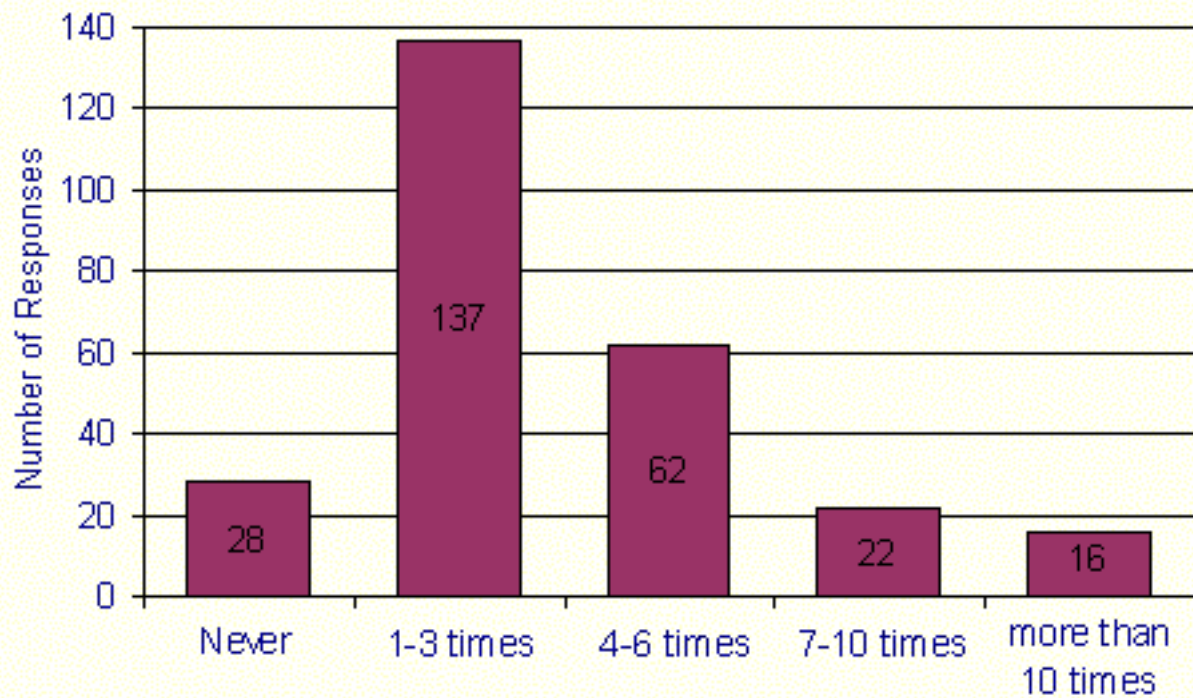
Searching for and Choosing a Source

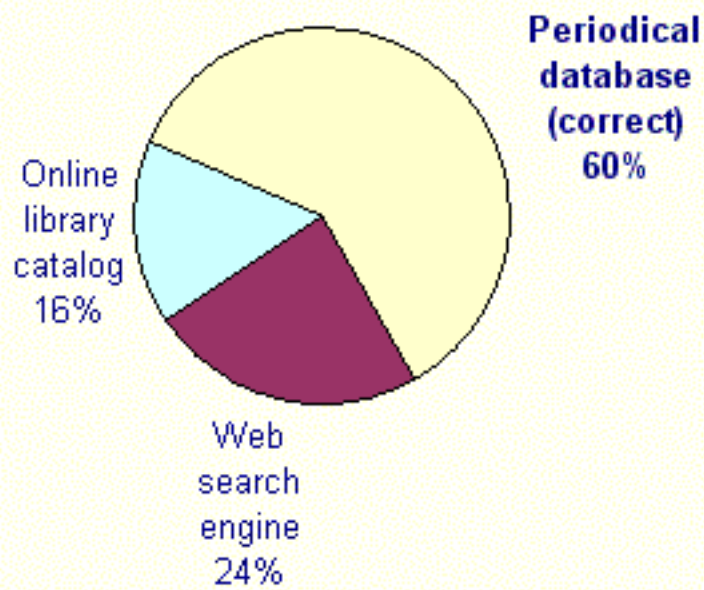# How important are the following qualities in determining whether a source is appropriate for your research?
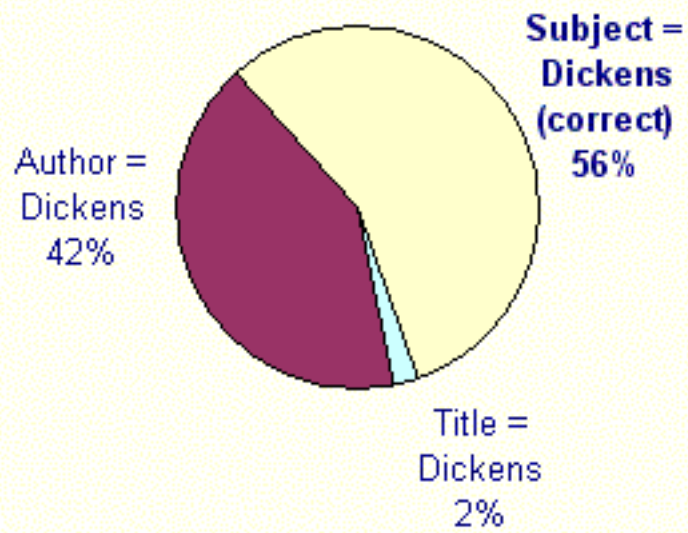## (weighted response)

contains current information 20%

accessible on the Web 14%

available in print in the library 16%

written by a noted or knowledgeable author 14%

contains scholarly research 16%

free of jargon and technical language 10%

short and to the point 10%

If you needed to find out whether Carleton's library held the book "King Leopold's Ghost," which would you search?

