CHAPTER 2

Planning a Stud

PICKING A STUDY TOPIC

CONDUCTING A REVIEW OF PAST STUDIES

Where Do You Find the Research Literature?
How to Conduct a Literature Review: A Six-Step Process

FOCUSING ON A RESEARCH QUESTION

THE RESEARCH PROPOSAL

A Proposal for Quantitative or Qualitative Research

WHAT HAVE YOU LEARNED?

APPLY WHAT YOU'VE LEARNED

Rick Friedman/Corbis

Do you have a tattoo? Have you ever wondered why people get tattoos? Your curiosity about tattoos can be the start of a research study. You might begin by looking at the several books and 25 social research articles on tattooing published in the past five years. This may help you turn the broad topic of tattoos into a research question for a study. You might ask, Why are tattoos popular for people in certain cultures or times? This question directs you to look at the cultural and historical development of tattoos—their use to brand people or in religious rituals. You might learn that the word *tattoo* originated from the Tahitian word *tatau*. Tattoos were used thousands of years ago in what is today Japan, Siberia, India, Peru, and Egypt. Certain peoples, such as the Maori in New Zealand, some Amazon tribes, and certain subcultures, such as Japanese crime gangs or Neo-Nazi skinheads, regularly tattoo. Alternatively, you might ask, How many people in the United States today have tattoos and what types of people get them? To answer these questions you might conduct survey research. One 2003 survey found that 16 percent of the U.S. population has a tattoo. This rises to 28 percent of people under the age of 25. There is no difference in the male–female tattoo rate. Democrats are slightly (18 percent) more likely to get them than Republicans (14 percent) and gay-lesbian-bisexuals (31 percent) more than straights and so forth (Harris Interactive 2003). Maybe you want to ask, How do others think about people who have tattoos? To answer this question, you might conduct an experiment similar to that by Hawkes, Senn, and Thorn (2004). They looked at people's reactions to college females with a tattoo. Participants in the study read about women. The researchers varied details about each woman's characteristics and her tattoo (its size and location). They also measured related factors, such as how people view gender roles. If your question is about tattoos on people in music videos, you could conduct a content analysis study of music

videos to see what tattoos are shown and who has them. Maybe you are curious about the business of tattooing. You could examine existing statistics and records to find the number of tattooing businesses, suppliers, and tattoo artists. If you are curious about subjective beliefs of people who get tattoos, you could conduct a qualitative field research study like that by Atkinson (2004). He spent a lot of time with tattooed people and tattoo artists and got to know them very well. Alternatively, you might focus on field research with a specific subgroup, such as gang members or Neo-Nazis, to see whether they see their tattoos differently. Many young people in North America today who get a tattoo say that it signals a rejection of authority, is a statement about control over their body, indicates group membership, or is a form of spiritual-artistic self-expression. Of course, once top celebrities or most of your friends get a tattoo, you may get one to mimic an idol or to conform to peer pressure. This example of tattoos shows how to turn a topic into the start of a research study. In this chapter, we will look at how to take a topic and design a research study to examine that topic in depth.[1]

In Chapter 1, you learned about principles and types of social research. You are now ready to look at the specifics of study design. Recall the steps of the research process: Begin with a general topic, narrow it into a specific research question, and then decide how to conduct a study that can address the research question. Before gathering data, you might prepare a **research proposal**, which is written a detailed plan for doing a study.

PICKING A STUDY TOPIC

Topics arise from many sources: past studies, television or film, personal reactions or experiences, discussions with friends and family, or ideas from a book, magazine, or newspaper. A topic may be something that arouses your curiosity, something about which you hold deep commitments, or something you believe is wrong and want to change. A topic appropriate for social research is one that you *generalize* about social *patterns* that operate in *aggregates* and are *empirically observable*. Let us look at these four features briefly:

- *Generalize.* The topic is beyond one isolated unique instance; it is likely to reappear and applies to a broad scope of people, places, times, or events.
- *Social pattern.* The topic has regularity or some kind of structure/form that describes interconnections among a set of events, situations, or relationships in a condensed way.
- *Aggregates.* The topic applies to a collection of people or other units (e.g., families, businesses, schools, hospitals, or neighborhoods). The people/units do not have to be connected to one another or even be aware of the others. There could be as few as ten or as many as hundreds of millions.
- *Empirically observable.* The topic appears in the observable world in a way that we can detect and observe it using our senses (sight, sound, touch, smell) directly or indirectly.

These four features rule out some topics. They eliminate particularistic situations (e.g., why your boy/girlfriend dumped you yesterday, why your friend's little sister hates her third grade teacher) and a single case (e.g., your own family). Nonetheless, patterns (boyfriends of this type tend to act in this way, children often dislike third grade teachers for one of four main reasons) help us understand particular situations. Also ruled out are things impossible to observe, even indirectly (e.g., unicorns, alien space creatures, or ghosts with supernatural powers). We cannot study imaginary objects, but we can study people's beliefs about them (e.g., what types of people tend to believe in ghosts and why).

research proposal a detailed plan for conducting a study on a specific research question, that includes a literature review and specific techniques to be used.

CONDUCTING A REVIEW OF PAST STUDIES

An early step when doing study is to read past studies, or to conduct a **literature review**. The "literature" refers to past research reports on a topic. Reading the literature serves several functions.

- It helps you to narrow down a broad topic by showing you how others conducted their studies. You can use other studies as a model of how narrowly focused your research question should be.
- It provides you with examples of research designs, measures, and techniques that you might use.
- It informs you about what is known about a topic. Past studies teach you the key ideas, factors, terms, and issues surrounding a topic. You may wish to replicate, test, or extend what others already found.
- It presents you with examples of what final research reports look like, their parts, form, and writing style.
- It can help you to improve writing skills and learn subtle elements of conducting a good research study.
- It is often fun and may stimulate your creativity and curiosity.

Before you go off to search for the published reports of studies, it is essential to be organized. To prepare a well-written, complete literature review, you have to schedule your time and develop a search plan. The ideal literature review is a carefully crafted summary of the recent studies on a topic. It discusses both study findings and how researchers reached the findings. In the review, you must carefully document all sources.

Doing a literature review is rooted in an assumption that knowledge accumulates. We build on what others have done. Recall that research is the collective effort of many people who share their results with one another. We pursue knowledge as a community. This is why researchers constantly compare, replicate, or criticize other studies. Certain studies may be especially important and a few individual researchers may become famous, but each research project is just one small part of the larger, collective process of expanding what we know. The study you do today builds on those of the past, and studies you or others conduct in the future will build on the studies being conducted today. As Sir Isaac Newton put it, "If I have seen further it is by standing on the shoulders of giants."[2] Every research achievement builds on those who came before.

Where Do You Find the Research Literature?

You can find research reports in several locations. This section briefly discusses each type and provides you with a simple road map for how to access them.

Periodicals. You can learn about social research in newspapers, in popular magazines, on television or radio broadcasts, and in Internet news summaries. They can be the start of a topic or research question, but they are not sufficient for preparing a literature review. They are not the full, complete reports of a study that you need for a literature review. Media reports are selected and highly condensed summaries journalists prepare for a general audience. They lack many essential details required to evaluate a study. Textbooks and encyclopedias contain condensed summaries of studies to introduce readers to a topic. They are also inadequate for a literature review because essential details are absent. To conduct a literature review, you must locate the complete report of a study. The full reports first appear in specialized periodicals.

A periodical (or "serial," in librarian terminology) is any publication (print or electronic) that appears regularly over time (such as daily, weekly, monthly, quarterly, or annually). There are thousands of periodicals and they come in a vast array

literature review a summary of previously conducted studies on the same topic or research question.

Making It Practical A Literature Review Search Plan

Evaluate resources: How much time can you devote to the search? Do you have access to a college or university library? Do you know what computerized literature search tools are available at the library and how to use them? Do you want to locate a minimum number of studies? Can you easily distinguish an empirical research study from other articles? After answering these questions, you may wish to start preparing a time schedule with benchmarks or self-created deadlines for each step. The more practice you have in published studies, the faster it will go. A first-time search by a novice can take three or more times longer than one by an experienced person.

Select and narrow the topic: You search a specific question, not a general topic. The faster you can focus on a specific research question, the quicker you can proceed. Some people devote days or weeks to focusing on a research question; this is not always necessary. The question you begin with is preliminary because you can adjust and refine it as you learn more from reading past studies.

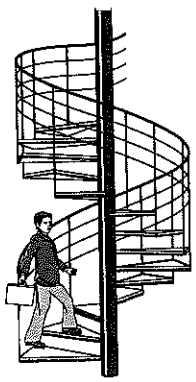
Learn to use literature search tools: Use computerized search tools (discussed later in this chapter) to search the literature. The tools require that you convert your research question's central ideas and terms into keywords. It takes time and practice to become skilled at using specific tools. Librarians can help or may offer workshops that teach about the tools. If you have never used a tool, expect to spend an hour or more to learning to use it.

Plan to locate and scan read articles: The search tools yield a list of articles with your keywords, but they cannot determine the true relevance of the articles for your research question. You must decide their relevance by scanning the articles' titles, abstracts (to be discussed later), or first few paragraphs. Based on a quick scan-read, you decide what is relevant. If the search tool locates 35 articles, it may take two hours to scan-read all of them and decide their relevance. You may end with 10 relevant, useful studies to read in depth.

Allow time to extract the major findings: Reading a scholarly research study is a skill that improves with practice. Most have a sophisticated vocabulary and technical information. It takes time to know what to look for. As you read, ask three questions: What was this study really about? How did researchers conduct the study (i.e., gather data), and What is the study's main finding or outcome? You want to extract the essential elements from a research report and write them as notes. Plan how to take notes and record all key source details (discussed later in this chapter). You might spend one hour reading and taking notes on each relevant article.

Final stage—synthesize: Once you have enough articles (because there are no more, you are learning nothing new with additional ones, or you ran out of time), you must pull together and integrate what they said. You might use a few quotes, but you mostly want to paraphrase (put in your own words). Integrating different studies and synthesizing what they really say in combination is a difficult thinking and writing task. Plan to reread what each study said more than once and return to the full article for clarification and verification.

■ Figure 2.1 Advancing Knowledge



of types. It is easy to be confused about the types of periodicals. With skill, you can learn to distinguish among the following five types:

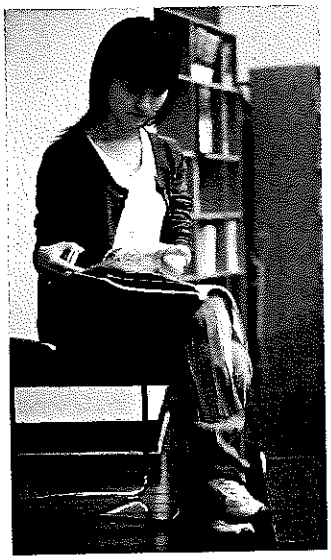
- Peer-reviewed scholarly journals in which researchers present reports of studies
- Popularized social science magazines for an educated general audience
- Practitioner advice/opinion/news-technical publications, newsletters, and magazines
- Opinion magazines in which scholars and experts debate and express their views
- "Mass market" or "trade" newspapers and magazines that are written for the general public

You want to locate scholarly journals because that is where full reports of empirical research appear. Articles in the other types of periodicals may discuss study findings, but they lack essential details about the study. Popularized social science magazines offer the interested, educated public a simplified version of study findings without all the details. Most professions have news/communication newsletters for working professionals in which you may find discussions of a research study or its implications, but they lack full study details. Experts and scholars write articles

for serious opinion/public issue magazines about topics on which they may also conduct empirical research (e.g., welfare reform, prison expansion, voter turnout, new marketing techniques). These publications differ in purpose, look, and scope from scholarly journals. They are an arena for debates about issues, not where researchers present a full report of their studies. Mass market publications provide the general public with news, opinion, and entertainment. You can find them at large newsstands, public libraries, or bookstores. They are source for many current events, but they do not contain reports of research studies.

