

Excerpt from
LABORATORY MANUAL
**PRINCIPLES OF PSYCHOLOGY:
EXPERIMENTAL FOUNDATIONS**

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Experiment 2

Information Literacy and Psychological Science
Elizabeth O. Hutchins

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Information Literacy and Psychological Science

Elizabeth O. Hutchins

Introduction

Rapid Growth of Psychological Research

A rapidly growing body of psychological research is now accessible in an increasingly wide array of reference works, indexes, databases, and web sites. Studying psychology effectively requires researchers to integrate previous research into their own work. To do so, they need to comprehend the “flow of information”; learn how to design effective research strategies; identify key psychological terms for their research; become familiar with general and specialized psychology reference works; and locate, retrieve, and evaluate material on a specific topic in the library.

Flow of Information

The key to conducting successful psychological research is in understanding the “flow of information” i.e. how an idea moves through the discipline's literature. The *information flow* evolves from a specific idea, through the stage of discussion, and to print and electronic sources. As the *research* becomes more focused, it moves from the examination of general works to subject specific resources that examine the key idea. The flow of information is illustrated in Figure 1.

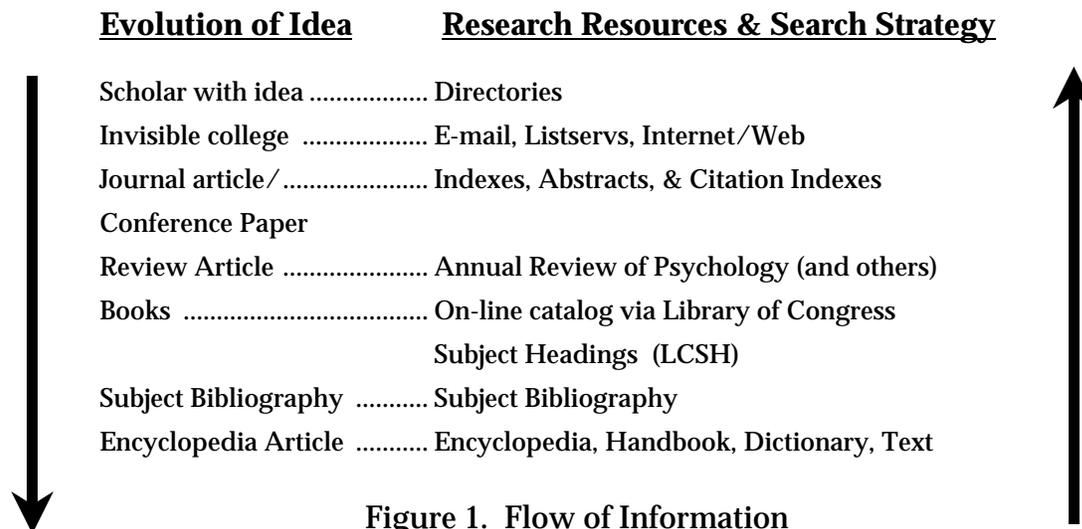


Figure 1. Flow of Information

Reference Collection

In spite of the extraordinary increase of psychological indexes, databases, networks, and web sites, classical psychology reference sources remain important. For this reason, the reference collection often continues to be the best starting point for research. It enables one to gain an overview of a topic and become familiar with research conducted by others in this area. This collection provides access to encyclopedias, subject dictionaries, bibliographies, biographical sources, statistical data, and/or print indexes.

Electronic Databases

Electronic databases, which have usually derived from print indexes, enable researchers to find published materials (articles, book reviews, and book chapters) on a particular subject area. Most databases offer the same features and functions, although they may be designed differently. For example, PsycINFO citations consist of *records* that include all the key information about an article or book chapter. Individual units of information are *fields*. Some of the fields in the PsycINFO database include TI: Title, AU: Author, SO: Source, PY: Publication Year, AB: Abstract, and DE: Descriptors.

Example: The following example illustrates key fields in a PsycINFO record. Explanation notes are provided in italics.

