A collaboration to develop materials that will foster critical thinking and communication skills through library-based research is described and presented. Library activities were designed to promote the use of cognitive skills, such as analysis, synthesis, and evaluation. This was a pilot study designed to expose undergraduate students to one facet of research in psychology: designing a research proposal. The students were enrolled in a psychology course designed for nonpsychology majors. The primary purpose of the course was to enable students to become better consumers and communicators of social science. Students were introduced to the library as a research tool through a series of structured activities in a workbook developed for the course. The workbook, "Individual Behavior: A Workbook and Journal," provides practice and instruction for each step in the process of developing a research proposal. As each new step in the research process was addressed, students were introduced to the concept the assignment covered and to the resources required to complete the activity. Students presented and defended a project to the class. Ethics and contribution to science was discussed for each proposal. On the final day of class, students completed a 10-item evaluation form. Results indicate that students increased their knowledge of library usage and became more skillful at library-based research. A figure illustrates library activities performed for a research proposal and a table summarizes student evaluation of the library activities. A copy of the workbook is provided. (Author/MAS)
A Library Based Apprenticeship in Psychology Research

Linda Ross, Ph.D. and Elizabeth W. Carter, M.L.S.
The Citadel
Charleston, SC

Abstract

A collaboration to develop materials that will foster critical thinking and communication skills through library-based research is described and presented. Library activities were designed to promote the use of cognitive skills, such as, analysis, synthesis, and evaluation. This was a pilot study designed to expose undergraduate students to one facet of research in psychology: designing a research proposal. The students were enrolled in a psychology course designed for nonpsychology majors, a core requirement in a liberal arts program. The primary purpose of the course was to enable students to become better consumers and communicators of social science. Students were introduced to the library as a research tool through a series of structured activities in a workbook developed for the course by the authors. The workbook, *Individual Behavior: A Workbook and Journal*, is included.
Introduction

The primary purpose of the psychology course was for students to become better consumers and communicators of social science. Students were required to be active learners, with the focus on the process of science rather than on the content of psychological knowledge. Through a process of library-based research activities in the field of human behavior, students were systematically exposed to the principles and methods of hypothesis testing, psychometrics, theory building, and scientific communication.

Cognitive science offers principles that can be used to shape effective apprenticeship programs to teach complex cognitive processes. This program was based on the assumption that exposing to students to the research strategies of experts in psychology would provide a model for problem-solving.

Rational analysis delineated steps that psychologists may go through to develop research proposals: reviewing literature; developing a testable hypothesis; designing an experiment to test the hypothesis; and defending the proposal to peers or to granting agencies. Students were treated as apprentices and were assigned activities to simulate researching a topic, analyzing the research literature, developing a research proposal, and presenting a research proposal to their peers for approval or rejection.
Method

The subjects for the study were 15 summer session undergraduates registered in a psychology course designed for nonpsychology majors at a small college in the southeastern United States. This course is a core requirement in a liberal arts program.

A workbook was designed by the authors to provide practice and instruction for each step in the process of developing a research proposal (see Figure 1). The assignments began with teaching basic skills such as connecting to the college VAX system, accessing databases, and search techniques. The work then evolved to more analytical skills requiring the students to compare scholarly articles versus popular material, analyze review and research articles, evaluate empirical data, and select a test instrument.

As each new step in the research process was addressed, the class met in the library. The students were introduced to the concept the assignment covered and to the resources required to complete the activity. Each student presented and defended a project to the class. The students discussed the ethics and contribution to science of each proposal.

On the final day of class the students completed a 10 item evaluation form. The students were asked to evaluate each item using a five point Likert scale that ranged from "strongly disagree" to "strongly agree."
Figure 1. Library activities for a research proposal.
Results

Results from Part I of the evaluation form indicate that students answered that they increased their knowledge about library usage and that they became more skillful at library-based research. The average rating of the items on the questionnaire ranged from 3.96 to 4.69 on a five point scale (see Table 1).

The students agreed with eight of the ten items. Scores averaged from 4.15 to 4.69. Two items received relatively lower scores: item 5 (The instructors adequately explained the procedures for the activities.) and item 9 (The library activities taught me how to analyze journal articles.) averaged 3.73 and 3.96 respectively.

In Part II of the evaluation form, the students were asked to approximate the time they spent completing the library assignments. The estimates ranged from 12 hours to 36 hours with an average time of 26 hours. One student answered “a dizzying amount” and another “many hours.”
<table>
<thead>
<tr>
<th>Item</th>
<th>Average on a 5 Point Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My ability to use the Daniel Library has improved through this course.</td>
<td>4.69</td>
</tr>
<tr>
<td>2. The assignments helped in learning how to use the library.</td>
<td>4.62</td>
</tr>
<tr>
<td>3. I feel better able to do research in the library after taking this course.</td>
<td>4.62</td>
</tr>
<tr>
<td>4. It is important for college students to know how to use the library.</td>
<td>4.54</td>
</tr>
<tr>
<td>5. The instructors adequately explained the procedures for the activities.</td>
<td>3.73</td>
</tr>
<tr>
<td>6. The librarians were helpful.</td>
<td>4.54</td>
</tr>
<tr>
<td>7. The library activities gave me an opportunity to understand one of the research steps in social science.</td>
<td>4.38</td>
</tr>
<tr>
<td>8. The library activities introduces me to electronic data bases (for example, PsycLIT).</td>
<td>4.54</td>
</tr>
<tr>
<td>9. The library activities taught me how to analyze journal articles.</td>
<td>3.96</td>
</tr>
<tr>
<td>10. The library activities helped me understand the difference between science and popular writing.</td>
<td>4.15</td>
</tr>
</tbody>
</table>

Overall average 4.38 / 5.00
Discussion

The preliminary results of this pilot study are encouraging. The students were asked to perform at a high level and the final proposals were of a high quality. The results of the evaluation questionnaire indicated that students found that they were required to spend many hours in the library.