You can find full reports of research studies in the following six outlets:

- *Scholarly journals.* The main place to look; they are stored for long periods in many locations and have a well-developed system to help you locate relevant articles;
- *Books.* In-depth and valuable for some topics, but difficult to find and time-consuming to read;
- *Government documents.* Only some are relevant and access may be limited, difficult to find;
- *Ph.D. dissertations.* Can be very valuable for an extensive review but difficult to find and access;



PhotoAlto/James Hardy/Getty Images Royalty Free

Summary Review Different Types of Periodicals

Periodical Type	Example	Authors	Purpose	Strength	Weakness
Peer-reviewed scholarly journal	*Social Science Quarterly, American Educational Research Journal, Journal of Applied Psychology, Social Forces*	Professors and professional researchers	Report on empirical research studies to professionals and build scientific knowledge	Highest quality, most accurate and most objective with complete details	Technical, difficult to read, requires background knowledge or training, not always about current issues
Semischolarly professional publication	*American Prospect, Society, Psychology Today, American Demographics*	Professors, professional policy makers, politicians	Disseminate and discuss new findings and their implications for professionals and the educated public	Generally accurate, somewhat easy to read	Lacks full detail and explanation, often includes opinion mixed in with discussion
Practitioner magazine or newsletter	*Coach & Athletic Director, Military Police, Retail Merchandiser, Mental Health Weekly*	Working professionals and some professors or "experts"	Provide a communication forum for working professionals	Current news and debates on relevant issues	Narrow focus and rarely builds general knowledge
Opinion magazine	*Nation, Human Events, Public Interest, Commentary*	Professors, professional policy makers, politicians	Present value-based ideas and opinions for professionals and educated public	Carefully written and reasoned	One-sided view and highly value based
Mass market magazines for the public	*Time, Esquire, Ebony, Redbook, Forbes, Fortune*	Professional journalists and other writers	Entertain, present, and discuss current events for lay public	Easy to read, easy to locate	Often inaccurate and incomplete

- *Policy reports.* Often relevant but are difficult to locate and only available for short periods of time; and
- *Presented papers.* Very difficult to locate, many are later published in scholarly journals.

A Special Type of Periodical: Scholarly Journals. The primary place where researchers disseminate information about studies is in scholarly journals (e.g., *Advances in Nursing Science, American Educational Research Journal, American Political Science Review, Journal of Marketing, American Journal of Sociology, Criminology, Nursing Research,* and *Social Science Quarterly*). Scholarly journals are essential to a literature review because they have the complete reports of research. You rarely find them outside of college and university libraries (or an online service connected with a college library). Many have *journal* or *review* in their title but not all do. They have the following features:

1. Most if not all of the articles are reports about original research studies.
2. Articles are peer-reviewed (see discussion in next section).
3. The articles have a reference or bibliography section that lists sources in detail.
4. Articles are part of an indexing location system accessible with **article search tools** (discussed later).

Peer review is a type of quality assurance system for the publication of research. After a researcher completes a study and writes a report about it, he or she presents it in several forums. The most frequently used and respected forum is a scholarly journal. It demands the highest level of rigor and is widely read by knowledgeable professional researchers. A critical feature of scholarly journal is that articles are **peer reviewed**. This means a study report went through the following peer review process:

1. A researcher prepares the detailed report of a study in a specific format and sends it (in pre-publication form it is called a manuscript) to the editor of a scholarly journal for consideration for possible publication.
2. The editor (a respected, experienced researcher with a deep knowledge of the field) looks at the manuscript and makes certain it meets minimal standards and is relevant for the specific journal.
3. The editor selects several (two to six) respected peer researchers to be volunteer reviewers. Each reviewer independently reads and evaluates the manuscript. He or she looks for a study's contribution to advancing knowledge, its originality, the quality of research design and execution, and the technical correctness of the research procedures. The editor also evaluates the report's completeness, organization, use of sources, and writing quality.
4. Each peer reviewer returns to the editor a written evaluation with criticisms, comments, and suggestions.
5. The editor examines all the evaluations from the reviewers and then decides to accept the manuscript as is and publish it; to ask the researcher to revise and resubmit the report for a second round of evaluation; or to reject the manuscript.

article search tool an online service or publication that provides an index, abstract list, or database with which you can quickly search for articles in numerous scholarly journals by title, topic, author, or subject area.

peer reviewed a scholarly publication that has been independently evaluated for its quality and merits by several knowledgeable professional researchers and found acceptable.

Most scholarly journals use a "blind review" version of the peer review process. In it, a researcher does not know the identity of the peer reviewers who evaluate the manuscript, and reviewers do not know who conducted the study. A blind review ensures that reviewers judge the manuscript solely on its own merits. Personal relationships with the author and his or her reputation do not influence decision making.

Many scholarly journals accept one-half to one-fourth of what they receive for consideration. Some highly prestigious and widely read journals publish 10 percent of the submitted manuscripts. That is, they turn down 90 percent of what researchers have sent to them. When you read articles in the high-prestige journals, you are seeing the top 10 percent of current research.

Scholarly journals feature more than reports of research. They also contain letters to the editor, theoretical essays, book reviews, legal case analysis, and comments on other published studies. Some specialized journals have only have book reviews; others only have literature review essays *(e.g., Annual Review of Psychology, Annual Review of Nursing Research, Annual Review of Law and Social Science, Annual Review of Public Health)* in which a researcher gives a "current state of the field" essay.

Except for peer review, there is no simple "seal of approval" to distinguish scholarly journals from other periodicals. Once you find a peer-reviewed scholarly journal, you need to distinguish an empirical research study from other types of articles. This takes judgment skills or the advice of experienced researchers or professional librarians. The best way to learn to distinguish among types of publications and articles is to read many articles in scholarly journals.

The Internet has a full copy of some, but not all, scholarly journal articles. Most journals charge a fee to access articles over the Internet; your college library may allow you free access (because the library paid the fee). Internet services sometimes provide a full, exact copy of the article, but some may only provide a short summary. Many services feature articles for a limited number of years and only from certain scholarly journals. Someday the Internet may replace print versions. For now, 99.5 percent of full scholarly journal articles are available in print, and about one-half of those from the past decade are available on the Internet in full form.

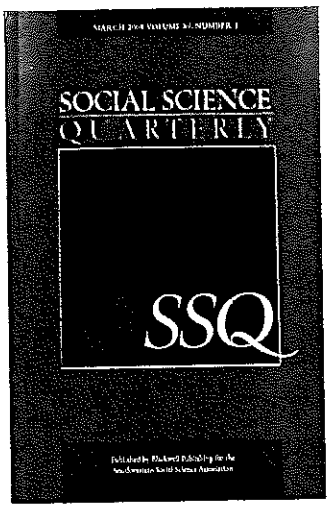


Photo Courtesy of Annie Pickert, Permission granted by Wiley-Blackwell for reproduction of *Social Science Quarterly,* March 2008, Volume 89, Number 1

You need to use an online library service to find articles. Once you locate a scholarly journal (see Making It Practical: Locating Scholarly Journals), you need to check that it is an article with study results and not another type (e.g., opinion essay, book

abstract short summary, usually on the first page of a scholarly journal article.

Making It Practical **Locating Scholarly Journals**

Your college library has a section for scholarly journals and magazines, or, in some cases, it mixes them with books. Look at a map of library facilities or ask a librarian to find this section. Many libraries place the most recent issues, which look like thin paperbacks or thick magazines, in a "current periodicals" section. The library stores them temporarily until it receives all the issues of a volume. After the library has an entire volume, staff members bind all issues together and place the volume in the library's collection. They place scholarly journals from different fields together with other periodicals or serials. Libraries post a list of the periodicals to which they subscribe.

Scholarly journals are published as rarely as once a year or as frequently as weekly. Most appear four to six times a year. For example, *Sociological Quarterly* appears four times a year, where as the *Annual Review of Nursing Research* appears once a year. Librarians and scholars created a system for tracking articles in scholarly journals. Every scholarly journal has a year, volume number, and issue number. When a journal begins, it is with volume 1, issue 1, and the numbers increase thereafter. The volume is a year of articles, and an issue is a part of the volume with several articles. Each issue has a table of contents with the title, author(s), and pages of articles. Most journals number pages by volume, not by issue or article. Page 1 is the first issue of a volume. Not all journals begin their publishing cycle in January. Issue 1 might begin in July or September. Page numbering continues throughout the entire volume and articles on consecutive pages. One issue may have from 1 to 50 articles, but most have 8 to 18 articles. Articles are 5 to 50 pages long. Because one volume is one year, a journal issue with volume 52 usually means that it has been operating for 52 years.

To locate an article, we use journal name, volume, year, issue, author, article title, and page numbers. These details are the **"citation"** of a source in the reference section of an article or literature review. Most journal articles have an **abstract**. A good abstract tells you the topic, research question, method, and findings. There are hundreds of scholarly journals in most fields. Each journal charges an annual subscription fee ($100 to $3000). For this reason, only the largest research libraries subscribe to most of them. If an article is not available on the Internet or at your local library, you can often obtain a copy from a distant library through an interlibrary loan service, a system by which libraries lend materials to other libraries.

review). It is easier to identify quantitative studies because most have a methods or data section and charts, statistical formulas, and tables of numbers. Qualitative research articles are easy to confuse with theoretical essays, literature review articles, idea-discussion essays, policy recommendations, book reviews, and legal case analyses.

Books. Books communicate information, provoke thought, and entertain. There are many types of books: picture books, textbooks, short story books, novels, popular fiction or nonfiction, religious books, children's books, and others. Some books report on original research or are collections of research articles. Libraries shelve and assign call numbers to them as with other types of books. You can find information on them (e.g., title, author, and publisher) in the library's catalog system. Only college or university libraries have books that report on research. It is difficult to distinguish them from other books. Some publishers, such as university presses, specialize in publishing them. Qualitative types of research are more likely to appear in a book format, as are the results of long, complex studies that may also be published in scholarly journal articles. Because they are not in the article search tool system, finding studies in books is difficult. Three types of books can contain research reports:

- *Monographs.* Contain the details of a long complex study or a set of interconnected studies.
- *Readers.* Contain articles on a topic, original or gathered from journals. Often the editor of the book has modified the research (i.e., shortened and simplified it) to make it easier for nonexperts to read.
- *Edited collection.* A collection of new research reports, articles reprinted from scholarly journals, or a mixture of both on a common topic.

Dissertations. All graduate students who receive the Ph.D. degree are required to do original research. They write the study as a dissertation thesis. Dissertations are in the library of the university that granted the Ph.D. About one-third of dissertation results are published later as books or articles. Because dissertations report on original research, they can be valuable sources of information. Specialized indexes list dissertations. *Dissertation Abstracts International* (online and print version) lists dissertations with their authors, titles, and universities (see Figure 2.2). To get a copy of the dissertation, you must borrow it via interlibrary loan from the degree-granting university, if that university permits this, or purchase a photocopy of it.

Government Documents. The U.S. federal government, the governments of other nations, state- or provincial-level governments, the United Nations, and international agencies such as the World Bank, all sponsor research studies and publish research reports. Many college and university libraries have some of these documents in their holdings, often in a special government documents section. Most libraries hold only the most frequently requested documents and reports. You can use specialized lists of publications and indexes to search for them, but usually you will need the help of a librarian. Some are also available online.

Policy Reports. Research institutes and policy centers (e.g. Brookings Institute, Rand Corporation) publish papers and reports (see Example Study Box 1: Sexual Harassment). An organization might list its reports on its Internet site and make copies available on the Internet. To find all of them, you need to contact the organization and request a list of reports. Sometimes organizations charge a fee for their reports.

Presented Papers. Each year, the professional associations in various fields (e.g., criminal justice, education, marketing, nursing, political science, psychology, recreation, sociology) hold annual meetings. At them hundreds of researchers gather to deliver, listen to, or discuss oral reports of recent research, with many

Figure 2.2 Example Dissertation Abstract

Title: Learning English in a midwestern urban high school: A case study of an ELL Vietnamese student
Author(s): Fan, Yanan
Degree: Ph.D.
Year: 2006
Pages: 00179
Institution: Michigan State University; 0128
Advisor: Adviser Anne Haas Dyson
Source: DAI, 67, no. 10A (2006): p. 3686
Standard No: **ISBN:** 978-0-542-90694-7

Abstract: The goal of this ethnographic case study is to examine what it means to learn English within the sociocultural contexts of a mid-sized Midwestern urban high school, focusing on a Vietnamese teenager. The data set consists of fieldnotes from key educational sites; interviews of students, teachers, and a first language aide; and collected artifacts (e.g., photocopies of student's written work, class handouts and syllabi, audiotaped interactions of the student in classrooms, visual images of sites, and site documents). Based on an inductive analysis of the data set, I asserted that the student's learning experiences are embedded in and influenced by the sociopolitical assumptions of a larger educational system that defines second-language learning. The student was lost in the institution's inconsistent vision of literacy while negotiating expectations and opportunities for participation in varied classrooms with little support and resources. In the meantime, the student's language proficiency, immigrant history, ethnicity, race, gender, and the model minority rhetoric all figure into her identity formation in the peer self-segregation of her school. This study extends the understanding of the complexities of second language learning, of the challenges adolescent immigrant students face in secondary schools, and of the cultural construction of the model minority rhetoric. It also contributes to the methodological discussion on conducting ethnographical studies by offering a reflection of the researcher's own negotiation of her relationship with the participants, considering issues of membership, reciprocity, and power.

