

**Creating Effective Research Assignments:  
Helping Students Solve Information Problems**

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Academically  
***adrift***

Limited Learning on College Campuses

Richard Arum and Josipa Roksa

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“Still, some colleges do a much better job than others of teaching students. Colleges can improve student learning simply by creating a culture of high expectations. After controlling for demographic background and level of preparation, Arum and Roksa found that undergraduates whose professors required more reading and writing learned more.”

--Ben Wildavsky, *Wilson Quarterly* (spring 2011), pp. 98-99.

# PROJECT INFORMATION LITERACY

A national study about college students' research habits

Since 2008, we have surveyed over 11,000 students at more than 50 U.S. colleges and universities to study how they find and use information for courses and in their daily lives.



WHAT IS MOST DIFFICULT ABOUT RESEARCH?



7 OUT OF 10 STUDENTS USE WIKIPEDIA

92%

SEARCH ENGINES

84%  
GETTING STARTED

WHAT OTHER SOURCES DO STUDENTS USE FOR COURSE RESEARCH?

88%

DATABASES

83%

INSTRUCTORS

30%

LIBRARIANS

WHAT DO STUDENTS DO IN THE LIBRARY DURING CRUNCH TIME?



81%

CHECK MESSAGES



73%

PREPARE ASSIGNMENTS



62%

STUDY & REVIEW

WHAT DO  
STUDENTS DO  
IN THE LIBRARY  
DURING CRUNCH  
TIME?



81%

CHECK MESSAGES



73%

PREPARE ASSIGNMENTS



62%

STUDY & REVIEW

fear,  
angst,  
tired,  
dread,  
excited,  
anxious,  
annoyed,  
stressed,  
disgusted,  
intrigued,  
confused, &  
overwhelmed.

12

ADJECTIVES  
STUDENTS USE  
TO DESCRIBE HOW  
THEY FEEL ABOUT  
RESEARCH  
ASSIGNMENTS



<http://projectinfolit.org>

**What is Project Information Literacy?**

PIL Finding	Lessons for Higher Education
<p>Students are overloaded, busy, and do things at the last minute.</p>	<ul style="list-style-type: none"> <li>• Provide easy, fast access to high quality information</li> <li>• Offer on-demand information services</li> <li>• Highlight digital reference</li> </ul>
<p>Technology is changing learning at warp speed—despite institutions and faculty</p>	<p>There is an erosion of pedagogical authority.</p> <ul style="list-style-type: none"> <li>• Who's in charge?</li> <li>• Who should be in charge?</li> </ul>
<p>Information literacy needs are more important than ever—but are evolving. Defining the task and assessing the process are harder than finding.</p>	<ul style="list-style-type: none"> <li>• Offer a comprehensive information literacy program—what should each student know?</li> <li>• Fewer lessons on "search."</li> <li>• Focus on task definition, use of information, synthesis, evaluation.</li> <li>• Recommend using milestones in major assignments.</li> </ul>
<p>Regarding library services, there is a shifting role from repository to support services, space, place, and equipment.</p>	<ul style="list-style-type: none"> <li>• Place less emphasis on print collection development</li> <li>• Offer flexible and collaborative spaces.</li> <li>• Use the Apple Store model for the 21<sup>st</sup>-century library.</li> </ul>



The Big6 is a process model of how people of all ages solve an information problem. From practice and study, we found that successful information problem-solving encompasses six stages with two sub-stages under each:

**1. Task Definition**

- 1.1 Define the information problem
- 1.2 Identify information needed

**2. Information Seeking Strategies**

- 2.1 Determine all possible sources
- 2.2 Select the best sources

**3. Location and Access**

- 3.1 Locate sources (intellectually and physically)
- 3.2 Find information within sources

**4. Use of Information**

- 4.1 Engage (e.g., read, hear, view, touch)
- 4.2 Extract relevant information

**5. Synthesis**

- 5.1 Organize from multiple sources
- 5.2 Present the information

**6. Evaluation**

- 6.1 Judge the product (effectiveness)
- 6.2 Judge the process (efficiency)



FIGURE 1: What Frustrates Students When They Conduct Research?