The project required the psychology instructor to provide daily feedback so that students could complete each step. The time element suggests that this project is only feasible with small classes. The authors are now involved in determining which of the activities can be effectively and efficiently used with larger groups of students.

The students were encouraged to be aware of the cognitive processes involved in the various facets of the project, so that the skills and concepts acquired during the course would transfer to other activities. Follow-up plans include telephone interviews with the students to discuss their use of problem-solving strategies in subsequent courses.
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<td>Following a Topic in the News</td>
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<td>Using PsycLIT to Locate a Review Article</td>
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<td>Selecting a Psychological Test</td>
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**PsycLIT "Quick Search" Reference Sheet**

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<th>Section</th>
<th>Topic</th>
<th>Page</th>
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</thead>
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<td>SECTION II</td>
<td>Journal</td>
<td>28</td>
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<td></td>
<td>Evaluation of Topic in the News</td>
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<tr>
<td>SECTION III</td>
<td>Who's Who in Psychology</td>
<td>32</td>
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Syllabus
Psychology 209-041--Psychology of Individual Behavior
Summer I 1993

Instructor: Linda Ross, Ph. D.
102 Capers Hall
953-5320

Library Resource: Elizabeth W. Carter, M.L.S.
Daniel Library
953-6844

Office hours: By appointment


Purpose: The primary purpose of this course is for students to become better consumers and communicators of social science. Students are required to be active learners, with the focus on the process of science rather than on the content of psychological knowledge. Through a process of library-based research activities in the field of human behavior, students will be systematically exposed to the principles and methods of hypothesis testing, psychometrics, theory building, and scientific communication.

Class schedule: The professor reserves the right to change the following schedule with a classroom announcement:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Course introduction</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Scholarly library research</td>
<td>[MEET AT LIBRARY]</td>
</tr>
<tr>
<td>3, 4</td>
<td>Developing expertise</td>
<td>Prologue &amp; Chapter 5</td>
</tr>
<tr>
<td>7, 8, 9</td>
<td>The science of psychology</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>10, 11, 14</td>
<td>Theories of personality</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>15</td>
<td>Communicating in psychology</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>16, 17, 18, 21</td>
<td>Psychopathology</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Journal presentations</td>
<td></td>
</tr>
<tr>
<td>23, 24, 25</td>
<td>Group behavior</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>28, 29, 30</td>
<td>Proposal presentations</td>
<td>[Attendance required: Evaluation period]</td>
</tr>
<tr>
<td>July</td>
<td>FINAL EXAM</td>
<td></td>
</tr>
</tbody>
</table>

Attendance: Regular attendance is expected and make-up evaluations will not be offered, except as required by college policy. It is the student's responsibility to register her/his attendance each day by signing the roll. Under no circumstances will a student be counted as present if she/he fails to sign in. Special assignments and changes in schedule may occur. Students who miss class for any reason are personally responsible for immediately obtaining all information missed.

Course requirements and grading policy: Students will demonstrate their knowledge through classroom participation, workbook and journal activities, quizzes, a final exam, scientific writing, and a scholarly oral presentation. Assignments must be submitted by due date or student will receive a zero; all work must be submitted by noon June 29, 1993 or student will receive a failing grade for the course.
Performance will be weighted as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom participation</td>
<td>5</td>
</tr>
<tr>
<td>Chapter quizzes        as noted</td>
<td>20</td>
</tr>
<tr>
<td>Assignments            as noted</td>
<td>45</td>
</tr>
<tr>
<td>Final exam             7/1/93</td>
<td>30</td>
</tr>
</tbody>
</table>

Class participation: Each student will begin with a participation score of 3, which is then adjusted in accordance with the student's in-class activity. Sharing ideas and challenging one another in the classroom is vital to the success of the class. Students are expected to make themselves known. Students must speak clearly and address the class (this is not a conversation between the professor and one student). Students must give their full attention to the speaker; rudeness will not be tolerated.

Final exam: The final exam will be objective-type and will cover assigned readings and lectures. The final exam will be comprehensive.

Reading schedule: Students will read assigned chapters by no later than the date indicated and work through the assignments on the provided Reading Guide. There will be a quiz on each chapter on the date indicated on the reading guide.


Prologue & Chapter 5: June 3
Key terms: sensory memory, short-term memory, long-term memory, transfer
Key concepts: learning principles, note taking and underlining, levels of processing, negative and positive transfer

Chapter 1: June 7
Key terms: determinism, variable, independent variable, dependent variable, controlled variable, random sampling
Key concepts: experimental research, correlational research, polls & surveys, naturalistic observation, nontraditional approaches

Chapter 2: June 10
Key terms: personality, psychodynamics, defense mechanisms, reinforcer, punisher, self-concept, client-centered therapy, self-actualization, reliability, validity, standardization, MMPI, Rorschach
Key concepts: psychoanalytical approach, Skinner's behaviorism, humanistic approach, projective tests, standard scores (study Figure 2-2, page 69)

Chapter 8: June 16
Key terms: DSM-III-R, personality disorder, somatoform disorder, dissociative disorder, schizophrenic disorder, mood disorder
Key concepts: psychoanalytic vs. client-centered vs. behavior modification vs. rational emotive vs. drug vs. electroconvulsive therapies (what are the assumptions of each model? develop one testable hypothesis for each model)