Source: Copy of an abstract from *Dissertation Abstracts*, International.

Example Study Box 1 Sexual Harassment

In December 2005 the AAUW (American Association of University Women) Educational Foundation released a 72-page report, "Drawing the Line: Sexual Harassment on Campus." It is an advocacy policy report that describes an applied research study on sexual harassment. Instead of an abstract, as in a scholarly journal, it contains a three-page executive summary, and research methods are described in an appendix. Data for the study came from a stratified random sample (discussed in Chapter 4) and an online survey. A professional survey organization sent people in its national database password-protected e-mail invitations to participate in a survey. Organization employees randomly selected a sample of students enrolled in public and private postsecondary schools that offered two- and four-year degrees. In total, they interviewed 2036 U.S. residents ages 18 to 24 enrolled in college in 2005. The average interview lasted 17 minutes.

The executive summary shows you that this was a descriptive study. Its research questions were as follows: How common is sexual harassment, who is being harassed, who is doing the harassing, how are students being affected by harassment, and what do students think should be done about it? Key findings are that one-third of students experience sexual harassment in their first year of college. Most harassment is verbal, but about one in three of the harassed students also experienced physical harassment. Men and women are both likely to be harassed but in different ways. Harassed students feel upset, embarrassed, angry, less confident, afraid,

worried, and confused. They are likely to be disappointed in their college experience. Lesbian, gay, bisexual, or transgender (LGBT) students are more likely than heterosexual students to experience sexual harassment. Males harass more than females, with nearly one-half of male college students saying that they sexually harassed someone. The harassing men thought it was funny or thought the victim wanted attention. They did not consider it serious or think about the consequences. Less than 10 percent of harassed students file a report with university officials. The study report contains charts and statistics. It also contains quotes from individual students about their ideas on and experiences with sexual harassment. A hard copy of the report is for sale from the AAUW for $12, 1111 Sixteenth Street NW, Washington, DC, 20036, helpline@aauw.org, or you can download a free copy if you complete an information form at. http://www.aauw.org/research/dtl.cfm.

also in written form. People who attend can pick up a copy. If you do not attend, you can obtain a meeting program with a list of each paper with its title, author, and author's place of employment. You can write directly to the author to request a copy.

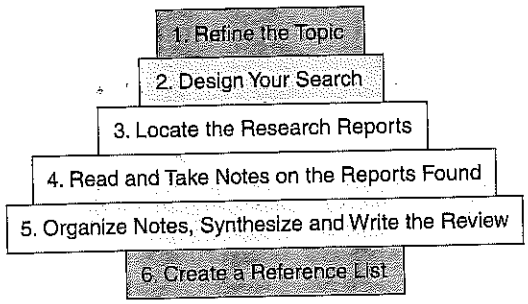
How to Conduct a Literature Review: A Six-Step Process

In this section, we examine six steps (see Figure 2.3) in locating research reports and preparing a literature review.

STEP 1. Refine the topic. Your search begins with a research question, not a topic. It is impossible to examine a broad topic with any depth or seriousness. A topic such as "divorce" or "crime" or "patient care" is too broad. Narrow the topic to something such as, "the stability of families with stepchildren" or "economic inequality and crime rates across 50 nations" or "long-term care of elderly patients with a heart condition." You further narrow this into a research question by adding conditions and limiting the range of cases/situations to which it applies (see discussion later in this chapter). Searching the literature itself also helps you focus a research question.

STEP 2. Design your search. (1) Decide on the review's extensiveness by fixing parameters for your search: how much time can you devote to it, how many years back will you look, what is the minimum number of reports you will examine, how many libraries you can visit, if you will look at both articles and books or only articles, and so forth. Expect to make multiple visits to a library (online or physically). If you have 15 hours to do a literature review, do not expect to locate and include

Figure 2.3 The Six Step Process



more than 10 to 12 research reports. (2) Decide which article search tools to use (discussed later in this chapter). (3) Decide how you will record the bibliographic information for each source and how to take notes (e.g., in a notebook, on 3 × 5 cards, in a computer document).

STEP 3. Locate the research reports. Searching varies by type of research report (article, book, or dissertation). Scholarly journal articles are usually the most valuable and least time-consuming to find. Locating a full copy of the reports can take time. After you find a full copy, you must read and take notes on it.

Articles in Scholarly Journals. Most studies are reported in scholarly journals. However, there are hundreds of journals, most go back several decades, and each may have over a hundred articles each year. Luckily, article search tools (sometimes called indexes or research literature services) make the task easier (See Making It Practical: Using Article Search Tools).

Many article search tools only provide author, titles—and abstract, not the full text of an article. Once you get search results, you can scan the titles and abstracts for relevant articles. Articles usually contain reference sections with leads to additional sources. For example, the article discussed in Figure 2.4 on a content analysis study of the media contained 53 references. The article on sexual harassment of college women listed 93 items, including journal articles, books, and other research reports. Reading the reference section can point you to relevant sources that you might not find using an article search tool.

Making It Practical **Using Article Search Tools**

Until about 10 years ago, a search for scholarly journal articles meant many hours reading through specialized books or magazines available only in college libraries. Today, you use such article search tools via online services. There are about 50 of them, some general and some specialized. Most only have articles from scholarly journals, although some also include papers from professional conferences, dissertations, and policy reports. Libraries pay to access the services.

To locate an article you use keywords or search by author name. Many article search tools are titled *abstracts* or *indexes* (e.g., *Psychological Abstracts, Social Sciences Index,* and *Gerontological Abstracts*). For education-related topics, the Educational Resources Information Center (ERIC) system is valuable; for medicine, MEDLINE is widely used. The name *abstract* is from an article's "abstract" or a short summary, usually placed at the beginning of an article. It does not contain all the findings or details of a study, but you can use abstracts to screen articles for relevance. Some are highly organized and contain specific details whereas others are less structured (see Figure 2.4).

You can search by author, subject, or keyword. Search tool subjects are limited to a few popular ones. Unless you know that a specific researcher did a study or you are at a late stage in searching, you probably will not use the author name for a search. For most searches, you will use keywords. You must develop key terms for your research question. The question *Are illegal drugs more common in urban than rural high schools?* might include keywords such as *drug abuse, substance abuse, drug laws, illegal drugs*. You can combine these with keywords as *high schools, high school students, rural schools, urban schools,* and *secondary schools*.

You should consider several synonyms for keywords. For example, a search with the keyword *homicide* may not find articles that use the word *murder*, so you want to try both. Most search tools look for a keyword in a title or the abstract. Often you can use multiple keywords using the connectors *or* or *and*. If you choose very board keywords or many connected by *or* you will get a huge number of irrelevant articles. Narrow keywords or several keywords connected with *and* may yield zero articles. To learn what works best, try experimenting with alternatives. The best search tools are only available to students or employees through a college library.

■ Figure 2.4 Examples of Two Abstracts from Scholarly Articles

Example abstract of journal article: Highly Structured

Article title: Measuring Media Bias: A Content Analysis of Time and Newsweek Coverage of Domestic Social Issues, 1975–2000
Authors: Tawnya J. Adkins Covert and Philo C. Wasburn
Publication Information: *Social Science Quarterly* Vol. 88 (3), pp. 690–706 [September 2007].

Abstract

Objective. This study is an effort to produce a more systematic, empirically-based, historical-comparative understanding of media bias than generally is found in previous works. **Methods.** The research employs a quantitative measure of ideological bias in a formal content analysis of the United States' two largest circulation news magazines, Time and Newsweek. Findings are compared with the results of an identical examination of two of the nation's leading partisan journals, the conservative National Review and the liberal Progressive. **Results.** Bias scores reveal stark differences between the mainstream and the partisan news magazines' coverage of four issue areas: crime, the environment, gender, and poverty. **Conclusion.** Data provide little support for those claiming significant media bias in either ideological direction.

Example abstract of journal article: Less Structured

Article title: The Moderating Roles of Race and Gender-Role Attitudes in the Relationship Between Sexual Harassment And Psychological Well-Being
Authors: Juliette C. Rederstorff, Nicole T. Buchanan, and Isis H. Settles
Publication Information: *Psychology of Women Quarterly* Vol. 31 (1), pp 50–61 [March 2007]

Abstract

Although previous research has linked sexual harassment to negative psychological outcomes, few studies have focused on moderators of these relationships. The present study surveyed Black (n = 88) and White (n = 170) female undergraduates who endorsed experiences of sexual harassment to examine whether traditional gender attitudes differentially moderated the relationship between sexual harassment and three outcomes: posttraumatic stress symptoms, general clinical symptoms, and satisfaction with life. We replicated past findings that sexual harassment is related to negative outcomes. Further, the results supported our hypothesis that less traditional gender attitudes (i.e., more feminist attitudes) would buffer the negative effects of sexual harassment for White women, whereas the same attitudes would exacerbate its negative effects for Black women. We discuss reasons for these differences, including Black women's double consciousness and differences in the meaning of feminist and traditional gender attitudes for Black and White women.

Example Study Box 2 **Sexual Harassment, Literature Search**

Here is a search I conducted using article search tools. My general topic was "sexual harassment." I narrowed the topic to "sexual harassment of female college students." I looked for peer-reviewed articles published from 2001 to 2006. I started with the article search tool called "EBSCO-Host Academic Elite." This tool examines 1500 peer-reviewed journals for all academic fields back to the late 1990s for most journals. Other article search tools contain information from different journals or cover different time spans. My first keywords were *sexual harassment* and *university*. The search located 199 articles. I found that many were not about college students. The search tool had picked up the word *university* from where the author worked. A search with *sexual harassment* and *student* yielded 80 articles. Some were about high school students and some were about males being harassed by females, but many were relevant. I narrowed my search further to *sexual harassment* and *college female* and got 28 articles. Not all were on my topic of interest. I noticed that

"gender-related harassment" and "unwanted sexual encounters" appeared in some articles. This gave me the idea to use them as alternative keywords for sexual harassment. I next used three other article search tools with the same restrictions and used the same keywords as before. I found that the four article search tools located many of the same articles, but at times one search tool found articles not located by a different article search tool. This suggests that is usually best to use more than one search tool.

Number of Articles Found Using Different Article Search Tools (peer reviewed articles, 2001–2006)

	Article Search Tool			
Keywords Used	**EBSCO-Host**	**Wilson-Web**	**Pro-quest**	**CSA-Illumina**
Sexual harassment & *university*	199	24	35	321
Sexual harassment & *student*	80	27	39	115
Sexual harassment & *college* & *female*	28	6	11	79

Specific article databases within each Article Search Tool: EBSCO-Host: Academic Elite; Wilson Web: Social Sciences, Education; Pro-quest: Criminal Justice, Gender Watch; CSA-Illumina: Social Services Abstracts & Sociological Abstracts.

Books. It is very difficult to find studies in books. The subject lists in library catalog systems are broad and not very useful. Moreover, they list only books in a particular library system. Professional librarians can help you locate books from other libraries. There is no sure-fire way to locate relevant books. Use multiple search methods, including a look at journals that contain book reviews and the bibliographies of articles.

Other Outlets. (Government documents, Ph.D. dissertations, Policy Reports, and Presented Papers) Locating studies in other outlets is far more difficult and time-consuming. A specific study might be highly relevant to your question, but few beginning researchers have the time or skills to search other outlets systematically.