<b>Course-Related Research</b>	<b>Everyday Life Research</b>
<ul style="list-style-type: none"><li>• Information overload (e.g., the more you know, the less you know, it's depressing).</li><li>• Too much irrelevant information, can't locate what is needed from online results.</li><li>• Beginning and getting started on an assignment.</li><li>• Trying to find the "perfect source."</li><li>• Not knowing what to look for, yet still sifting through articles that might fit.</li><li>• Trouble finding books needed on library shelves.</li><li>• Can find the citation online, but cannot find the full-text article in a database.</li><li>• Scholarly databases or library books are out-of-date.</li></ul>	<ul style="list-style-type: none"><li>• Too many results from a Google search and the need to sort through them.</li><li>• Knowing the "answer" is online, but not being able to find it.</li><li>• Figuring out what is a credible source, and what is not.</li><li>• Figuring out if something is up to date.</li><li>• Knowing that everything is not online, especially when searching the Web.</li><li>• Never can find enough information on the obscure topic being searched.</li><li>• Once a great source is found online, how is it found again when it is needed?</li><li>• Don't have a computer at home, so online searches for information involves some travel.</li></ul>

## Language Context

*"I wanted to write about how using animals can help people. But I needed different terms, other terms to use when I was searching and trying to look up other things on other sites. I found there's, like, dolphin-assisted therapies, horse therapies, and then there's psychotherapies...I guess they're all different themes, I guess that's what they are, and then I found out I needed animal-assisted therapy, that's what it's called, that's what I found out I needed."*

FIGURE 3: Why Do Students Use Wikipedia?

1. Provides background and brief overview; helps where scholarly journals can be too specific or narrow as a beginning step in the research process.
2. Identifies and defines search terms that students can use when they search scholarly research databases next.
3. List citations at the bottom that serve as a jumping-off point for using scholarly research databases.
4. Often includes timelines and charts that help with visual learning.
5. Uses “good English” that is written by “real people” and that is easily understood (e.g., Wikipedia has content written in a style with “no fluff”).
6. Provides current, up-to-date information (e.g., “everything is there, even ‘Joe the Plumber’ is in there”).
7. Interface is usable (e.g., links are highlighted, entries are short, and “above the fold” information is prioritized).
8. Builds confidence and helps students start to get the work done (e.g., “if Wikipedia can summarize something that seems so broad and huge to me, then I know I can do it to for my assignment”).
9. Shows another network of research sources that exist (e.g., “I was working on a paper about the Seven Wonders of the Ancient World, I had my list of resources that I could compare with the citations on Wikipedia to see someone there came up with”).
10. Open-sourced functionality allows for updates and changes that can increase the authority and accuracy of information.

## Recommendations

## Gustavus Adolphus College

- **First -Term Seminar (sample assignment)**

Eric Eliason wants first-semester students to understand research involves dead ends, blind alleys, and strange detours, that not all questions have answers but they're still worth asking. He asks students in a first year seminar to look for ways a Bible story--Cain and Abel, for example--has been appropriated in the arts. He asks them to look for novels, plays, poetry, films, paintings, and music that somehow reinterprets the story. Students express frustration as they work on this assignment because answers don't come easily, and sometimes don't come at all, but they become incredibly persistent and determined - even obsessive in their search. Ultimately they all learn their way around the library, know the libraries on a first name basis, find more than enough material to do a poster presentation that is the public result of their work.

## Questions to ask when designing assignments:

- What core research skill is being addressed in this assignment, and how?
- Will this assignment serve to bring in enriching material for the students?
- Does this assignment encourage my students to think about the type of information they need (factual, background, evaluative), and the form in which they're most likely to find it?

## Drew University (continued)

- Does this assignment help my students distinguish among various types of information sources: magazine articles, books, academic or research journals, personal web sites, etc?
- Does this assignment include retrieval of information through some major finding tool such as an index, catalog, database or search engine?
- Does this assignment ask students to look at information critically--to evaluate it, to compare it with other information, to synthesize information from different sources, to identify the most crucial pieces of information available?

## Concordia University

### Characteristics of a good assignment design:

- Provide opportunities for students to report on progress and to ask questions

### Providing guidance includes:

- Define any ambiguous subject-specific and/or library-related terminology
- Specify assignment requirements (length, style, due date, etc.)
- Allow students to use a variety of sources and not be too restrictive
- Clarify differences between licensed databases available through library subscriptions and free information available through the Web
- Provide starting points to increase confidence and comfort level
- Outline what constitutes plagiarism and how it can be avoided



## Bad Assignment

### ENG 149: The 19<sup>th</sup>-Century American Novel

- Write a paper on one of the authors we studied this semester.
- The paper will be three to five pages in length, double spaced.
- Research the topic.
- The paper is due on the final day of class.