Chapter 11: June 23
Key terms: stereotype, inoculation, prejudice, discrimination, social facilitation, social loafing, group polarization
Key concepts: cognitive dissonance theory, Robbers Cave experiment, groupthink, Asch's research, Milgram's research
### Assignments Due:

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 7</td>
<td>Analysis of review article</td>
<td>3</td>
</tr>
<tr>
<td>June 9</td>
<td>Analysis of test instrument</td>
<td>3</td>
</tr>
<tr>
<td>June 10</td>
<td>Comparison of library collections</td>
<td>2</td>
</tr>
<tr>
<td>June 15</td>
<td>Analysis of research articles</td>
<td>5</td>
</tr>
<tr>
<td>June 16</td>
<td>Pop versus science</td>
<td>2</td>
</tr>
<tr>
<td>June 17</td>
<td>Compare and contrast charts</td>
<td>5</td>
</tr>
<tr>
<td>June 18</td>
<td>Hypothesis</td>
<td>4</td>
</tr>
<tr>
<td>June 21</td>
<td>Proposal</td>
<td>5</td>
</tr>
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<td>June 22</td>
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<td>June 25</td>
<td>Film questions</td>
<td>3</td>
</tr>
<tr>
<td>June 28</td>
<td>Journals</td>
<td>5</td>
</tr>
<tr>
<td>June 28-30</td>
<td>Proposal defense: Oral presentation</td>
<td>5</td>
</tr>
</tbody>
</table>

### Library dates:

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2</td>
<td>Intro to Indices</td>
<td>Meet at library</td>
</tr>
<tr>
<td>June 3</td>
<td>Locating information</td>
<td>Meet at class</td>
</tr>
<tr>
<td>June 8</td>
<td>Selecting psychology tests</td>
<td>Meet at class</td>
</tr>
<tr>
<td>June 9</td>
<td>Selecting research articles</td>
<td>Meet at class</td>
</tr>
<tr>
<td>June 18</td>
<td>Locating funding</td>
<td>Meet at class</td>
</tr>
</tbody>
</table>
Logging Into the VAX the First Time
Information Resource Management
The Citadel
Charleston, SC 29409

Revised May 27, 1995

This is a quick overview of logging into the VAX. A more thorough explanation is given in the VAX/VMS User's Guide. To log on, you need two things - a username and a password. Your username will never change (unless your last name changes). Your password will automatically expire every three months. When you try to log in after it expires, you'll be prompted throughout all of the steps to change your password. You cannot reuse a password you've used during the last year. Unless told otherwise, your username is your last name + your first initial (with no spaces in between). Your initial password is your social security number.

After turning on your VT, IBM, or Mac (and starting your terminal emulator if you're using a personal computer), press Enter or Return until you see the Local> prompt. Before you begin, have a new password in mind (see the New password section to learn about restrictions on passwords).

At Local> prompt, enter C CIT

You'll be logged in to either CIT1 or CIT2. If the software you're using is only licensed for one VAX, you'll need to specify which VAX to connect to (for example, C CIT2).

At Username: prompt, enter your username

At Password: prompt, enter your social security number

You'll get a message telling you your password has expired.

At New password: prompt, enter new password

Passwords must be eight characters or longer. Passwords are checked against a common dictionary. You'll get an error message if you enter a word found in the dictionary. You can, however, combine two words (for example, BLUEWHITE). You cannot use a password that includes your username.

At Verification: prompt, enter new password again.

You should now see the $ prompt. If not, read any messages displayed on the screen, note the prompt, and start from that position in the instructions.

Setting up a modem from home

To connect to Citnet from off-campus, you will need a personal computer connected to a Hayes-compatible modem. Here are the specific settings you need to adhere to:
Baud Rate: 1200-14,400 bps
Data Bits: 8
Stop Bits: 1
Parity: none
VT emulation: VT200 or above
Telephone numbers to access Citnet: 953-1114 or 953-1115

Note: User Support Services (USS) supports and may answer any questions regarding the following communications packages: Reflection for IBM-compatibles; Kermit for IBM-compatibles; and Mac220, Mac320 or Mac340.

There are hundreds of other software programs that will allow you to use a modem from your computer. Unfortunately, many of these will not allow you to successfully log on to a VAX system. If you experience problems dialing in, consult your program’s documentation to ensure that it has at least VT200 or above terminal emulation. If you discover that your program does not meet this requirement, USS has several other options available:

If you are an IBM-compatible user, simply bring a blank, formatted diskette to Bond 253 to receive a free VT emulation program called Kermit.

Macintosh users who are either faculty, staff, or students at The Citadel may also bring a blank, formatted diskette to Bond 253 to receive a free VT emulation program called Mac320.

If you need any additional assistance, contact a USS staff member at 953-6996.
SECTION I The Library as a Research Tool

Daniel Library: A fortress of learning, or the mouse that roars.

Listed below are some of the many resources and services offered Daniel Library users. For more information, do not hesitate to ask one of the reference librarians.

Books. Nearly 200,000 books are held in this library and the Civil Engineering departmental collections. Through interlibrary loan (ILL) or the courier service provided by Charleston Academic Library Consortium (CALC), we can obtain just about any copy of a book or periodical article. Ask the reference librarian for more information to obtain this service.

To locate books, consult the online catalog. The catalog can be searched by author, title, subject, call number, or keyword/Boolean logic. Instructions for searching the catalog are available near each terminal. The Reference Librarians will be glad to provide assistance.