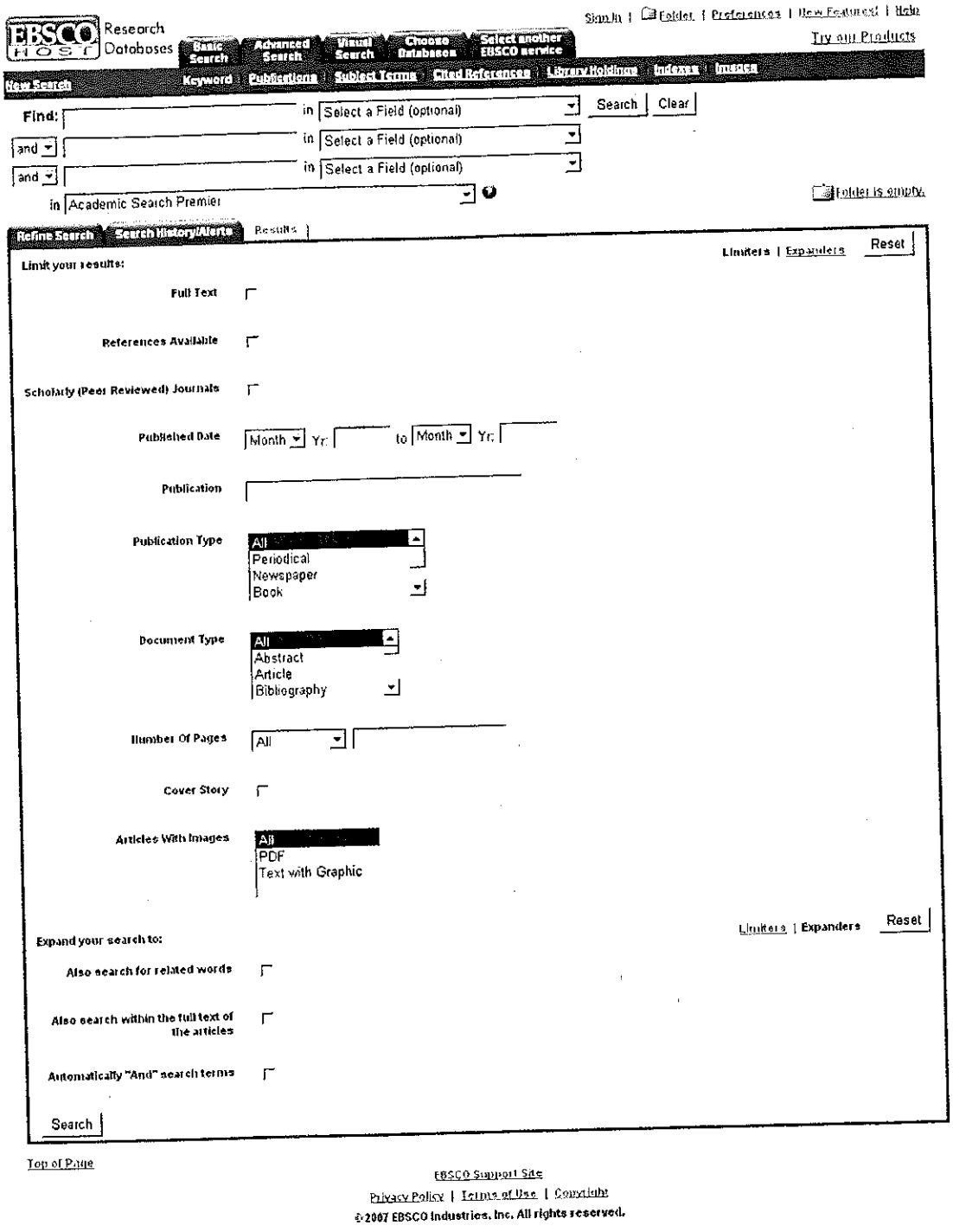
STEP 4. Read and take notes on the reports found. It is easy to feel overwhelmed as you gather studies. To help, develop a system for taking notes. The old-fashioned approach is to write notes onto index cards. You then shift and sort the note cards, placing them in piles, then look for connections among them. This method still works. Today, most people use word-processing software and gather photocopies or printed versions of many articles.

Create Source and Content Files. Several strategies are used in literature searches and article reading. My strategy is to create two kinds of files: a *source file* and a *content file.* I recommend that you adopt a similar strategy.

In the source file, I record *all* the bibliographic information for each source, even if I may not use some of the articles. This includes journal name, full article title, date, volume and issue number, starting and ending page numbers, and the full names of all authors. It is easier to erase an unused source than to try to locate bibliographic information later when needed. The source file allows me to create a list of complete references very quickly.

I put substantive details in the content file. This file contains major findings, details of methodology (such as if it was a survey or experiment, the number of

■ Figure 2.5 Web Page from EBSCO-Host Academic Elite Advanced Search



Making It Practical How to Read a Scholarly Journal Article

1. Read with a clear purpose in mind. Are you reading to gain background knowledge on a broad topic or to find information for a very specific research question?
2. First read the title and abstract for an article's relevance and general content. Next, quickly scan subheadings and the introduction and conclusion sections.
3. Form a mental image of the article's topic, major findings, method, and general conclusion.
4. Consider your own opinion about or bias toward the topic, the method, the publication source. How might your own opinion color how you read and evaluate the study?
5. Marshal external knowledge. What do you know about the topic and the research methods used?
6. As you read the entire article, evaluate. What errors might be present? Does the discussion of findings follow the data? Is the article's conclusion consistent with its approach?
7. Summarize. Prepare your own abstract. Include the topic, the methods used, and the main findings. Next, take notes, including quotation from the article and page numbers for quotes or ideas.
8. Review the reference section or bibliography for additional sources.

participants), definitions of major concepts, how concepts were measured, and interesting quotes. When quoting, I *always* record the specific page number(s) on which the quote appears. On each content note, I put the author's last name and the publication year, which allows me to link multiple cards or computer notes in the content file to a specific source in the source file.

What to Record in Notes. It is best to be consistent when writing notes—use all computer files or all note cards of the same size. As you decide what to record about an article, book, or other source, it is better to err by writing a little too much rather than not enough. Your notes should answer the following questions:

- What is study's basic topic and question? Does it state expectations of what the data will show based on a theory? Often a study will look at multiple questions, but only one is of interest to you.
- How did the authors define and measure their major ideas?
- What is the study's basic design? What procedures and techniques did the author use (e.g., was it an experiment, a survey, a field research study, and so forth)?
- What is the data, group, or sample? What units were examined (individuals, families, companies, towns, or nations). How many were examined (5 or 5000)? How were units chosen?
- What findings are relevant to your research question? Studies often have multiple findings, and the findings most relevant for your research could be buried deep inside an article.

Critically reading research reports is a skill that takes time and practice to develop. Despite a peer review procedure, errors and sloppy logic can slip into research reports. Sometimes titles, abstracts, and the introduction are misleading; they may not fully explain the study's method and results. A good article is logically tight, and all its parts fit together. Weak articles make huge leaps in logic or omit transitional steps.

As you read for details and take notes, you develop a mental image of how researchers conducted a study. This is why reading many studies will expand your research design skills. If you read a study in which the authors were disorganized or did not clearly provide all the details, you will see quickly the importance of good organization and clearly specifying all details. As mentioned earlier, look at the reference section to find new sources.

You may encounter unfamiliar terms, new theoretical ideas, advanced technical vocabulary, or sophisticated statistical charts, graphs, and results beyond your back-

■ Figure 2.6 Example of Notes on an Article

ENTRY IN SOURCE FILE

Bearman, Peter, and Hannah Bückner. 2001. "Promising the Future: Virginity Pledges and First Intercourse." *American Journal of Sociology* Volume 106, pages 859–912, January, issue number 4.

CONTENT FILE

Bearman and Bückner 2001

Background: Since 1993, the Southern Baptist Church sponsored a movement among teens. Teens make a public pledge to remain virgins until marriage. Over 2.5 million teens have made the pledge. This study looks at whether the pledge influenced the timing of first sexual intercourse and whether pledging teens differ from those who did not pledge. Critics say the pledge supporters often reject sex education, hold an unrealistic and overly romanticized view of marriage, and push teens to follow to traditional gender roles.

Questions/expectations: Adolescents try to engage in behaviors that adults enjoy but that are forbidden to them. When social controls are high, adolescent opportunities to engage in forbidden behavior is limited. Expectation 1: Teens from nontraditional families will have fewer social controls, more freedom and less supervision. They are more likely to engage in forbidden behavior (sexual intercourse) than those from traditional families and close to their parents. Teens from traditional families experience greater social control and delay sexual activity. Expectation 2: Teens closely tied to an "identity movement" outside the family will modify their behaviors based on the norms taught by the movement. As a result, family influence on them will not be as strong.

Definitions and measures: Identity movement is a social movement that emphasizes a self-identity separate from the larger society and being the member of a select group. Movements recruit members who modify their identity. The abstinence pledge movement recruits through the Internet, church groups, and Christian music and rallies. A person sustains his or her movement-pledge identity by repeated interactions with other pledging members. Pledge—A public shift in identity. The study measured it by asking unmarried teens if they have "ever taken a public or written pledge to remain a virgin until marriage." Family type—The study measured three types: living with both biological parents; living with only a mother or father; and living with two adults one or both of whom are step- or foster parents Religiosity—Measured with three behavioral items: frequency of praying, church attendance, and self-report of the importance of religion in the person's life.

Research Design: U.S. teens who were in randomly sampled public or private schools in 1994–1995 completed a questionnaire on a single day within one 45-60-minute class period. About 80 percent of students in a school completed it. Researchers also interviewed a subset of the students at home for 90 minutes. All students were asked about their parent's educational and occupational background, household structure, risk behaviors, visions of the future, self-esteem, health status, contacts with friends, and the sports and extracurricular activities in which they participated. The in-home interview measured sensitive health risk behaviors, such as drug and alcohol use, sexual behavior, criminal activities and family dynamics.

Data or Subjects: 90,000 students in grades 7–12 in 141 schools. Schools varied from under 100 to more than 3,000 students. 20,000 of the 90,000 students completed a second questionnaire.

Findings: Teens who pledged substantially delayed the timing of first sexual intercourse. However, pledging teens were largely in social contexts where abstinence was already a social norm. Pledging teens were more religious, less developed physically, and from traditional family backgrounds. Once social context is considered, the pledging itself had little effect on the delay of sexual activity compared to teens who did not pledge. In short, teens from traditional social backgrounds, strong religious beliefs and close family ties were less likely to engage in early sexual activity whether or not they pledged. Teens from non-traditional backgrounds, weak religious beliefs and few family ties are more likely to engage in early sexual activity whether or not they pledged. Another finding was that pledging teens who engaged in sexual intercourse were less likely to use contraceptives than non-pledgers.

ground. This is because professional researchers are the primary audience for research reports. The technical terms and results communicate important information to this audience. Do not be overly concerned if you cannot follow everything. As a novice researcher and consumer of studies, you should not expect to have the sophisticated knowledge of an expert researcher. A lack of knowledge might prevent you from fully evaluating all aspects of a study, but you can still learn from and build on the studies. Even if parts are over your head now, you can improve and expand your understanding over time. Be prepared to read an article more than once.

Photocopying all the relevant articles can save time in recording notes, and you will have the entire report and can write on the photocopy. Although photocopying sounds like the easy route, it has several downsides:

- The time and cost of photocopying can add up (30 articles of 20 pages = 600 pages, at 7 cents = $42, at 10 minutes to copy each article = 300 minutes).
- Be aware of copyright laws. U.S. copyright laws permit photocopying for personal research use.
- Be certain to include all citation details (title, page numbers, volume, etc.) of each article.
- Organizing many articles can be cumbersome. Plus, you may use several parts of a single article for different ideas or purposes.
- You may have to reread articles more than once unless you highlight carefully or take good notes.

STEP 5. Organize notes, synthesize, and write the review. Synthesizing and discussing findings with clear writing is the most difficult step in preparing a literature review. After gathering information, you need to organize specific findings to create a mental map of how they fit together. Your organizing method depends on the purpose of the review. Usually, it is best to organize findings around your research question or around a few core shared findings. Most professionals try several organizing schemes before they settle on a final one. Organizing is a skill that improves with practice. Some people place notes into several piles, each representing a common theme. Others draw charts or diagrams to show the connections among different findings. Others create lists of how the many study findings agree and disagree. Organizing notes is a process. Often you will find that some references and notes are no longer relevant, and you will discard them. You may discover gaps or new areas that you did not consider previously. This may require return visits to the library to refine your search.

A common error when writing a first literature review is to list summaries of articles, one study after another. This indicates an incomplete process that stopped before synthesis. To synthesize means to combine parts or elements into an integrated whole. You want to blend the findings, methods, or statements from separate studies and end up with a coherent whole in which the studies fit together as one integrated picture. Like fitting together the pieces of a jigsaw puzzle, all the parts fit to present an overall picture. However, with jigsaw puzzles someone started with the picture and then cut it up. In a literature review, there is no preexisting picture. You create one out of the many studies. It is more like weaving cloth from many separate threads. The threads start separate and different but end up as one piece of cloth or clothing tightly held together.

You use all the skills of good writing to produce a literature review. Your goal is to produce a compact document that clearly summarizes what many studies say about a research question. A literature review is a neutral summary-description. It does not include your personal opinion or conjecture. The rules of good writing (e.g., clear organizational structure, an introduction and conclusion, transitions between sections, etc.) apply.

A good literature review communicates its purpose to the reader by its organization. If you write a review by listing a series of summaries, you to communicate a sense of purpose; your review reads as notes strung together. You want to organize

Making It Practical **What a Good Literature Review Looks Like**

EXAMPLE OF WEAK REVIEW

Sexual harassment has many consequences. Adams, Kottke, and Padgitt (1983) found that some women students said they avoided taking a class or working with certain professors because of the risk of harassment. They also found that men and women students reacted differently. Their research was a survey of 1000 men and women graduate and undergraduate students. Benson and Thomson's study in *Social Problems* (1982) lists many problems created by sexual harassment. In their excellent book *The Lecherous Professor,* Dziech and Weiner (1990) give a long list of difficulties that victims have suffered.