## Sample Assignment Outline: top ten components

### HIST 150: Comparative Labor

1. Timetable
2. Research guidance
3. Selecting a topic
4. Recommended sources
5. Catalog and databases
6. Getting started
7. Types of sources
8. Evaluating sources (include checklist)
9. Avoiding plagiarism
10. Support
  - Felician College Library
  - Center for Learning

Wrestling with a Topic

# Narrowing Your Topic

to get an interesting research question

5 QUICK  
TIPS



Lorna Dawes | Learning Communities Librarian | University of Nebraska, Lincoln

## Wrestling with a Topic

### The Research Question

1

Identify Your Interests.

2

Select Key Concepts

3

Change Your Focus

4

Contextualize the Question

5

Identify Keywords

Write the Question

Readings and Further Help

Contact

## Wrestling with a Topic

**Source:** Palmquist, Mike. *The Bedford Researcher: An Integrated Text, CD-ROM, and Web Site*. Boston: Bedford/St. Mark's, 2003.

### Step 1: Locate Conversations in Your Sources

- Think about the title
- Consult the table of contents

## Wrestling with a Topic

### Step 2: Identify important Conversations about the Topic

- Personal connections
- Ideas repeated in sources
- Problems discussed in sources
- Similarities and differences among sources
- Agreements and disagreements in sources
- Recurring voices in sources



## Evaluating Articles: Checklist

		Yes	No
<b>Audience</b>	Is the level of the article appropriate to your needs?	_____	_____
	Does the text use scholarly or technical language?	_____	_____
	Does it assume the reader is well educated in the discipline?	_____	_____
	Does the article explore one issue or topic in detail?	_____	_____
<b>Accuracy</b>	Is the article free of errors and disproven theories?	_____	_____
	Does it generally agree with other sources for similar information?	_____	_____
	Is documentation or evidence provided for the author's argument? (Look for in-text references and citations or a bibliography.)	_____	_____
	Is there an explanation of the research methods? (For articles that are primarily about a research study.)	_____	_____
<b>Bias</b>	Does the article present information in an objective manner?	_____	_____
	Are all sides of an issue represented?	_____	_____
	If not, can you determine the bias of the article?	_____	_____
<b>Credibility</b>	Is an author identified?	_____	_____
	Are the author's credentials and associations clearly noted?	_____	_____
	Is the author an expert in this field?	_____	_____
	Is the publisher well known and reputable?	_____	_____
<b>Currency</b>	Was the article published recently?	_____	_____
	Has the article been revised or updated?	_____	_____
<b>Relevance</b>	Does the information add to or support your research?	_____	_____
	Does the article provide references that are also useful?	_____	_____

Look closely at items appearing in the "No" column. Does this item on the checklist weaken your source? Why or why not?

## Research Assignment Ideas (Williams College)

- Citation searching
- Footnote following & critique
- Scholarly roots
- Review article
- Popular vs. scholarly
- Problem sets
- Wikipedia assessment



## Examples of Research-Based Assignments that Can Be Adapted (NJLA)

- Opposing viewpoints (introductory)
- Citation examination (introductory & gateway)
- Annotated bibliography (gateway)
- Research process paper (metacognitive)
- Understanding primary and secondary sources (gateway)
- Examining bias (introductory & gateway)

## Resources to Include

- Research guide (LibGuide): provided by liaison on request
- Contact information for liaison
- [library@felician.edu](mailto:library@felician.edu)
- [www.felician.edu/mobile-library](http://www.felician.edu/mobile-library)
- Felician College Library consultation
- Center for Learning consultation

# LIBRARY

About Felician > Facilities & Resources > Library

## Library

- Find Articles & Online Resources
- Journal List
- Find Books & Other Materials
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- About the Library
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- Video Tutorials
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- Venues Available for Meetings & Events

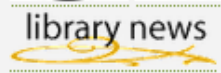
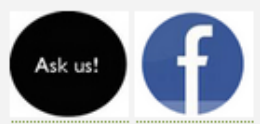
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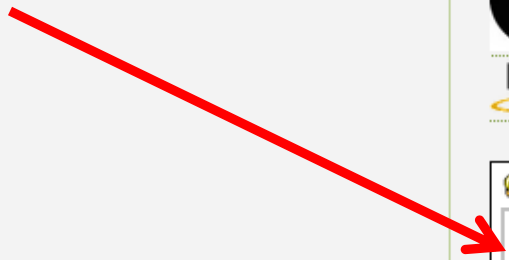


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a Million Species

Elizabeth S. H. Blackburn  
From Climate Change



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