After identifying books which satisfy research needs, they may be located by the call number which appears on the display screen for each title. Make a note of the call number, author, title, publisher and date, or make a printout of the screen display. "REF." books are located on either side of the first floor entrance. Circulating books with Library of Congress call letters A - HB are located on the first floor and books with call numbers HC - Z are on second floor. Oversized books are denoted by an "X" above the call number and are on the oversized shelves, second floor.

Reference Resources. Consists of thousands of general and specialized encyclopedias, dictionaries, almanacs, atlases, bibliographical and biographical tools, as well as indexes and abstracts for periodicals and other literature. They are located on both sides of the first floor entrance and begin with "REF." located above the Library of Congress call number. They may only be used within the library.

Periodicals. Daniel Library subscribes to nearly 1,400 periodicals in paper, microfiche, or microfilm format. There are approximately 10,000 bound periodicals, as well as more than 400,000 microfiche or microfilm rolls. Consult the alphabetical (by title) periodicals lists located in the Reference area, or the electronic version on The Citadel gopher, to determine which periodicals are held by The Citadel or other libraries in the Charleston area.

Current issues of popular magazines and core titles from each academic discipline are located in the first floor reading lounge opposite the circulation desk. Bound periodicals and other current issues are located in the periodical stacks on the first floor.

Periodicals on microfilm or fiche, as well as mechanized readers and reader/printers for reading or copying, are located on the Chapel side of the building (first floor). Copies are ten cents each. Recent periodical subscriptions will be found in fiche format. When using microfiche, please leave a plastic "in use" file dividers for easier filing by our staff. After using the fiche, leave it in the file box on top of the cabinets so that staff may refile more quickly. Duplicate fiche may be purchased for $0.25 as long as it is not copyright protected.

Periodical Indexes. Indexes locate periodical literature available in libraries. The Daniel Library currently subscribes to eighteen periodical indexes in electronic format, has access to nearly all existing outside databases, and subscribes to numerous printed indexes. Electronic indexes are accessed in the library through the VT and computer terminals in the reference area. These indexes can also be accessed remotely from any computer or modem. Current paper indexes are located on the index tables.
beside the online catalog. Older volumes are located in the alcove area facing the chapel. Periodicals not held by the Daniel Library can usually be obtained through interlibrary loan.

Computer or online searches of indexes and abstracts are available for faculty, graduate students, and undergraduate students who are conducting serious research. Consult the Reference Librarian to see if an online search would be appropriate for your topic.

Coastnet. The libraries of the Charleston Academic Library Consortium (CALC) have formed a metropolitan area network called Coastnet which links the online catalogs of the member libraries and provides shared access to a number of electronic periodical indexes. Users of any Coastnet library can easily access the holdings of all the others from their own library or from a computer and modem. The Consortium members are The Citadel, Charleston Southern University, The College of Charleston, The Medical University of South Carolina, Trident Technical College, and the Charleston County Library.

Internet. Citadel students, faculty and staff have access to the Internet, a worldwide computer network connecting educational and research institutions and organizations. In one important component of the Internet, libraries all over the world have opened up their online catalogs to anyone with Internet access, thus making the resources of the world’s greatest libraries available to the researcher.

Interlibrary Loan. The amount of information available to the researcher and the student is so vast that no one library can contain it all. Therefore, the Daniel Library provides an extensive Interlibrary Loan/Document Delivery Service to bring in needed journal articles and books. Material available from within the Charleston Academic Library Consortium can be obtained in two to four working days. For material obtained outside the Charleston area, plan for a ten to fourteen day turnaround time.

ERIC (Educational Resources Information Center). A major microfiche collection of primarily unpublished research and scholarly articles, reports, speeches, and books that covers a wide range of topics. The material is indexed and abstracted through the ERIC database and is readily available on fiche in Daniel Library. There are other fiche collections of news (Newsbank), career information, major city telephone directories (Phonefiche), college catalogs, government documents, poetry (Grangers Core Fiche), as well as the Essay and General Literature Core Fiche.

Government Documents. The Citadel is a partial US Government Document depository with a collection of approximately 100,000 federal documents. Documents received since 1990 are listed on the online catalog. Additionally, the GPO Monthly Catalog is available electronically to library users. Documents received on paper are shelved following the HB call letter book stacks, and documents received on fiche are filed in fiche cabinets in the micromedia area.

The US Government is the world's largest publisher, and students should not overlook this valuable source of material, particularly for information relating to countries, defense, transportation, education, government, housing, environment, health, and any other matter which a department, bureau, agency, or committee of the government handles. Many government documents are listed in the online catalog, but many are not, so it is best to obtain help from the reference librarian in locating these materials.

Circulation. The Circulation Desk, located in front of the main entrance is where circulating and faculty reserve books are charged, completed computer searches are picked up, and fines and photocopying charges are paid. The borrowing period on circulating books is two weeks. Fines on overdue books are assessed at ten cents a day. To charge materials students present library bar-coded I.D.s.
Introduction to Periodical Indexes

Every discipline has hundreds of journals where scholars and researchers exchange ideas and communicate with each other, and where the results of research and information on current issues in the field are published. Each discipline also has one or more periodical indexes to identify information on a particular topic within those journals. There are a number of periodical indexes available to retrieve information in the discipline of Psychology. These indexes have different functions: some index scholarly and professional articles; and some index articles reporting on current issues and recent developments in the field.

Many of the electronic periodical databases available in the library provide abstracts, or summaries, of the articles indexed. These abstracts give detailed information on the contents of each article and are invaluable for selecting the best articles on your topic. Remember, though, they are not the actual article and must not be used in place of the article. There may be some instances where, with the professor's permission, it is acceptable to use abstracts. However, they must be cited as such. The Publication Manual of the APA (BF 76.7 P83 1983, available in the Stacks or the PermanentReserves) provides instructions on how to properly cite an abstract.