Researchers study the topic in different ways. Hunter and McClelland (1991) conducted a study of undergraduates at a small liberal arts college. They had a sample of 300 students, and students were given multiple vignettes that varied by the reaction of the victim and the situation. Jaschik and Fretz (1991) showed 90 women students at a mideastern university a videotape with a classic example of sexual harassment by a teaching assistant. Before it was labeled as *sexual harassment,* few women called it that. When asked whether it was sexual harassment, 98 percent agreed. Weber-Burdin and Rossi (1982) replicated a previous study on sexual harassment, but they used students at the University of Massachusetts. They had 59 students rate 40 hypothetical situations. Reilley, Carpenter, Dull, and Bartlett (1982) conducted a study of 250 female and 150 male undergraduates at the University of California at Santa Barbara. They also had a sample of 52 faculty. Both samples completed a questionnaire in which respondents were presented vignettes of sexual-harassing situations that they were to rate. Popovich et al. (1986) created a nine-item scale of sexual harassment. They studied 209 undergraduates at a medium-sized university in groups of 15 to 25. They found disagreement and confusion among students.

EXAMPLE OF BETTER REVIEW

The victims of sexual harassment suffer a range of consequences, from lowered self-esteem and loss of self-confidence to withdrawal from social interaction, changed career goals, and depression (Adams, Kottke, and Padgitt, 1983; Benson and Thomson, 1982; Dziech and Weiner, 1990). For example, Adams, Kottke, and Padgitt (1983) noted that 13 percent of women students said they avoided taking a class or working with certain professors because of the risk of harassment.

Research into campus sexual harassment has taken several approaches. In addition to survey research, many have experimented with vignettes or presented hypothetical scenarios (Hunter and McClelland, 1991; Jaschik and Fretz, 1991; Popovich et al., 1987; Reilley, Carpenter, Dull, and Barlett, 1982; Rossi and Anderson, 1982; Valentine-French and Radtke, 1989; Weber-Burdin and Rossi, 1982). Victim verbal responses and situational factors appear to affect whether observers label a behavior as harassment. There is confusion over the application of a sexual harassment label for inappropriate behavior. For example, Jaschik and Fretz (1991) found that only 3 percent of the women students shown a videotape with a classic example of sexual harassment by a teaching assistant initially labeled it as *sexual harassment.* Instead, they called it "sexist," "rude," "unprofessional," or "demeaning." When asked whether it was sexual harassment, 98 percent agreed. Roscoe et al. (1987) reported similar labeling difficulties.

common findings or arguments together, address the most important ideas first, logically link findings, and note discrepancies or weaknesses in the research (see Making It Practical: What a Good Literature Review Looks Like for an example).

STEP 6. Create the Reference List. The last step is to create a reference list, works cited list, or bibliography. Works cited and reference list are the same thing—an alphabetical list of sources cited or to which you referred. They differ from a bibliography, which is an alphabetical list of all the materials you consulted, whether or not you cited them. For a literature review, use a reference list of sources you discussed in the review.

How you indicate sources in the text of your review and in the reference list is very important. There are several format styles, each with separate rules. Different fields (e.g., psychology, history) use specific formats. In the text of a review itself, an in-text citation format in most common. It has the author or authors' last name and year of publication for a general statement, with page numbers for specific details or quotes. To discuss an article on abstinence pledges, I might say, *Bearman and*

Brückner (2001) studied the identity movement in which teens pledge to stay virgins until marriage. Alternatively, I could state, *In a study of the identity movement, teens pledged to stay virgins until marriage (Bearman and Brückner 2001).* A quote from a specific page might look like this: *The movement has been successful in organizing mass rallies in which speakers extol the benefits of abstinence to stadiums full of eager adolescents. Its growth rate has been phenomenal, and with it, the movement has spawned a whole new subculture in which it is "cool" to say no to sex (Bearman and Brückner 2001: 860).*

The order and format of source **citation** information can vary greatly. You need to learn which format style an instructor or publication requires. The citation format style precisely specifies how to organize details of source information in a reference list. Two reference books on the topic in social science are the *Chicago Manual of Style,* which contains nearly 80 pages on bibliographies and reference formats, and the *American Psychological Association Publication Manual,* which devotes about 60 pages to the topic.

The entry for a book is shorter and simpler than for an article. It has the following: author's name, book title, year of publication, place of publication, publisher's name. Article entries are more complex than book entries. They require the names of all authors, article title, journal name, and volume and page numbers. Some formats require the authors' complete first names whereas others use initials only. Some require the issue or month of publication; others do not (see Figure 2.7 for four styles, MLA [Modern Language Association], ASA [American Sociological Association], APA [American Psychological Association] and Chicago [*Chicago Manual of Style*]).

citation documenting a source of information in a standardized format.

■ Figure 2.7 Different Reference Citations for a Book and a Journal Article

Style	Book with One Author in Reference List
MLA	Pillow, Wanda S. Unfit Subjects: Educational Policy and the Teen Mother. New York: Routledge, 2004.
ASA	Pillow, Wanda S. 2004. *Unfit Subjects: Educational Policy and the Teen Mother.* New York: Routledge.
APA	Pillow, W.S. (2004). *Unfit subjects: Educational policy and the teen mother.* New York: Routledge.
Chicago	'Same as MLA for the arts, literature or history. Same as ASA for science fields.
Style	**Journal Article with Two Authors in Reference List (Journal Pagination by Volume)**
MLA	Bearman, Peter and Hannah Bückner. "Promising the future: Virginity pledges and first intercourse." American Journal of Sociology 106 (2001) 859–912.
ASA	Bearman, Peter and Hannah Bückner. 2001. "Promising the Future: Virginity Pledges and First Intercourse." *American Journal of Sociology* 106:859–912.
APA	Bearman, P., and Bückner, H. (2001). Promising the future: Virginity pledges and first intercourse. *American Journal of Sociology* 106, 859–912.
Chicago	Same as APA for science fields. Same as MLA for arts, literature and history.
Others	Bearman, Peter and Hannah Bückner, 2001. "Promising the future: Virginity pledges and first Intercourse." *Am. J. of Sociol.* 106:859–912. Bearman, P. and Bückner, H. (2001). "Promising the Future: Virginity Pledges and First Intercourse." *American Journal of Sociology* 106 (January): 859–912. Bearman, Peter and Hannah Bückner. 2001. "Promising the future: Virginity pledges and first Intercourse." *American Journal of Sociology* 106 (4):859–912. Bearman, P. and H. Bückner. (2001). "Promising the future: Virginity pledges and first intercourse." American Journal of Sociology *106, 859–912.* Peter Bearman and Hannah Bückner, "Promising the Future: Virginity Pledges and First Intercourse," American Journal of Sociology 106, no. 4 (2001): 859–912.

Format styles for sources in a reference list.

Tips for the Wise Consumer Using the Internet for Social Research

The Internet has revolutionized research. Only fifteen years ago, few people used it. Today, researchers and others use it Internet regularly to review the literature, to communicate with others, and to search for information. The Internet has been a mixed blessing. It has not proved to be the panacea that some people first thought it might be. It is an important way to find information, but it remains one tool among others. It is a supplement rather than a replacement for traditional library research. On the positive side, it is easy, fast, and cheap. On the negative side, there is no quality control over what gets on the Internet. Unlike standard academic publications, there is no peer review process, or any review at all. Anyone can put almost anything on a Web site. It may be poor quality, undocumented, highly biased, totally made up, or fraudulent.

Many excellent sources and important resource materials for social research are not available on the Internet. Most information is available only through library subscription services. Contrary to popular belief, the Internet has not made all information free and accessible to everyone. Internet sources can be "unstable" and difficult to document. After you conduct a search on the Internet and locate Web sites, note the specific URL (uniform record locater) or "address" (usually it starts http://) where it resides and the date you saw it. This address refers to an electronic file sitting in a computer somewhere. If the computer file moves, it may not be at the same address two days later. Unlike a journal article stored on a shelf in hundreds of libraries for many decades and available for anyone to read, Web sites can quickly vanish. This means it may not be possible to check Web references easily, verify a quote, or go back to original materials. It is easy to copy, modify, or distort and then reproduce copies of a Web source, so you may find several variations on the same material. A few rules can help you locate the best sites on the Internet—ones that have useful and truthful information. Sources that originate at universities, research institutes, or government agencies usually are more trustworthy. Many Web sites fail to provide complete information to make citation easy. Better sources will provide complete information about the author, date, location, and so on.

FOCUSING ON A RESEARCH QUESTION

By now you know that before you conduct a literature review or develop a proposal for a study, you need to focus on a research question that is much narrower than a topic. The way you do this varies depending on whether your study follows one of two general approaches to research, an inductive or deductive approach. A study that is **inductive** starts with by evidence and then slowly builds toward generalizations, patterns, or summary ideas. A **deductive** study starts with a summary idea or an "educated guess" of what you think might occur and then moves toward specific, observable evidence to test or verify the ideas.

Many studies are not strictly inductive or deductive, but most emphasize one approach over the other. There is no rigid rule; however, the type of data and purpose of a study is a guide. Most often, an inductive approach goes with qualitative data and the deductive approach with quantitative data. Most exploratory studies use the inductive approach, explanatory studies use the deductive approach, and descriptive studies use both.

If you follow a deductive approach with quantitative data, you will need to devote significant time early in a research study to specifying the research question precisely and planning most study details. Once you design the study, the other steps (i.e., collecting and analyzing data) can proceed in a fairly straightforward way. By contrast, if you follow an inductive approach with qualitative data, you can devote less time to developing a research question and planning study details in advance. However, you must spend far more time and effort during the subsequent stages of a study (i.e., collecting and analyzing data).

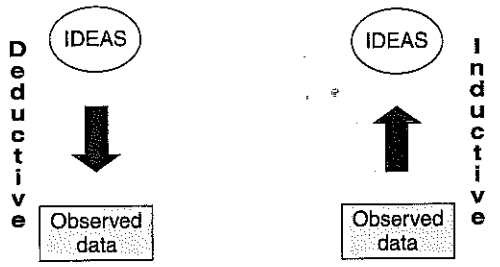
It takes time to develop the judgment skills to decide whether a deductive-quantitative or an inductive-qualitative study works best for a research question. Three things can help you pick most effective type:

- Reading many past studies
- Appreciating the specific features of qualitative and quantitative data

inductive research in which you start many specific observations and move toward general ideas or theory to capture what they show.

deductive research in which you start with a general idea or theory and test it by looking at specific observations.

■ Figure 2.8 Inductive or Deductive Approach



Making It Practical **Narrowing a Topic into a Research Question**

You want the research question to be empirically testable and specific. Here are four ways to do this:

Examine the research literature. From a literature review, you may decide to replicate a past study exactly or with slight variations. You can also explore unexpected findings discovered in past research. In many reports, authors offer suggestions for future research that you can follow. You can also extend an existing explanation to a new topic or setting. For example, a study of workplace relations in a hospital found that nurses and other staff cooperate and are more productive under certain arrangements. You might conduct a study to see whether the same arrangements have the same outcome in a nonmedical setting (e.g., a large legal office). You can examine the intervening process. For example, a study found that increased police foot patrols produced more calls to police when trouble occurred. You might examine exactly how this occurred—did the foot patrols increase familiarity, feelings of trust, and belief in the honesty in police?

Talk over ideas with others. Ask people who are knowledgeable about the topic for questions. It is often useful to seek out those who hold opinions that differ from yours on the topic and discuss possible research questions with them. A research question might help resolve different positions on an issue.

Specify the context. Apply a finding or topic a specific time, society, geographic unit, or category of people. Let us say you want to study divorce. Your research question might examine divorce in a particular era (divorce in the 1950s versus the early 2000s), location (Southwest versus New England states), or category of people (among people of different religions versus a shared religion).

Specify the purpose of your study. Do you want the study to be an exploratory, descriptive, explanatory, or evaluation study? Tailor your research question to one or another purpose.

COMPARING GOOD AND NOT-SO-GOOD RESEARCH QUESTIONS

Not-So-Good Research Questions

Not empirically testable, nonscientific questions. Should abortion be legal? Is it right to have capital punishment?

General topics, not research questions. Treatment of alcohol and drug abuse. Sexuality and aging.

Set of variables, not questions. Capital punishment and racial discrimination. Urban decay and gangs

Too vague, ambiguous. Do police affect delinquency? What can be done to prevent child abuse? How does poverty affect children?

Good Research Questions for Parallel Structure

Exploratory questions. Has the actual incidence of child abuse changed in California in the past 10 years? Is a new type of abuse occurring?