TI: Title [*Title of the article.*]

Observations of aggressive and nonaggressive children on the school playground

AU: Author

Pepler, Debra J; Craig, Wendy M; Roberts, William L

AF: Author Affiliation [*Organization with which authors are associated professionally.*]

York U, LaMarsh Ctr for Research on Violence & Conflict Resolution, North York, ON, Canada

SO: Source [*Title of the journal, conference report, or book.*]

Merrill-Palmer Quarterly. Vol 44(1), Jan 1998, pp. 55-76

IS: ISSN [*Journal code identification used for requesting an interlibrary loan article.*]
0272-930X

AB: Abstract [*Summary of document.*]

Naturalistic observations were made of 17 aggressive and 22 nonaggressive children in Grades 1 to 6, filmed with video cameras and remote microphones on school playgrounds. Observers coded interactive behaviors, affective valence, and play states.

Aggressive children displayed more verbal and physical aggression, more prosocial behaviors, and higher rates of interaction than did nonaggressive children.... (c)

1998 APA/PsycINFO, all rights reserved)

LA: Language

English

PY: Publication Year

1998

PT: Publication Type

Journal Article; Empirical Study

DE: Descriptors [*Terms from Thesaurus of Psychological Index Terms*]

*Aggressiveness; *Antisocial Behavior; *Childhood Play Behavior; *Peer Relations; *Prosocial Behavior; Childhood; School Age Children

ID: Identifiers [*Key words/phrases included in the article.*]

prosocial & antisocial peer interactions on school playground; aggressive vs. nonaggressive 6.7-12.8 yr olds

PO: Population

Human; Male; Female; Childhood (birth-12 yrs); School Age (6-12 yrs)

Controlled Vocabulary

On-line catalogs and electronic databases frequently use controlled vocabulary. Controlled vocabulary is a *set of specified terms* used by experts to describe an

article or book. Researchers need to utilize the controlled vocabulary terms in their search for the most appropriate books and journal articles. In PsycINFO these terms are called *descriptors*.

To find controlled vocabulary, you need to consult a list of terms or a thesaurus. For example, the Library of Congress Subject Headings (“Red Books”) provide the search terms for SAGE (St. Olaf College’s online catalog). The Thesaurus of Psychological Index Terms provides the terms for PsycINFO.

Controlled vocabulary appears in the *subject headings* in SAGE and *descriptors* in PsycINFO.

Search Strategy

Your research strategy, which will evolve from an idea you wish to explore, should be approached in several steps. Select a topic and formulate a hypothesis.

Example: Aggressive children play with their peers with more antisocial behavior than do non-aggressive children.

1. Identify & underline the main ideas in your hypothesis.
2. Select the key words in your research question to use as possible search terms.

Example: aggressive, children, play, peers,

3. Find synonyms for these terms. This step will be key in allowing you a broad literature search. If you are searching on a database that has *controlled vocabulary*, such as SAGE or PsycINFO, be sure to check the subject headings/descriptors that will offer additional search terms.

Example:

<u>Variable A</u>	<u>Variable B</u>	<u>Variable C</u>
aggressiveness	children	peer relations
OR	OR	OR
antisocial behavior	AND childhood	AND friendship

4. Combine the terms you have selected by using Boolean logic.

Example: (aggressiveness OR antisocial behavior) AND (children OR childhood) AND (peer relations or friendship)

5. Locate additional relevant descriptors in a useful article and narrow your search further by using field codes.

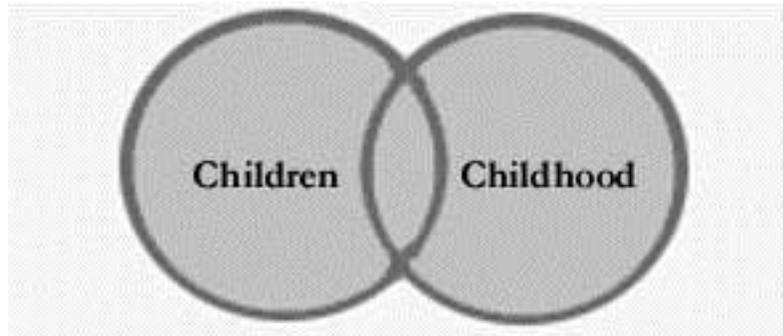
More about Boolean Logic

Using Boolean logic, you may design a research strategy that matches your hypothesis. You do this by combining terms (either key words or controlled vocabulary) into sets.