The indexes listed below are appropriate for research in Psychology:

**PsycLIT.** Electronic version of Psychological Abstracts, a comprehensive index to scholarly and professional journals in the field of psychology. Provides summaries of indexed articles.

**MedLine.** Database of the National Library of Medicine, containing citations and abstracts from biomedical literature.

**ERIC.** Indexes and abstracts scholarly and professional journals in education and related disciplines, including psychology.

**Social Sciences Index.** Author/subject index to journals in the social sciences including political science, economics, psychology, and sociology. Indexed journals include both research and current issues. Abstracts of articles are not provided.

**General Science Index.** Index to journals in the natural sciences, useful for physiological aspects of a topic in psychology. Indexed journals include articles on both research and current issues. Abstracts of articles are not provided.

**Reader's Guide to Periodical Literature.** Indexes the well-known and popular periodicals. Useful for locating "layperson" type information.

Exercise: Comparing Articles

1. Select and list a topic from Variable List A.

   *Variable List*
   - Depression
   - Psychoticism
   - Neuroticism
   - Extraversion
   - Social alienation
   - Family adaptability and cohesion
   - Gender role
   - Dysfunctional attitudes

   **Topic:** Stress
   - Locus of control
   - Test anxiety
   - Optimistic life orientation
   - Social desirability: dissimulation
2. Locate one article on that topic from each of three of the following indexes:

PsycLIT
MedLine
Social Sciences Index
General Science Index
Readers Guide to Periodical Literature.

3. Fill in the following details regarding each article:

a. Index used:
   Date or volume of index used:
   Subject heading used to find article:
   Title of article:
   Author:
   Title of periodical:
   Date: Volume: Pages:

   Analyze the treatment and coverage of the topic:
   i. What is the language level of the article? Is it written for the professional or the layperson?

   ii. Is the treatment of the topic superficial or in-depth?

   iii. Is the method of the research provided?

   iv. Are references provided?

   v. Are results provided?

   vi. Is there a discussion of the ramifications and limitations of the results?

b. Index used:
   Date or volume of index used:
   Subject heading used to find article:
   Title of article:
   Author:
   Title of periodical:
   Date: Volume: Pages:

   Analyze the treatment and coverage of the topic:
   i. What is the language level of the article? Is it written for the professional or the layperson?

   ii. Is the treatment of the topic superficial or in-depth?
iii. Is the method of the research provided?

iv. Are references provided?

v. Are results provided?

vi. Is there a discussion of the ramifications and limitations of the results?

c. Index used:
Date or volume of index used:
Subject heading used to find article:
Title of article:
Author:
Title of periodical:
Date: Volume: Pages:

Analyze the treatment and coverage of the topic:
   i. What is the language level of the article? Is it written for the professional or the layperson?

ii. Is the treatment of the topic superficial or in-depth?

iii. Is the method of the research provided?

iv. Are references provided?

v. Are results provided?

vi. Is there a discussion of the ramifications and limitations of the results?
Selecting a Topic for a Research Project

Select a category of interest from the Variable List A. Think about this variable. What might cause a person to be in a certain category? What might be related to a high score within in a category? Or a low score?

Variable list A
- Depression
- Dysfunctional attitudes
- Stress
- Locus of control
- Test anxiety
- Optimistic life orientation
- Gender role
- Psychoticism
- Neuroticism
- Extraversion
- Social alienation
- Family adaptability and cohesion
- Social desirability: dissimulation
- Other

Following a Topic in the News

The theories promoted and issues discussed in the psychological literature do not exist in a vacuum. This information affects our daily lives. In fact many articles in daily newspapers reflect the very same problems and issues scholars and researchers are grappling with. You need look no further than the current debate on women in combat positions in the military to find evidence of issues on gender roles, or the proliferation of articles on the stress of modern life for validation of the enormous amount of research being done in that area.

One way to find popular treatment of psychological issues is to consult USA Today DecisionLine, the Library’s online version of the newspaper USA Today. The daily digests of news is arranged by broad category to provide quick access to a wide variety of information.

Using the variable you have already chosen, check USA Today DecisionLine daily to find any articles reporting some aspect of that topic. In searching, think of popular applications of these concepts. You may need to search using common terms to describe these concepts.

To access USA Today DecisionLine, at the HOME GOPHER SERVER, select ELECTRONIC PUBLICATIONS (when dialing in, first type GOPH at the $ prompt in your VAX account), then select USA Today. Follow the on screen instructions for moving through the database. Use the print screen key to print articles.

Exercise: Following a Topic in the News

1. Select a topic from Variable List A.
2. Access USA Today on the VAX.
3. Write a daily summary in the journal section of this workbook (beginning on page 25).
Using PsycLIT to Locate a Review Article

Locate a review article with PsycLIT. Follow the research strategy to select an article that reviews the research on the variable you selected.

Search Strategy Worksheet
Research Topic:

Database:

Search Terms: (Select a topic from Variable List A. See page 6)

Variable A

or

or

1. Use the "PsycLIT Quick Search" user guide at the end of Section I for detailed instruction on using the PsycLIT database.