Descriptive questions. Is child abuse, violent or sexual, more common in families that have experienced a divorce than in intact, never-divorced families? Are children raised in impoverished households more likely to have medical, learning, and social-emotional adjustment difficulties than children raised in nonimpoverished households?

Explanatory Questions. Does the emotional instability created by experiencing a divorce increase the chances that divorced parents will physically abuse their children? Is a lack of sufficient funds for preventive treatment a major cause of more serious medical problems among children raised in families in impoverished?

Evaluative Questions. Has the new patient tracking system produced higher satisfaction ratings? Does the automatic arrest of abusive males in domestic violence calls to police reduce later violent domestic abuse incidents? Will third-grade children's readings scores show larger improvements under the new program than the existing reading program? Does calling customers to remind them of their appointment a day in advance reduce the percent of customer no-shows at the service center?

- Understanding how to use various research techniques and recognizing their strengths and limitations

You need a specific research question to make decisions about study design, although you adjust the research question as the study progresses. If you adopt a deductive-quantitative approach, you must be very specific before you can proceed. If you adopt the inductive-qualitative approach, you can begin with a general a research question that you narrow further during the data collection process.

THE RESEARCH PROPOSAL

As stated at the start of this chapter, the research proposal is a written document in which you review the literature and provide a detailed plan for research study. Your proposal will vary depending on whether the approach and research evidence is primarily deductive-quantitative or inductive-qualitative. A mixed approach with both types of data is also possible and has many advantages.

A Proposal for Quantitative or Qualitative Research

In all empirical research studies, you systematically collect and analyze data. If your data are qualitative in the form of words, sentences, photos, symbols, and so forth, you must use different strategies and data collection techniques than if the data are numbers. Techniques appropriate for qualitative data may be wholly inappropriate for quantitative data, and vice versa. One data form is not always superior; rather, each has strengths. Your goal is to fit the form of data to a specific research question and situation in a way that utilizes its strengths. The form of data affects how to conduct a study and influences your research proposal as follows:

1. When and how you do focus the research question?
2. To what universe can you generalize from a study's findings?
3. Will you follow a linear or nonlinear path when doing research?
4. Do you examine variables and hypotheses or cases and contexts?
5. How will you analyze patterns in the data that you gather?
6. What type of explanation will you use to give meaning to the patterns in the data?
7. What are your units of analysis in your study?
8. What is the level of analysis of your study?

1. When Do You Focus the Research Question? If you plan to conduct research gathering quantitative data, you need to develop a specific focus early in the process, before gathering any data. The research question directs you to the particular data you will need to gather. Past studies, theories, or a few discussions might help you focus. For example, your question tells you to collect data about the attendance of students in specific grades, and to measure their learning (using test scores, course grades, teacher notes) in specific subject areas. If you intend to gather qualitative data, you proceed slowly and focus on a research question after you gather data. You will need a topic, such as how do high school students actually learn course material, but do not have to focus on a specific question at first. You may spend many hours gathering data by talking with, observing, and interacting with students, teachers, and parents. After examining the data, you develop a specific question to direct later stages of data collection. The research question emerges slowly, in an ongoing, interactive process of data gathering.

universe a broad category of cases or units to which the study findings apply.

2. To What Universe Can You Generalize from a Study's Findings? As you move to focus on a research question, you will also specify the **universe** to which you can generalize an answer to the question. Only rarely do you want to restrict findings

to the specific units or cases you happened to study. Instead, you want to extend them to a broader category of people, organizations, and other units. For example, your research question is, Does a new attendance policy help high school students learn more? You plan to study three high schools in one U.S. city in 2008. The universe, in this case, is all high school students. You want to generalize what you learn beyond the specific students in three high schools of one U.S. city in 2008 to all high school students, or at least all U.S. high school students in the early twenty-first century.

3. Which Type of Research Path Do You Follow? A path is a metaphor for the sequence of activities you do. It is a way of thinking and a way of looking at issues. In general, with quantitative data you will follow a **linear path**. You follow a relatively fixed sequence of steps in one direction. It is like a staircase, a straight pathway that moves upward without deviation and takes you to a single location. When gathering qualitative data, the pathway is less a straight line or fixed sequence; the set of steps is somewhat flexible, multidirectional, and nonlinear. A **nonlinear path** makes successive passes through steps and moves sideways before going forward. You advance slowly but not directly. It is more of a spiral. At each cycle or repetition, you collect data and gain new insights, then move ahead.

If you are accustomed to the direct, linear approach with fixed steps, the nonlinear path may look inefficient and sloppy. A nonlinear approach does not have to be disorganized and is never an excuse for doing poor-quality research. It has its own discipline and rigor. It can be highly effective when adjusting to a fast-changing, fluid situation. It can create a feeling for the whole, allow grasping subtle shades of meaning, pull together divergent information, and permit switching perspectives. If you are used to a nondirect approach, the linear approach may appear to be rigid and artificial. It may look so set, fixed, and standardized as to miss what is most interesting and important in dynamic human relations. The linear path can offer a highly efficient, disciplined, and simple-to-follow sequence that makes it easy to spot a mistake and to repeat a past study.

linear path a relatively fixed sequence of steps in one forward direction, with little repeating, moving directly to a conclusion.

nonlinear path advancing without fixed order that often requires successive passes through previous steps and moves toward a conclusion indirectly.

Making It Practical **Practical Limitations on Study Design**

Designing a perfect research project is an interesting academic exercise, but if you actually carry out a study, practical limitations have an impact on its design. You need to ask the following questions:

- How much time you can devote to the study?
- What is the cost of conducting the study and do you have the required funds?
- Can you gain access to needed resources, people, and locations?
- Do you have required approval of authorities or officials?
- Have you addressed all ethical concerns?
- Do you have the needed skills, expertise, and knowledge?

If you can devote 10 hours a week for five weeks to a study but answering a research question requires a five-year study, narrow the research question. It is difficult to estimate accurately how much time you will need to conduct a study. The research question, research technique you use, and the amount and types of data you collect will all have an impact. Consulting with experienced researchers is the best way to get a good estimate.

Access to resources is a common limitation on a study. Beyond money and time, required resources include the expertise of others, special equipment, and information. For example, you have a research question about burglary rates and family income in the 20 largest nations. This is almost impossible to answer because information on burglary and income is not available for most countries. Some questions require the approval of authorities (e.g., to see medical records) or involve violating basic ethical principles (discussed in the next chapter). Your expertise or lack of it can be a limitation. Answering some research questions may require knowledge of research techniques, a statistical ability, or foreign language skills that you do not yet have.

4. What Do You Examine? The **variable** is a central idea in quantitative research. Simply defined, a variable is a concept that varies. Research with quantitative data uses a language of variables and emphasizes relationships among variables. Once you begin to look for them, you will see variables everywhere. For example, gender is a variable; it can take on two values: male or female. Marital status is a variable; it has the values of never married single, married, divorced, or widowed. Type of crime is a variable; it can take on values of robbery, burglary, theft, murder, and so forth. Family income is a variable; it can take on values from zero to billions of dollars. A person's attitude toward abortion is a variable; it ranges from strongly supporting the right to a legal abortion to strongly opposing abortion.

It is easy to confuse a variable with the categories or values of variables. Confusion arises because a category in one variable can itself become a separate variable with a slight change in definition. "Male" is not a variable; it describes a category of the variable gender. A related idea, "degree of masculinity," is a variable. It describes the intensity or strength of attachment to attitudes, beliefs, and behaviors associated with being masculine within the broader idea of gender. "Married" is a category of the variable "marital status." Related ideas such as "number of years married" or "depth of commitment to a marriage" are variables. If you wish to gather quantitative data, you must convert most of your ideas into the language of variables.

Types of Variables. We can classify variables into three basic types, depending on their location in a cause-effect statement. The cause variable is the **independent variable**. The result or effect variable is the **dependent variable**. The independent variable is "independent of" prior causes that act on it. The dependent variable "depends on" the cause.

It is not always easy to determine whether a variable is independent or dependent. Two questions help identify the independent variable:

- Does it come earlier in time? Independent variables always come before any other type.
- Does it have an impact on another variable? Independent variables have an impact on other variables.

You can reword most research questions in terms of the dependent variables because dependent variable is what you will explain. If your research question is about reasons for an increase in the crime rate in Dallas, Texas, then your dependent variable is the Dallas crime rate.

A simple cause-effect relationship requires only an independent and a dependent variable. A third type of variable, the **intervening variable**, appears in complex relations. It shows the link or mechanism between the independent and dependent variable. To advance knowledge, we both document simple cause-and-effect relationships and try to specify the mechanisms within a causal relation. In a sense, the intervening variable acts as a dependent variable with respect to the independent variable and as an independent variable toward the dependent variable.

Here is a three-variable example. The famous French sociologist Emile Durkheim developed a theory about a causal relationship between marital status and suicide rates. He found that married people are less likely to commit suicide than single people and believed it was because married people were more socially integrated (i.e., had feelings of belonging to a group or family). We can restate his theory as the following: Being married (independent variable) increases social integration (intervening variable), which in turn reduces the suicide rate (dependent variable).

Specifying the chain of variables clarifies the linkages in a causal explanation. Complex theories have multiple independent, intervening, and dependent variables. They link together a string of intervening variables. You notice that people from disruptive family settings have lower incomes as adults. Why? Family disruption causes lower self-esteem among children, which causes greater psychological depres-

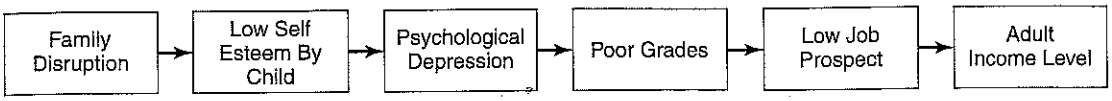
variable a feature of a case or unit that represents multiple types, values, or levels.

independent variable the variable of factors, forces, or conditions acting on another variable to produce an effect or change in it.

dependent variable the variable influenced by and changes as an outcome of another variable.

intervening variable a variable that comes between the independent and dependent variable in a causal relationship.

■ Figure 2.9 Chain of Variables



sion, which causes poor grades in school, which causes reduced prospects for getting a good job, which causes a lower adult income (see Figure 2.9).

Family disruption is the independent variable. Adult income level is the dependent variable. All the rest are intervening variables. Two explanations of the same dependent variable may use different independent variables, or agree about the independent and dependent variables but differ on the intervening variable. Both may say that family disruption causes lower adult income. One holds that disruption encourages children to join deviant peer groups that are not socialized to norms of work and thrift. Another emphasizes the impact of the disruption on childhood depression and poor academic performance.

In a single study, you usually test only a part of a complex causal explanation. Even though you might test one small part, you want to link it to a larger explanation. In a study, you connect independent and dependent variables with the hypothesis. A **hypothesis** is a tentative statement of a relationship between two variables. It is a guess about how the world works and can be restated as a prediction about what you expect to find. A causal hypothesis has the following five characteristics:

- It has at least two variables.
- It specifies how the variables are connected, which is the cause, and which is the effect.
- It includes a time order assumption (what comes first).
- You can restate it as a prediction or expected finding.
- You can show that it is supported or false with empirical data.

Example: The more a couple attends religious services together, the lower the chances that they will divorce.

- Two variables: (1) attendance at religious services, (2) probability of divorce.
- Connection: Lower attendance causes higher chance of divorce, and vice versa.
- Time order: attendance is earlier and divorce comes later.
- Prediction: Couples who attend religious services together very often will have fewer divorces than couples who never or rarely attend religious services together.
- Testable with empirical data: We can look at 1000 couples and ask how often they attend religious services together, then see how many of them are still married to one another 10 years later.

Knowledge cannot advance far with one test of a single hypothesis. In fact, you may get a distorted picture of the research process if you focus too much on a single study that tests one hypothesis. Knowledge develops over time as many researchers test many hypotheses. It grows out of the shifting and winnowing of many findings about hypotheses. If data fail to support some hypotheses, researchers gradually drop them from consideration. If data support a hypothesis, they keep it in contention. Researchers constantly create new hypotheses that challenge existing ones that have received support. Over time, if a hypothesis continues to receive empirical support in test after test and it stands up as better than alternative hypotheses, we can begin to accept it as likely to be true. To gain acceptance, the hypothesis needs multiple tests with consistent and repeated empirical support.

hypothesis a statement about the relationship of two (or more) variables yet to be tested with empirical data.

The Null Hypothesis. Our confidence in the truthfulness of a hypothesis grows as it defeats its competitors in repeated tests. A curious aspect of hypothesis testing is that we treat evidence in support of a hypothesis differently than evidence that

negates it. We give the negative evidence greater importance. Technically, researchers never say that they have proved a hypothesis true; however, they do say it is rejected.