Library Catalog (correct) 81%

Web Search Engine 8%

Periodical Database 11%

If you needed to find a journal article on Baroque architecture, which would you search?

Periodical database (correct) 60%

Online library catalog 16%

Web search engine 24%

To retrieve books about Charles Dickens, the best search would be:

Subject = Dickens (correct) 56%

Author = Dickens 42%

Title = Dickens 2%

Citing Sources

How confident do you feel that you know how to cite others' work when writing a research paper?

Very confident
17%

Somewhat confident
69%

Not at all confident
14%
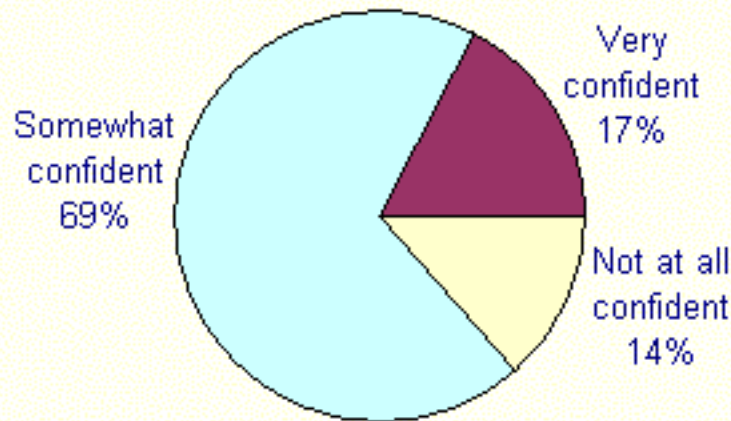
What type of source is the following is a citation to?

DeWoody, J. A. 1999. Nucleotide Variation in the p53 Tumor-Suppressor Gene of Voles from Chernobyl, Ukraine. Mutation Research. 439 (12):25-36.

a book (incorrect)
21%

a journal article (correct)
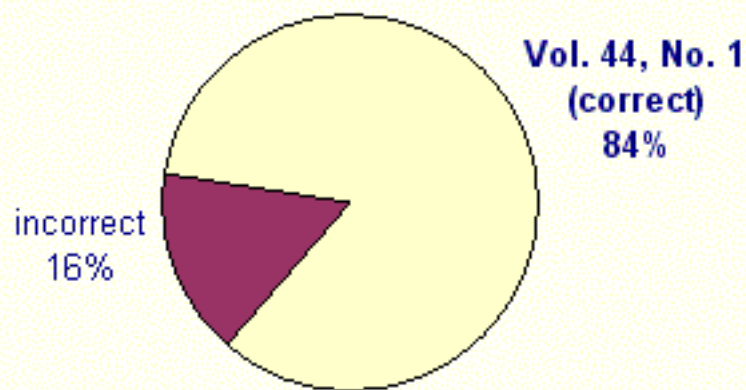68%

a portion of a book (incorrect)
24%
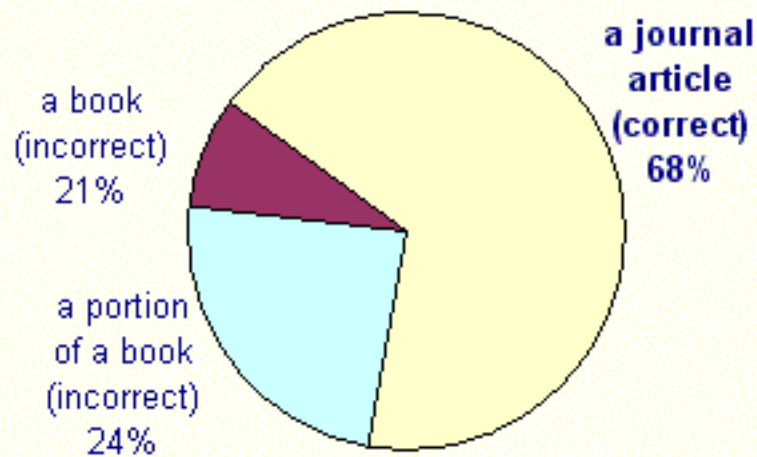
Look at the following information retrieved from a database. In what issue and volume of Latin American Politics and Society will you find this article?

TI: The Cuban Revolution's Evolving Identity
AU: Erisman, H Michael
SO: Latin American Politics and Society, 2002, 44, 1, spring, 145-153

Vol. 44, No. 1
(correct)
84%

incorrect
16%

Which paragraph or paragraphs should contain a citation to Freud's Interpretation of Dreams:

(A) Although Freud deemed most dream analysis impossible without knowledge of the individual dreamer's unconscious thoughts, he defended generalized interpretations of common dreams. "A peculiar interest attaches to these typical dreams," Freud wrote, "because, no matter who dreams them, they presumably all derive from the same sources, so that they would seem to be particularly fitted to provide us with information as to the sources of dreams."

(B) Although Freud deemed most dream analysis impossible without knowledge of the individual dreamer's unconscious thoughts, he defended generalized interpretations of common dreams. He believed these seemingly universal dreams held promise for study and interpretation because, he presumed, they arise from the same source, regardless of the dreamer's psyche.

Both (correct) 22%

B 24%

A 54%