2. After logging on to PsycLIT, press ESCAPE or F10 to display the menu. Press T (for thesaurus).

3. At the thesaurus, type the selected Variable A and press return. The thesaurus will be displayed, and the cursor will indicate the variable or its closest variation. Press T (for term details) and a definition of the variable along with a list of broader, narrower, and related terms will be displayed. Remember, these variables are concepts. There may be additional ways to describe them: read through the lists and move the cursor to any term you wish to include in your search. Press S (for select term). List the terms you selected:

4. Press F (for find) to return to the FIND screen. The database will process your selections and display the number of articles indexed under each term.

5. Eliminate non-English records using the following method:
   Type the line number of the search result followed by and english in la (e.g. #6 and english in la).
   
   List number of records before limiting to English: ________
   List number of records after limiting to English: ________

6. Display the results of the search by pressing ESCAPE or F10, then pressing S (for show).

7. Scroll through the records of the abstracts, looking for the information necessary to analyze a research article (hypothesis, subjects, test used, results, discussion).

8. Press M (for mark record) at each record you wish to print.

9. After reviewing and marking the records, press P (for print), and then RETURN. The search strategy (from the FIND screen) and all marked records will be printed.
Exercise: Analyzing an Article That Reviews a Research Topic

1. Select a review article on your topic from the library’s reserve section.
2. Analyze the article by filling in the following details:

   Reference (use APA format)

   Location of article (which library has this article?):
   Abstract: (attach abstract)
   Topic:
   Examine the reference list to determine the historical range of articles:
   Number of articles cited: ________
   Oldest article: __________
   Most recent article: __________
   Format of the article (how is the material categorized or organized?):

   Key points:

   Theories discussed:

   Test instruments cited:

   Evaluation (how is the research evaluated?):

   Discussion
   Conclusions:

   Limitations:

   Future research:

   Seminal article cited:
Locating Tests

In reading and evaluating scholarly articles in Psychology, you will notice that the findings are based on empirical data, that is, on the results of some sort of measurement or experimentation. Reference sources are available that list and describe many tests used by psychologists to gather and analyze data. Three important sources of testing instruments are Mental Measurements Yearbook, Tests in Print, and Tests in Microfiche:

Mental Measurements Yearbook (REF.Z5815.P8 B932). MMY, the major source for test instruments, is now in its 11th edition. MMY provides in depth discussions of each test, covering validity, reliability, and other pertinent points. Citations of review articles are also provided. Because this source describes the major testing instruments that are the intellectual property of a person, institution, or organization, and thus are under copyright restriction, the actual tests are not provided.

Tests in Print (REF. Z5614.E9 B8). This is a companion (similar in scope and coverage) set to Mental Measurements Yearbook. Volumes I, II, and III are available.

Note: Mental Measurements Yearbook and Tests in Print cross-reference each other.

Tests In Microfiche (located in the Microfiche cabinets). Published by Educational Testing Service, this source indexes tests that are in the public domain. Therefore, actual copies of the tests are provided. However, as these are lesser known tests, review articles are not provided, and little or no data analyzing validity, reliability, and so forth are available.

Author Information

One possible component of review articles is a discussion of the test instrument used to collect the data. There are factors, such as educational background, training, or area of research, that influence researchers and may provide insight into the test itself.

The test sources described above will also list the author(s) of the specific test cited in your review article. Consult biographical sources and psychology reference books to do some background reading on the test's author and the field in which he/she works:

Biography and Genealogy Master Index (index tables). Indexes reference books containing biographical sketches of noteworthy people in all fields. Referenced articles range in size from brief "Who's Who" entries to lengthy essays.


Encyclopedia of Psychology (REF. BF31.E522)

Both encyclopedia sets provide basic information and broad overviews on people, issues, theories and concepts in Psychology.

The REF. BF section contains other dictionaries, handbooks and single volume encyclopedias of Psychology.
Exercise: Selecting a Test Instrument

1. Use the review article that you have selected to complete this exercise.

   Source:
   Title or name of test instrument:
   Date of publication:
   Author of the instrument:
   Biographical information:
      Date and place of birth:
   Education:
   Theory of psychology:

   Evaluating the test instrument:
      Variable measured:
      Variable definition:
      Operationalization:
      Reliability:
      Validity:
      Target group:
      Suggested use (diagnostic or research)

Exercise: Comparing Tests

1. Select a test from Tests on Microfiche

   List title and author:

2. Select a test from Mental Measurements Yearbook or Tests in Print

   List title and author:

   Under which conditions would you use each test?

   What criteria are you using to make your decisions?
Selecting a Second Variable

Select a variable from Variable list B that you think might be logically related to your first variable. Think about the variables. How are they related? Are you considering cause and effect? How could they be correlated? What would be the differences be between two groups in relation to variable A? What would be related to a high score? Or a low score?

Variable list B
Age
Gender
GPA
Hours spent studying
Birth order
Child of divorce
Parenting style: Father
Parenting style: Mother
Self-knowledge
Church attendance
Self-rated attractiveness
Childhood trauma
Alcohol consumption
View of psychology
Other__________________________

Using PsycLIT to Locate Research Articles

Use PsycLIT to locate three research articles that deal with the relationship between your two variables. Select articles from 1988 to the present.

Variable A __________________________
Variable B __________________________

Search Strategy Worksheet
Research Topic:
Database:
Search Terms:
Variable A
__________________________

Variable B
__________________________
or
__________________________
or
__________________________ AND

1. Use the "PsycLIT Quick Search" user guide at the end of this section on locating review articles for detailed instruction on using the PsycLIT database.
2. After logging on to PsycLIT, press ESCAPE or F10 to call up the menu. Press T (for thesaurus).