If your evidence supports a hypothesis, the hypothesis is a possibility; it is still in the running and the case is not closed. When evidence fails to support a hypothesis, it is tarnished and falls out of the running. This is because a hypothesis makes a prediction. Negative evidence shows that the prediction is wrong. Positive evidence is less critical, because alternative hypotheses may make the same prediction. Confirming evidence may reinforce your belief in a hypothesis, but it does not automatically beat out the alternative hypotheses making the same prediction. Whereas negative evidence seriously weakens a hypothesis, piling up more and more evidence in favor of a hypothesis is not as significant.

Researchers test hypotheses in two ways: a straightforward way and by using the **null hypothesis**. Most of us talk about a hypothesis as a way to predict a relationship between two variables. The null hypothesis does the opposite; it predicts no relationship. Many quantitative researchers, especially experimenters, use a null hypothesis. They look for evidence that will let them accept or reject the null hypothesis. For example, Sarah believes that students who live on campus in dormitories get better grades than students who live off campus and commute. Her null hypothesis is that residence and grades are unrelated. She matches the null hypothesis with a corresponding alternative hypothesis. It is that a relationship exists; more specifically that a student's on-campus residence has a positive effect on grades.

null hypothesis a hypothesis that there is no relationship between two variables, that they do not influence one another.

Making It Practical From the Research Question to Hypotheses

Going from a well-formulated research question to a hypothesis is a short step. A good research question has hints about the hypothesis. The hypothesis is a tentative answer to the research question. Consider the research question, "Is age at marriage associated with chances of divorce?" It has two variables: "age at marriage" and "chances of divorce." Age at marriage is the independent variable because marriage must logically come before divorce. Beyond stating that two variables are connected, you need to decide the direction of the relationship. You have two choices: (1) The lower the age at time of marriage, the greater the chances that of divorce; (2) the higher the age at time of marriage, the greater the chances of divorce. A hypothesis makes a prediction, with choice (1) it says that people who marry younger are more likely to divorce. This may help you to better focus the research question, "Are couples who marry younger more likely to divorce?"

You can create several hypotheses from one research question. The question was, "Is age at marriage associated with chances of divorce?" Here is another hypothesis from it: "The smaller the difference between the ages of the marriage partners at the time of marriage, the lower the chances of divorce." Here age at marriage is specified differently. You can also specify conditions under which a relationship works. For example, "The lower the age at time of marriage, the greater the chances that the marriage will end in divorce, unless it is a marriage between two members of a tight-knit traditional religious community in which early marriage is the norm."

Besides answering a research question, a hypothesis can be an untested proposition from a theory. You can express a hypothesis at two levels: (1) an abstract, conceptual level of general theory; and (2) a concrete, measurable level that you actually test in a study. The theory explains why the prediction in your hypothesis is true. We can continue with the same example but now put it in the form of a theoretical statement.

> Adults stabilize their self-identity and develop mature coping abilities as they move from their late teens to their late twenties. A stable self-identity and mature coping abilities help people to sustain a long-term committed intimate relationship, such as marriage. If two adults enter into a marriage relationship before they have a stable a self-identity and mature coping abilities, the marriage is unlikely to last many years.

Now let us look at the same hypothesis but phrased as empirically testable statement with specific measures:

> The rate of divorce within the first 10 years of a marriage is much higher when both partners are 21 years old or younger at the time of a marriage than when both marriage partners are 28 years old or older.

You may feel that the null hypothesis is a backward way of hypothesis testing. It rests on the assumption that hypothesis testing should make finding a relationship between variables very demanding. With the null hypothesis approach, you directly test the null hypothesis. If evidence supports the null hypothesis (technically—you accept it as true), you are forced to conclude that the alternative hypothesis is false. On the other hand, if the evidence rejects the null hypothesis, then the alternative hypothesis remains as a possibility. You keep it in contention. As you repeatedly test and reject the null hypothesis, the alterative hypothesis looks stronger over time. Researchers use the null hypothesis because they are extremely cautious. They hesitate to say that a relationship exists until they have mountains of evidence. This is similar to the Anglo-American legal idea of innocent until proved guilty. Assume that the null hypothesis is correct until reasonable doubt suggests otherwise.

Quantitative data studies emphasize variables. By contrast, studies with qualitative data examine cases and contexts. A researcher who uses qualitative data may not think in terms of variables or testing hypotheses. He or she sees many areas of social life, human relations, and social activities as being intrinsically qualitative. Rather than try to convert fluid qualitative social life into variables or precise numbers, he or she retains the loose images or ideas that people use in natural social contexts.

Qualitative researchers usually examine a limited number of cases in depth. The cases are usually the same as a unit of analysis (discussed later). Instead of precise numerical measures of a very large number of cases, as in quantitative data analysis, in a qualitative study you examine in detail many aspects of a few cases. The rich detail and astute insight into the cases replace precise measures across numerous cases. Because you closely examine the same case or a few over time, you can see an issue evolve, a conflict emerge, or a social relationship develop. This places you in a good position to detect and observe processes. In historical research, the passage of time may involve years or decades. In field research, it may be days, weeks, or months. In both, you observe what unfolds and can quickly notice when something unusual or important occurs.

The social context is very important for studies with qualitative data. This is because an event, social action, or statement's meaning depends, in an important way, on the context in which it appears. When you remove an event, social action, or conversation from its social context, or ignore the context, you can seriously distort its meaning. Without the context, its real importance or significance is often lost. This requires you to pay close attention to what surrounds an action, event, or statement. It also implies that the same actions, events, or statements can have different meanings in different situations, cultures, or historical eras.

Let us say you studied voting. Instead of simply counting votes across time or cultures, you might ask, What does voting mean in the context? The same action (e.g., voting for a presidential candidate) may differ depending on the context, such as intense argument and competition among several parties, no difference among candidates, or a situation of total one-party dominance. Until you place the parts of social life into a larger whole, you may not grasp the part's meaning. It is hard to understand a baseball glove without knowing about the game of baseball. If you look at it as a glove, like a mitten for cold weather, a pair of driving gloves, or gloves to use for working in the garden, the baseball glove has little meaning. The glove's meaning comes from its use and placement within the flow of a baseball game. The whole of the game—innings, bats, curve balls, hits—gives meaning to each of the parts. Each part without the whole has little meaning.

5. How Do You Look for Patterns in the Data? Researches look for patterns in both the quantitative and qualitative data but do so differently. With quantitative data you rearrange, examine, and discuss numbers by using charts, tables, and statistics to see patterns. They reveal patterns in the numerical data. You connect the patterns with your research question. In a way, the hypothesis is both an answer to the

research question and a prediction about what will appear in your charts, tables, and statistics.

With qualitative data, you look for patterns by rearranging, examining, and discussing textual or visual data. You do this in a way that conveys an authentic voice, or that remains true to the original understandings of the people and situations that you studied. Instead of relying on charts, statistics, and displays of numbers, you identify patterns (i.e., sequences, cycles, contrasts) in the data, (i.e., observed events, conversations, or situations) as they appear in a specific context. You might discuss the patterns in terms of themes or as narratives. A narrative is a story that has a beginning and ending and major actors or forces that pull the reader from start to finish. Qualitative data are often more complex and filled with specific meaning than numbers. Essentially, you must translate, or make understandable, the data for people who lack a direct experience with the specific research setting. For example, you describe a 30-second social interaction in which no one spoke.

> A middle-aged man in a business suit rushes into a coffee shop, opens his wallet, and puts a five-dollar bill on the counter. Without a word, the clerk at the shop quickly pours a cup of coffee into a take-away container and adds cream for the man. The man picks up the container, turns, and quickly walks out the door.

You create a translation based on observations, conversations, and the context. The man is a regular patron of the coffee shop near a train station. He has been coming each morning for five years. Today he is in a rush to catch a commuter train to his office downtown. He will drink the coffee while on the train. The clerk knows the man and knows what he wants. The man orders the same thing every day. In return, the clerk rushes to take care of the man each time. When the man is very rushed, he just puts down a five-dollar bill. The coffee only costs $1.50; the money covers the cost of the coffee, $1.50 for the newspaper that the man took from outside the front of the coffee shop before entering, and a $2.00 tip. On the days that he has time, the man sits and chats with the clerk about baseball and current events.

Summary Review Quantitative versus Qualitative Research

Overall Type of Study	Quantitative Research	Qualitative Research
Approach	Approach is usually deductive.	Approach is usually inductive.
Research Question	Developed and refined before gathering data	Developed and refined while gathering data
Path	Path is linear.	Path is non-linear.
Main goal	Test a hypothesis that you started with.	Discover/capture the meaning of a social setting.
Concepts and Ideas	Are expressed in the form of distinct variables	Are expressed in the form of themes and motifs
Measurement	Plan precise measurements before data collection	Create measures ad hoc as gathering data
Data	In the form of numbers	In the form of words and images
Theory	Theory is largely causal.	Can be causal or other.
Data Analysis	Data analysis includes statistics, tables, or charts with relationships among numbers.	Often includes narrative story with a detailed description of a social setting.

6. What Type of Explanation Will You Use? We use the word *explanation* in two ways. One is an everyday type, in which *explanation* means making something clear or comprehensible to another person with examples or everyday reasons. The other is a research study type that means answering the why question and making something comprehensible by placing it within a relevant structure of theory, ideas, or set of circumstances.

When doing explanatory research, you create a research explanation. There are several research explanations, but the most common one is a **causal explanation** In it you explain by finding one or more causes for an effect or outcome. The cause in the explanation corresponds to your independent variable and the effect to your dependent variable. A causal explanation is usually inside a larger theory or idea framework and has the following three elements:

- *Time order:* The cause must come earlier in time than the effect or the result it produces.
- *Association:* The cause and effect are associated or they go together and vary with one another. Some people call it correlation, although technically correlation is a specific measure of association.
- *Alternative causes ruled out:* There is no better or stronger cause than the one you identified.

To be a cause (an independent variable), something must happen first. Usually you can observe or logically determine time order. Two factors that occur together are associated: that is, when one factor is present or at a high level, the other one is also present or at a high level. Several statistics measure an association. The most well known is the correlation. The last item in the list is the most difficult one to document or observe. If you claim that one factor causes another, there should not be any stronger, truer, or better cause present that you are not including. This is an important element because there can be multiple causal factors, some obvious and some hidden. If you say that a factor causes another but an unacknowledged and stronger cause is present, it is misleading. You try to rule out other possible causes (see the discussion of spuriousness later in this chapter).

In a causal explanation, you make a generalization and specific instance of it, as follows:

A causes B generally.
This situation is A, therefore, we expect to find B.
Example: People who spent many years in prison have difficultly finding stable, well-paid work after their release. Joe Brown was imprisoned for many years; he is having difficulty finding stable, well-paid work after his release.

You fit a specific observable instance within the more general rule or pattern. You can covert a causal explanation into independent and dependent variables.

Independent variable: Whether a person was previously imprisoned for many years
Dependent variable: Amount of difficulty in finding stable, well-paid work

Sometimes researchers who use qualitative data use causal explanation. At other times they do not but instead develop ideas or theories during the data collection process. They build up from specific data to general ideas. Instead of a causal connection between two variables, their explanation is in the form of motifs, themes, or distinctions. Many explanations with qualitative data take the form of **grounded theory**. In a grounded theory explanation you build the explanation by making comparisons. For example, you observe an event (e.g., a police officer confronting a speeding motorist). You look for similarities and differences. You ask, Does the police officer always radio in the car's license number before proceeding? After radioing the car's location, does the officer ask the motorist to get out of the car sometimes but at other times casually walk up to the car and talk to the seated driver? When data collection and theorizing are interspersed, theoretical questions arise that

causal explanation a type of research explanation in which you identify one or more causes for an outcome, and place cause and effect in a larger framework.

grounded theory ideas and themes that are built up from data observation.

■ **Figure 2.10** Quick Checklist of Study Design Issues in a Research Proposal

When do you focus the research question?	Very early or it emerges later
What is the universe of your study?	The broad set of units to which you can generalize
What is your research path?	Linear or nonlinear
What do you examine?	Variables and hypotheses or cases and contexts
How do you interpret patterns in the data?	Statistics and charts or themes and narratives
What type of explanation do you use?	Causal explanation or grounded theory
What are your units of analysis?	The cases or units you measure
What is your level of analysis?	Micro to macro

suggest future observations. You collect new data so they can answer theoretical questions that came from thinking about previous data.