If you wish to search as widely as possible on a topic, combine synonyms for your key concepts by inserting the word OR. This search will retrieve records

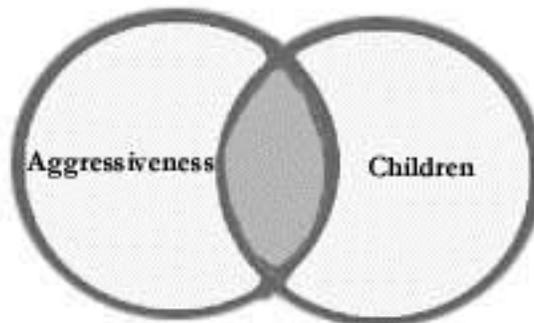
with any one, all, or a combination of the search concepts you specify. Whenever you add a term connected by OR, you *broaden your search*.

If you write
“children OR childhood”
you will find *any* article using either or both of the terms “children” or “childhood.”



If you wish to *narrow* your search, use the word AND. This search will retrieve records that include all the search terms you specify. Each term you connect with AND must appear in the retrieved record. Whenever you add a term connected by AND, you *narrow* your search. The final result of a search using AND includes only the area where the concepts overlap.

If you write
“aggressiveness AND children”
you will find only those articles that include both of the terms “aggressiveness” and “children.”



Your final search may combine both strategies.

You search statement
“aggressiveness AND (children or childhood)”

Now look again at the search you could have compiled with variables from the descriptor field of your selected article:

(aggressiveness or antisocial behavior) AND (children or childhood) AND (peer relations or friendship)

Lab Objectives

- To integrate library research and resources with psychological investigations
- To comprehend and utilize the flow of information
- To design and develop effective research strategies appropriate to psychological investigation
- To identify and use psychological descriptors/subject headings
- To locate, retrieve, and evaluate library resources, using the topic of children's play as the basis for independent field research
- To develop and refine a hypothesis
- To lay the foundation for future research in psychology and other related fields

Terms

American Psychological Association (APA) style

Boolean logic

Cambridge Scientific Abstracts (CSA)

Controlled vocabulary

Descriptor

Electronic databases

Encyclopedia of Psychology

Expanded Academic ASAP

Fields

Flow of information

The Gale Encyclopedia of Psychology

Interlibrary loan (ILL)

Keyword search

PsycINFO

Records

Reference collection

Reference librarian

Sage

Scholarly journal

Search strategy

Subject heading

Subject search

Thesaurus of Psychological Index Terms

Uniform Resource Locator (URL)

World Wide Web (WWW)

Method

During this lab, a reference librarian will introduce you to research strategies and library resources. You will receive information about sources that are essential for completing this lab. **Use this time to ask the reference librarian any questions you have about the library!**

During the second part of the lab, you will actively explore some research materials available in the library and answer a set of questions that will help you learn how to use these resources. Ideally the sources you locate will help you with your observational research project. You may decide to refine your ideas about your project based on your discoveries from this lab. In some cases, you may wish to broaden your topic and, in others, you may wish to narrow it.

Record answers to questions in the space provided. Your formal lab report for this lab will differ significantly from the other labs. Your preceptor will tell you what needs to be put in your notebook.

Materials

Cambridge Scientific Abstracts (CSA)

Encyclopedia of Psychology

Expanded Academic ASAP

The Gale Encyclopedia of Psychology

PsycINFO

Sage

Thesaurus of Psychological Index Terms

World Wide Web (WWW)

PART 1 Information Literacy Skills

Procedure

1. The Information Literacy Lab will be held in Rolvaag 477 or 277 (to be announced). Bring your lab notebook, lab manual, and citation skeleton to the lab.
2. After the librarian's demonstration, you will work in your research groups to find the answers to the following questions. Your group's play topic should be the focus of your search. Be sure *each* member of your research group feels comfortable in using all of the following reference resources.
3. Make notes as you search for answers.

Library Exercise

A. Select Search Terms

1. State the hypothesis of your observational research project.
2. Identify and underline the main concepts in your research question, i.e., the different elements of your hypothesis.
3. Write down your key terms and any synonyms that seem appropriate for these concepts. As you examine the following resources, continue to add to this list of terms.