3. At the thesaurus, type in Variable A and press return. The thesaurus will be displayed, and the cursor will indicate the variable or its closest variation. Press T (for term details) and a definition of the variable along with a list of broader, narrower, and related terms will display. Remember, these variables are concepts and there may be additional ways to describe them. Read through the lists and move the cursor to any term you wish to include in your search. Press S (for select term). List the terms you selected:

4. Press F (for find) to return to the FIND screen. The database will process your selections and display the number of articles indexed under each term.

5. Repeat steps 2, 3, and 4 using Variable B. List terms chosen for Variable B:

6. At the FIND screen, combine variable A and B using the line numbers and the connector AND (e.g. #3 and #5).

7. Eliminate non-English records using the following method:
   Type the line number of the search result followed by and english in la (e.g. #6 and english in la).
   List number of records before limiting to English:    
   List number of records after limiting to English:  

8. Display the results of the search by pressing ESCAPE or F10 then pressing S (for show).

9. Scroll through the abstracts, looking for the information necessary to analyze a research article (hypothesis, subjects, test used, results, discussion).

10. Press M (for mark record) at each record you wish to print.

11. After marking records, press P (for print) and RETURN. The search strategy (from the FIND screen) and all marked records will be printed.
Comparing Library Collections

Considering the enormous amount of information available to the researcher, no one library can have everything. A library's collection is determined by the degrees offered by the institution, the focus and philosophy of the academic departments, and the financial resources. However, the student is not limited to the resources of his or her library. Just as periodical indexes allow the researcher to identify all published journal information on a topic, electronic library networks locate libraries owning needed journals and books. Coastnet and the Internet, the electronic networks available at The Citadel, allow researchers to search library holdings all over Charleston, SC, and around the world.

Coastnet is a metropolitan area network linking together the five academic libraries and the public library system in the Charleston area. The Internet is an international network of educational and research organizations. One function of the Internet enables researchers to search the online catalogs of libraries all over the world.

The search capabilities of these and other networks enable libraries to provide access to all the information the user needs, whether the library owns it or not.

Exercise: Comparing Collections

Compare the library collections at various institutions and note the value of being able to "browse" through these collections. Using Coastnet and the Internet, search for books on the same topic in a variety of libraries. Begin by searching The Citadel's holdings on your topic. Then compare those findings with those of the Medical University of South Carolina, a much larger institution offering doctoral degrees. Compare that data with the holdings of the University of South Carolina, the largest library in the state. Observe how USC compares with Harvard University, one of the country's premier research institutions. Finally, go outside the United States and see how our "finest" compares internationally by searching the holdings of the University of London.

Below are instructions for accessing library online catalogs via the Internet. As you connect to these libraries, it is wise to print the initial help screen to help navigate through databases.

Medical University of South Carolina
1. From HOME GOPHER SERVER select LIBRARIES
2. Select SOUTH CAROLINA LIBRARIES (#3)
3. Select FOUR-YEAR COLLEGES AND UNIVERSITY LIBRARIES (#3)
4. Select MEDICAL UNIVERSITY OF SC (#8)
5. Follow on-screen instructions for logging on/off and searching

University of South Carolina
1. Repeat steps 1-3 above.
2. Select UNIVERSITY OF SOUTH CAROLINA (#11)
3. Follow on-screen instructions for logging on/off and searching

Harvard University
1. From HOME GOPHER SERVER select LIBRARIES
2. Select OTHER LIBRARIES IN THE UNITED STATES
3. Select MASSACHUSETTS(#20)
4. Select HARVARD UNIVERSITY (#16)
5. Follow on-screen instructions for logging on/off and searching
University of London:
1. From LIBRARIES select OTHER LIBRARIES IN THE WORLD
2. Select EUROPE AND MIDDLE EAST (#5)
3. Select UNITED KINGDOM (#20)
4. Select London
5. Select London University
6. Follow on-screen instructions for logging on/off and searching

Use the chart below to record your findings.

<table>
<thead>
<tr>
<th>Library</th>
<th>Number of Titles</th>
<th>Age of titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Citadel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvard University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of London</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analyzing a Research Article

Analyze your three research articles for the following elements:

1. Reference (use APA format):

   Location of this article:

   Abstract (attach abstract):

   Theoretical assumptions:

   Hypothesis:

   Subjects:

   Independent variable:

       How operationalized:

   Dependent variable:

       How operationalized:

   Test statistic used:

   Results:

       Significant    Not significant

   Hypothesis:

       Supported    Rejected

   Discussion:

   Conclusions:

   Limitations:

   Future research:

   Notes:
3. Reference (use APA format):

Location of this article:

Abstract (attach abstract):

Theoretical assumptions:

Hypothesis:

Subjects:

Independent variable:
  How operationalized:

Dependent variable:
  How operationalized:

Test statistic used:

Results:
  Significant   Not significant

Hypothesis:
  Supported     Rejected

Discussion:

Conclusions:

Limitations:

Future research:

Notes:
### Science Versus Pop Psychology

Select an article from the popular literature and compare it to one of your research articles.

1. Reference for research article:

2. Reference for popular article:

<table>
<thead>
<tr>
<th>Research Article</th>
<th>Popular Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
Writing a Review of the Literature

1. Analyze the three research articles and synthesize the conclusions. Use the following tables to: (a) Identify the conclusions; (b) Categorize the conclusions; and c) Compare the conclusions.

(a). **List of Conclusions**

<table>
<thead>
<tr>
<th>Author</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

(b). **Categorizing Conclusions**

<table>
<thead>
<tr>
<th>Category</th>
<th>Conclusion</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
(c). **Comparing Research Findings** (Use the conclusions chart to complete the following chart.)