7. What Are the Units of Analysis in Your Study? Every study contains units of analysis. They are critical for clearly thinking through and planning a research study. Few researchers explicitly identify units of analysis as such. Your research question shapes the unit of analysis, which in turn influences study design, so being aware of them will help you to design a better study and to avoid errors. The **unit of analysis** is the unit on which you measure variables and gather data. Common units are the individual, the group (e.g., family, friendship group), the organization (e.g., corporation, university), the social category (e.g., social class, gender, race), the social institution (e.g., religion, education, the family), and the society (e.g., a nation, a tribe). Say you want to conduct a descriptive study to find out whether colleges in the North spend more on their football programs than do colleges in the South. Your variables are college location and amount of spending for football, and the unit of analysis in this situation is the college. It flows from the research question.

In social research the individual is the most commonly used unit of analysis, but it is by no means the only one. Different questions imply one or another unit of analysis, and different research techniques work best for specific units. For example, the individual is the unit of analysis in the survey of students about sexual harassment (see Example Study Box 1: Sexual Harassment, page 33). On the other hand, you might conduct a study to compare the level of sexual harassment at 20 different colleges. Perhaps you think harassment is greater at colleges with more alcohol-related problems. You could measure the number of alcohol-related behavior problems/arrests at the colleges and measure degree of harassment by the number of harassment reports filed and amount of hours counselors devote to sexual harassment at the colleges. Your unit of analysis would be the organization, or specifically the college. This is because you are comparing characteristics of the colleges. Units of analysis influence how to gather data and the level of analysis (see below).

8. What Is the Level of Analysis of Your Study? The social world operates on a continuum from small scale or micro level (e.g., a few friends, a small group) to large scale or macro level (e.g., entire civilizations or a major structure of a society). The **level of analysis** is the level of reality you examine. It is a mix of the number of people, the expanse of geographic space, the scope of the activity, and the length of time. A micro-level study might involve 30 minutes of interaction among five people in a small room. A macro-level study could involve a billion people on three continents across a century. The level of analysis delimits the kinds of assumptions, concepts, and theories you will use. It also influences the appropriate units of analysis. Let us look at examples at each end of the continuum.

unit of analysis the case or unit on which you measure variables or other characteristics.

level of analysis the level of reality to which explanations refer, micro to macro.

Micro Level: Suppose you want to study the topic of dating among college students. A micro-level analysis uses ideas such as interpersonal contact, mutual friendships, and common interests among individual students. Suppose you believe that students tend to date someone with whom they have had personal contact in a class, share friends in common, and share common interests. You might gather data from 100 students on their friends, contacts, and relationships. The individual student is your unit of analysis.

Macro Level: Suppose you want to learn how social-economic inequality affects violent behavior in a society. You may be interested in the degree of inequality (e.g., the distribution of wealth, property, income, and other resources) throughout a society. Likewise, you may look at patterns of societal violence (e.g., aggression against other societies, level of violent crime, violent feuds between families, organized crime with gangs, bandits, and warlords, religious-racial-based conflicts). You develop a macro-level explanation because of the topic and the level of social reality. You gather data on the level of inequality in each of 50 countries for 20 years, as well as data on how many acts of violence occurred in each country. The country is your unit of analysis.

Warning: Avoid Spuriousness. As you design a study with a causal explanation, you need to be aware of an issue that may totally upset your explanation. As you learned previously, you need three things for a causal explanation: time order, association, and ruling out of alternative causal factors. You can observe or test the first two, but the third element can be tricky. It involves making certain that there are no alternative causes. The alternative cause may not be obvious. If an unseen alternative cause strongly affects your dependent variable, then claims you make about the cause (independent variable) could be false. Having time order and a strong association between two variables does not mean you can relax. It could be an illusion, just like the mirage that resembles a pool of water on a road during a hot day.

Spuriousness is an illusionary relationship due to an unacknowledged other variable that is a cause of both the independent and the dependent variable. You could have a strong correlation between the two variables, but the two variables may be not really be cause and effect. You must also check for spuriousness to claim causality.

Spuriousness may seem complicated, but it uses common-sense logic. You already know that there is an association between the use of air conditioners and ice cream cone consumption. If you measured the number of air conditioners in use and the number of ice cream cones sold each day, you would find a strong correlation. More cones are sold on the same days when more air conditioners being used. However, you know that eating ice cream cones does not cause people to turn on air conditioners, or turning on an air conditions does not produce a craving for ice cream. Instead, a third factor causes both variables: hot days.

spuriousness when two variables appear to be causally connected but in reality, they are not because an unseen third factor is the true cause.

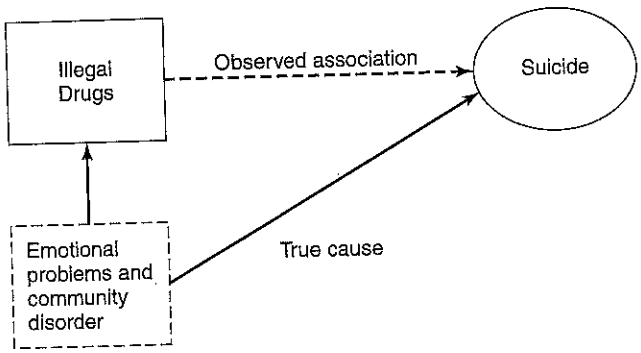
Learning from History Night-Lights and Spuriousness

For many years, researchers observed a strong positive association between the use of a night-light and children who were nearsighted. Medical professionals thought that the night-light somehow caused children to develop vision problems and advised parents against using a night-light for their children. Other researchers could find no good reason for night-light use causing nearsightedness. A 1999 study provided the answer. It found that nearsighted parents are more likely to use night-lights. Parents also genetically pass on their vision deficiency to their children. The study found no link between night-light use and nearsightedness once the effect of parental vision was considered. Thus, the initial causal link was misleading or spurious once the previously unrecognized impact of parental vision impairment and night-time behavior was considered (see *New York Times*, May 22, 2001).

You may ask, How can you tell whether a relationship is spurious? How do you discover the mysterious third factor? As you prepare a research proposal, how can you build in a safeguard against spuriousness? You can deal with spuriousness in different ways using different research techniques. The internal design of an experiment helps to control for spuriousness. In survey data and existing statistical sources, you must decide on control variables that measure possible alternative causes. You then use statistical techniques (discussed later in this book) to test whether an association is spurious. In all situations, including qualitative data analysis, you need a theory, or at least a good guess, about what alternative causes might influence what you see as the cause and effect, and then take them into consideration. One way to grasp the idea of spuriousness is with an example (see Learning from History: Night-Lights and Spuriousness).

Let us look a spurious relationship. Does taking illegal drugs cause more suicide, school dropouts, and violent acts? Many people point to positive correlations between taking drugs and being suicidal, dropping out of school, and engaging in violence. They argue that ending drug use will end such problems. A second position argues that many people turn to drugs to cope with their emotional problems or high levels of disorder in their communities (e.g., high unemployment, unstable families, high crime, few community services, and lack of civility). At the same time, people with emotional problems or who live in disordered communities are often in such straits that they are more likely to commit suicide, drop out of school, and engage in violence. It may be that reducing emotional problems and community disorder will end both drug use and the other problems. Reducing drug taking alone will have a limited effect because it does not address the root causes (i.e., emotional problems and community disorder). If the second position is correct, the apparent relationship between illegal drugs and the problems stated is spurious and misleading. This is because emotional problems and community disorder are the true and initially unacknowledged alternative causes (see Figure 2.11).

■ Figure 2.11 Spuriousness Example—Relationship Between Illegal Drugs and Suicide



WHAT HAVE YOU LEARNED?

In this chapter, you encountered the groundwork to begin a study. You saw how to conduct a literature search, narrow a topic into a focused research question, and identify units and levels of analysis. The decision to use qualitative or quantitative data suggests a different sequence of decision making as you get started. Choosing a qualitative or quantitative approach (or a mix of both) depends on your topic, your purpose and intended use of study results, as well as your own assumptions.

If you decide that quantitative data are best, you take a linear path and emphasize objectivity and use explicit, standardized procedures and a causal explanation. You use the language of variables and hypotheses testing. The process is a set of discrete steps that precede data collection: Narrow the topic to a more focused question, transform concepts into variables, and develop hypotheses to test. In actual practice, you move back and forth, but the general process flows in a single, linear direction. Your explanations usually take a cause-effect form.

If you decide that qualitative data are best, you follow a nonlinear path that emphasizes becoming intimate with the details of a natural setting or a particular context. You use fewer standardized procedures or explicit steps, and you must devise on-the-spot techniques. You use a language of cases and contexts that directs you to examine particular cases or processes in detail. You do not separate planning and design decisions into a distinct pre–data collection stage, but you continue to develop the study design throughout early data collection. You slowly evolve toward a specific focus based on what you learn from the data. As you reflect on the data, you can develop a grounded theory explanation.

The qualitative and quantitative distinction is overdrawn and is not a rigid dichotomy. You can mix the two types. Before you mix the data types, you need to understand each and appreciate each on its own terms. You should recognize that quantitative and qualitative data each have strengths and limitations. Your ultimate goal is to better understand and explain events in the social world, and the best way to do so is to appreciate the value of each style of data collections has to offer.

Studying people and doing a research study about human relations also has an ethical-moral dimension. In the next chapter, we examine that aspect of doing research.

KEY TERMS

article search tool *30*
abstract *31*
causal explanation *53*
citation *43*
deductive *44*
dependent variable *48*
grounded theory *53*
hypothesis *49*
independent variable *48*
inductive *44*
intervening variable *48*
level of analysis *54*
linear path *47*
literature review *27*
nonlinear path *47*
null hypothesis *50*
peer reviewed *30*
research proposal *26*
spuriousness *55*
unit of analysis *54*
universe *46*
variable *48*

APPLY WHAT YOU'VE LEARNED

Activity 1

Go to your college library (physically or via its Web site) and locate article search tools. You may have to ask your librarian about which specific services at available at the library; some common ones are JSTOR, EBSCO, WilsonWeb, and Proquest. Pick one of the article search tools and conduct a search using the term *tattoo*. Restrict your search to peer-reviewed scholarly publications. Then answer the following:

- How many total studies have been conducted on the topic of tattoos during the past 10 years? ____

- How many total studies have been conducted on the topic of tattoos during the past 5 years? ____
- Based on the article title or abstract, what percent of studies in the past 5 years appear to be about medical issues (e.g., infection, etc.)? ____

Activity 2

Repeat Activity 1 but with a different article search tool. What differences did you discover? What accounts for the differences?

Activity 3

Take the five most recent scholarly journal articles you found in Activity 1 or 2. Prepare a reference/bibliography using the ASA (American Sociological Association) format. Be sure to put the articles in alphabetical order by the last name of the first author. Note that in a scholarly journal article that has more than one author, the first listed author usually did more work on the study than the others, so you want to retain name order.

If you Google "American Sociological Association style" you will find many college library sites that have additional help on how to organize the references. You can also find information on the ASA format at the following Web site: http://www.asanet.org/page.ww?name=Quick+Style+Guide&section=Sociology+Depts

Activity 4

Design the first part a study using quantitative data on a topic of interest to you. Complete each of the following parts of the design:

Topic: _____
Research question: _____
Hypothesis: _____
Your independent variable of the hypothesis above: _____
Your dependent variable of the hypothesis: _____
The unit of analysis for your study: _____

Activity 5

Identify the unit of analysis, Universe, and dependent variable in each of the three articles from the scholarly journal *Social Science Quarterly* listed below.

1. "The Effects of Visual Images in Political Ads: Experimental Testing of Distortions and Visual Literacy" (*Social Science Quarterly,* 2000, 81:913–27) by Gary Noggle and Lynda Kaid.
2. "The Politics of Bilingual Education Expenditures in Urban Districts" (*Social Science Quarterly,* 2000, 81:1064–72) by David Leal and Fred Hess.
3. "Symbolic Racism in the 1995 Louisiana Gubernatorial Election" (*Social Science Quarterly,* 2000, 81:1027–35) by Jon Knuckey and Byron Orey.

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Hawkes, Daina, Charlene Seen and Chantal Thorn 2004. Factors That Influence Attitudes Toward Women With Tattoos. *Sex Roles* 50 (9/10):593–604.
Horne, Jenn, David Knox, Jane Zusman, and Marty Zusman, 2007. "Tattoos And Piercings: Attitudes, Behaviors, and Interpretations of College Students." *College Student Journal* 41 (4):1011–1020.
Kang, Miliann, and Katherine Jones. 2007. "Why do people get tattoos." *Contexts* 6(1):42–47.

ENDNOTES

1. For more on the topic of tattoos see Atkinson (2003, 2004), Caplan (2000), DeMello (2000), Fischer (2002), Horne, Knox, Zusman, and Zusman (2007) and Kang and Jones (2007).
2. Sir Isaac Newton in letter to Robert Horne, Feb. 5, 1676. http://en.wikiquote.org/wiki/Isaac_Newton