B. Encyclopedias

Articles in encyclopedias give you a general overview of your topic. They also frequently offer bibliographies of relevant articles and books.

1. Compare and contrast the entries under "Play" in the following encyclopedias:

Encyclopedia of Psychology (R. R. BF 31 .E52 2000)

The Gale Encyclopedia of Psychology (R. R BF31 .G35 1996)

- a. Similarities:

b. Differences:

c. Strengths of each source:

C. Thesaurus

1. Look up the two entries "Play Behavior (Childhood)" and "Play Development (Childhood)" in the following thesaurus:

Thesaurus of Psychological Index Terms (R. R. BF 1.P655)

Record the correct index term for each one of these entries. These cross-referenced terms are indicated by **Use**.

a. _____ b. _____

Now look under these correct term headings. What are three other related subject terms (indicated by **R**) you might use for *your* research topic?

1. _____

2. _____

3. _____

2. How is a thesaurus (i.e., a list of controlled vocabulary) helpful?

CT Why do you think students and faculty often ignore the thesaurus?

D. SAGE

To find the St. Olaf Catalog (SAGE), go on the home page of the St. Olaf College Libraries: <http://www.stolaf.edu/library/>

Then click SAGE: Our Library Catalog: <http://sage.stolaf.edu/>

1. Search for books on “play” in *both* the SUBJECT and KEYWORD search mode.
 -
 - a. Why are there many more entries (“hits”) in a KeyWORD search than in a SUBJECT search?
 - b. Which search mode (SUBJECT or KeyWORD) is a more useful way to find books on play? Why?
2. Start another KeyWORD search. Add an additional word related to *your* research question that will narrow the KeyWORD search on “play” [e.g., “play AND pretend”]. You may also add synonyms if your second word narrows the search too much [e.g., “play AND (pretend or symbolic)”].
 - a. Which terms did you select to search for materials about your project?
 - b. Which subject headings listed at the bottom of the entry in SAGE would be useful ones for your project? These headings are *Library of Congress Subject Headings*. [Hint: In the text version of SAGE, use the "M" key to scroll through the entry to find the subject headings.]
 - c. Select one of the books you found about play and list it, using APA style

E. PsycINFO

PsycINFO [On-line] indexes journals, book chapters, technical reports, and dissertations on psychology and related disciplines from 1887 - present. It corresponds to the print version of *Psychological Abstracts* [R.R. BF1 .P6]. The web edition is accessed via *Cambridge Scientific Abstracts*.

To search *PsycINFO*,

- Go to the Library Home Page: <http://www.stolaf.edu/library>
- Click on "Find Articles and More..."
- Click on "Find Indexes & Databases by Title"
- Click on "P"
- Scroll down and select *PsycINFO*
- Check *PsycINFO* 1984-Current
- Go to Advanced Search
- Note: For guidelines on searching *PsycINFO*, go to *Cambridge Scientific Abstracts* under "Find Indexes & Databases by Title" and click on "Search Tips" <http://www.stolaf.edu/library/research/articles/csasearch.html>.

1. Locate two relevant articles

- a. Find two articles related to your research question. These articles should have been published within the last 5 years and, if possible, owned by St. Olaf or Carleton. [Hint: Click on "Locate Document" to see if either college owns the journal.]
- b. *Print one of the selections, including both the citation and the abstract. Attach the printout to the appropriate page(s) in your lab notebook.*
- c. *List below the citations to the two articles in APA style. After the citation, indicate if the journal is at St. Olaf or Carleton*

1.

2.

2. List three more specific subject headings that might be helpful with your project? [Hint: Look for the descriptors (DE=descriptor) at the end of the useful article citations.]

a.

b.

c.

3. Record the search statement, on the left-hand side of the search screen, which found the citations to these articles.

4. What might be the advantage and/or disadvantage of using a specialized database such as *PsycINFO* instead of a general index such as *Expanded Academic Index*?