<table>
<thead>
<tr>
<th>Categories/ Conclusions</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
2. Explain the differences among the conclusions in regard to the following factors:
   (a.) Theoretical assumptions;
   (b.) Subjects;
   (c.) Instruments;
   (d.) Experimental controls;
   (e.) Appropriateness of test statistic.

3. Use each category of conclusions to structure your review of the literature. Submit this separately; typed and double spaced.

4. Generate a hypothesis based on the research

   If _____________________________________________,
   Something about the independent variable

   then _____________________________________________,
   Something about the dependent variable

   For example:
   If locus of control is internal,
   then men tend to assign more responsibility to victims of crime.

5. Include your hypothesis at the end of the review of the literature and submit at the same time.
Locating Funding Sources

Foundation Grant Sources

Grant sources provide information on organizations that provide funding for research. They identify the type of projects funded, application requirements, and the amount of funding available. The following are some grant sources available at the Daniel Library:

Directory of Research Grants (REF. LB2338)

The Foundation Directory (REF. AS911.A2 F65)

Foundation Grants to Individuals (REF. AS911.A2)

Scholarships, Fellowships and Loans (REF. LB2338.F4)

South Carolina Foundation Directory (REF. AS911.A2 S65 1993)

Which agency would you approach for funding?

What type of projects do they fund?

List budget requirements:

What is the amount of funding available?
Designing a Research Project

Consider the hypothesis generated from your review of the literature.

1. Which agency would you apply to for funding?

2. Use the following format to write a proposal:

   Introduction
   Theory driven (review of the literature):
   Hypothesis:

   Method
   Subjects:
   Apparatus:
   Procedure:

   Results
   Test statistic (select an appropriate statistical test):
   Anticipated results:

   Discussion
   Application of the results:
   Limitations:
   Future research:

3. Submit two typed, double spaced copies of your research proposal.
Defense of Research Proposal

1. Prepare an oral defense of your research proposal. Include the following elements:

   Personal background

   How did you become interested in this topic?
   Include the following elements:
   - Introduction
   - Review of the literature
   - Theoretical assumptions
   - Hypothesis
   - Method
   - Results
   - Discussion
   - Application of the results
   - Limitations
   - Future research

2. What types of visual aids will you use?

3. What questions might you be asked?
DANIEL LIBRARY, THE CITADEL
PsycLIT Quick Search

NOTE: For more detailed instructions, see PsycLIT Step by Step

IMPORTANT KEYS F1 = HELP F10 or ESCAPE = COMMANDS MENU

GETTING STARTED
* At Index & Abstract Menu: Highlight PsycLIT and press <ENTER>
* At Terminal Menu: Select appropriate terminal emulation and press <ENTER>
or
Type Q and press <ENTER> to Quit
* At Database Selection Screen: Highlight desired file and press Spacebar
Press <ENTER>
* At PsycLIT Database Menu: Press F10 or ESCAPE for Commands Menu

SEARCHING
* At Commands Menu: Type T for Thesaurus, or I for Index, or F for Find
* From Thesaurus: Type in a term and press <ENTER>
Highlight choice from list and type T for Term Details
Highlight desired term(s) and type S to Select
Type F to Find
* From Index: Use for terms not in Thesaurus, and for proper names.
Type term and press <ENTER> for list of Indexed terms
Highlight desired term(s) and type S to Select
Type F to Find
* From Find: Type term and press <ENTER>
* To Combine Terms: When using Find, connect term line numbers with and or or
(e.g. #1 and #2 or #1 or #2 or #3)
* To Xchange Files: Press F10 or ESCAPE for Commands Menu
Type X for Xchange
Press Spacebar to highlight desired PsycLIT file
Press <ENTER>

DISPLAYING, PRINTING
* To View Citations: Press F10 or ESCAPE for Commands Menu
Type S for Show to display citations
Use arrow keys, Page Up, Page Down, to browse
* To Print: To mark a citation for printing, press <ENTER>
Type P and press <ENTER> to print all marked items

ENDING
* To Exit: Press F10 or ESCAPE for Commands Menu
Type Q

Local journal holdings can be found in the Charleston Area Union List of Serials, near the computer terminals.
For any articles not available at The Citadel, please fill out an interlibrary loan photocopy form.
SECTION II  Journal

Check USA Today DecisionLine from USA Today on a daily basis to find articles reporting some aspect of your topic.

To access USA Today DecisionLine, at the HOME GOPHER SERVER, select ELECTRONIC PUBLICATIONS (when dialing in, first type GOPH at the $ prompt in your VAX account), then select USA Today. Follow the on screen instructions for moving through the database. Use the print screen key to print articles.

Topic:

Popular article:

Review article:

Research articles:
1.

2.

3.

Names associated with this topic:

Important dates associated with this topic:
Exercise: Evaluation of Topic in the News

1. Does the news reflect the science underlying your topic or is it speculative? Support your conclusion with examples from your research and the news.

2. Do the news reports make it clear what the scientific basis is for the conclusions presented? Provide examples to support your conclusion.

3. Did you notice a reductionist bias to the news reports? Present at least two examples of this.

4. Provide an example of sensationalism from the news reports.
SECTION III   Who's Who in Psychology

The following are some of the theorists that you will become familiar with through this course. You will be required to match the theorist with the theoretical construct. Use this part of your workbook to make notes on the theorists and to add to this list.

1. Adler

2. Asch

3. Binet

4. Bloom

5. Engels

6. Erikson

7. Eysenck

8. Freud

9. Galen

10. Galton

11. Gauss

12. Gossett

13. Hebb

14. Hippocrates

15. Jung

16. Maslow