F. *Expanded Academic Index* (Optional)

This database is a good source of full-text articles. If a journal article you find in *PsycINFO* is NOT at St. Olaf or Carleton, before you request Interlibrary Loan (ILL) you may wish to conduct an *advanced search* by author and title in EA-ASAP to see if there may be a full-text version online. You may record your results below. Please note that EA-ASAP defaults to *scholarly* articles. To get to EA-ASAP from the St. Olaf College Libraries home page:

- Go to “Find Articles & More...”
- “General”
- “General & Basic”
- *Expanded Academic ASAP*

Journal articles found in EA-ASAP (Use APA style.):

a.

b.

G. World Wide Web (WWW) (If you have time.)

Psychology web sites are available from numerous sources.

- See below for suggested web links.

- Search Engines may also be useful. Try *Dogpile*: <http://www.dogpile.com/> (searches many databases simultaneously), *Northern Light*:

<http://nlresearch.northernlight.com/research.html> (be sure to limit to web sites), Altavista: <http://www.altavista.com/>, Google: <http://www.google.com> or Yahoo: <http://www.yahoo.com/> (a directory of web sites). In Yahoo, go to the Social Science section and then to the Psychology subsection.

1. Using the Web links below or a search engine, find one web site with material related to your research question
2. Record this web site using the correct APA format for web citations. [Note: this format may be found online at *Electronic Reference Formats Recommended by the American Psychological Association*, which is available via the Library Home Page. Go to "Instruction Guides" and click on "Style Manuals & Citation Guides." <http://www.apastyle.org/eleceref.html>
3. Now evaluate the web site by using the "Evaluating Web Sites" guidelines, which may be found online under the Library Home Page "Instruction Guides" section. <http://www.stolaf.edu/library/instruction/evaluation.htm> Answer the questions: Why will the site you found be useful? Is it popular or scholarly? How do you know? Who is responsible for this site? When was it last updated? If there are links to other sites, are these relevant for your research and why?

Web Links

Psychweb <http://www.psychweb.com/>
Provides links to other psychology-related sites and scholarly resources. Click on "Mega Sites" to find other sources.

Social Psychology Network <http://www.socialpsychology.org/>
A comprehensive source of social psychology links, with additional general psychology options.

Psych Web created by Russell E. Dewey <http://www.psywww.com/>
Contains a large amount of information about resources, departments, areas, discussion groups, & various other information.

St. Olaf Psychology Department <http://www.stolaf.edu/depts/psych>

PART 2

Revision of Play Lab Hypothesis

Look back at your hypothesis about children's play. If you wish to, revise your proposal, reflecting your thoughts and the discoveries from your library research. Revision of your proposal is optional (provided your pre-existing proposal has been approved). **If you do this, submit the updated version of your proposal to your preceptor.** When you feel your library work supports your research proposal and your project has been approved, you are ready to begin your field observations.

PART 3

Topic for Critical Thinking

Outline the steps you would take to design a research project focused on the concept of play that is set in another culture and/or seen through the eyes of a different discipline (e.g., sociology, art, history, or biology). Provide a basic hypothesis or question. Design a search strategy. Find research material on your topic. Specify why you selected it and how it might be valuable.

References

Required Lab Reading

Brownlee, S. (1997, February 3). The case for frivolity: Play isn't just fun. Young animals can't do without it. *U. S. News & World Report*, 122(4), 45-49.

Suggested Readings

Fister, B. (1992). The research process of undergraduate students. *Journal of Academic Librarianship*, 18(3), 163-169. [This article explores ways in which student research processes compare and contrast with the search strategies that are often introduced in bibliographic instruction. Fourteen undergraduate students who were interviewed describe how they formulated the focus for their projects, gathered evidence, \ subsequently revised their focus, and translated their research discoveries into writing.]

American Psychological Association. (2001). *Publication Manual of the American Psychological Association*. (5th ed.). Washington, DC: Author. [This manual includes most up-to-date information on APA style guidelines, incorporating coverage of technological publications, case studies, and more. Indispensable research resource.]

Reed, J. G., & Baxter, P. M. (1992). *Library use: A handbook for psychology* (2nd ed.). Washington, DC: American Psychological Association. [This respected text offers a thorough introduction to library research and information sources. It covers library organization, defines research topics and strategies, and

describes key psychological resources.]

