WRITING A RESEARCH PAPER

Deciding What to Investigate
- Choose a Subject
  - Find a Focus
- Narrow Your Topic
- Know Where to Look
- Take Notes

Gathering Information
- Assemble a Working Bibliography

Devising a Framework
- Decide on a Basic Premise
- Plot an Organizational Pattern
- Race Through the First Draft
- Add the Missing Elements

Writing the Paper
- Cluster Your Notes
- Revise and Edit Your Paper
- Print the Final Copy
If your writing falls apart, it probably has no primary ideas to hold it together.

Sheridan Baker (1918–2000), professor, author of The Practical Stylist

From the time it is assigned until the day it is due, a research paper can occupy your mind like no other type of assignment. Although writing a research paper can be time consuming, it doesn’t have to be overwhelming if you take the process one step at a time. To give you a head start in the art of the research paper, this chapter provides a calm and well-organized system for

- Deciding What to Investigate
- Gathering Information
- Devising a Framework
- Writing the Paper
Writing even a modest research paper can take a lot of effort. Yet though the task is long, the skills it requires aren’t sophisticated, and most of them aren’t new. In fact, writing a paper isn’t much more difficult than reading about a subject in detail, taking notes on your reading, organizing your notes, and reciting—all the activities you undertake to prepare for a test or quiz. The difference is that instead of reciting out loud, you put your recitation on paper in a form that makes what you’ve learned readable for others. If you realize that writing a paper is not much different from studying your notes, and if you systematically decide what to write about, gather information, devise a framework, and then do the actual writing, you may even find that writing papers can be a most absorbing way to learn about a subject.

Deciding What to Investigate

Finding a suitable topic is often the biggest stumbling block in research. It’s essential that you know how to choose a topic easily and efficiently. There are three steps in the process of selecting a topic: Begin with a general subject that interests you, narrow it down, and then sharpen it even further by finding a focus. If you follow these steps, you’ll wind up with a topic that is both interesting and specific.

Choose a Subject

In most cases, you’ll be selecting a topic from a broad subject area. Because you’ll be spending a great deal of time on the subject, your best bet is to choose one you are interested in or can develop an interest in. And if it isn’t a subject that others are researching, then so much the better.

If you aren’t sure what subject to select, do some preliminary research. Although you can sometimes get ideas by surfing the Web, the best place to do your preliminary research is still the library, where you’ll have access to a variety of reference sources, both bound and computerized, a chance to browse through the section of the library stacks that matches your area of interest, and an opportunity to talk to a reference librarian, who will introduce you to an array of possible topics.

Suppose you are fascinated by natural disasters and want to learn more about them. But the subject “natural disasters” includes scores of topics: droughts, floods, tornadoes, hurricanes, volcanoes, and earthquakes, to name just a few. How can you do justice to them all? Obviously, you can’t. You must narrow your topic.
Narrow Your Topic

Selecting a topic that interests you is just the beginning. The most common criticism of a research paper is that its topic is too broad. A Cornell professor of English suggests this method for narrowing your topic: Put your subject through three or four significant narrowings, moving from a given category to a class within that category each time. This method is similar to the Silver Dollar System (see Chapter 11), which enables you to select the most important ideas from your notes.

For example, if you select natural disasters as the topic for a ten- to fifteen-page research paper, you have to narrow the scope of your topic before you can cover it in adequate depth. Three narrowings will probably reduce the subject down to a manageable size, although four may be necessary.

General Topic: Natural Disasters
First narrowing: earthquakes
Second narrowing: earthquake prediction
Third narrowing: scientific developments in earthquake prediction
Fourth narrowing: computer simulations in earthquake prediction

Concept maps, which are explained in Chapter 8 and are similar to those at the beginning of each chapter, can be used to “visually” narrow a topic. Write your general subject on a blank sheet of paper and circle it. Next write down subtopics of your general subject, circle each, and connect them with lines to the general subject. Then write and circle subtopics of your subtopics. At this point, you may have a suitably narrow subject. If not, keep adding levels of subtopics until you arrive at one. (See Figure A.1.) The advantage of narrowing your topic with a concept map is that you provide yourself with a number of alternate topics should your original topic choice prove unworkable.

Find a Focus

Once you’ve narrowed your topic, give your research direction and purpose by developing a compelling question about your topic. The information you gather from your research can then be used to develop an answer. For the topic “The use of computer simulations in earthquake prediction,” you might ask, “How helpful are computer simulations in earthquake prediction?”

Whether you actually arrive at a definitive answer to your research question isn’t crucial. The important thing is to focus your research efforts on answering the broad question.
Figure A.1
Using a Concept Map to Narrow a Topic

Supplement: Specialized Skills
Gathering Information

The next step in your research is to begin gathering information. That requires knowing where to look (and knowing what you’re looking for), assembling a working bibliography, and then taking detailed notes.

Know Where to Look

Unless you’re using firsthand information—from interviews or experiments—nearly all your material will come from the library (although depending on the nature of your topic, some of it may be found on the Web as well). During this stage of your investigation, the library’s most valuable resources will be the reference librarian, indexes, periodicals, and books.

Get Help from the Reference Librarian

Before you begin your research, as well as any time during the process when you hit a snag, seek out the reference librarian. Although librarians may not be experts on your particular subject, they are experts at using the library’s research tools. Librarians can often suggest indexes or databases you may not have heard of, sources you didn’t think to consult, and searching strategies you didn’t try.

Consult Periodical Indexes

Most of your research will come from periodicals and books. It’s wise to consult the articles that relate to your paper topic before you begin to delve into books. Not only do periodicals frequently provide the most recent information on a subject; sometimes they supply the only information. In addition, articles often include important names and titles that relate to your subject and occasionally provide a valuable overview of your topic.

There are a number of general and specific indexes—both computerized and bound—for periodicals.

Using Computerized Indexes

Most libraries use computerized magazine indexes that enable you to type in the name of a subject, author, or title and receive a list of relevant articles. You may also be able to customize your search with keywords and/or Boolean searching.

Keyword search. Keywords can provide the most direct route to the articles you are seeking, especially when searching by subject isn’t convenient or fruitful. For example, if you want information about Gregg Toland, the cinematographer who
worked with Orson Welles on the movie *Citizen Kane*, you may come up empty if you use the subjects “Toland” or “Citizen Kane” in your search. The database simply may not have enough articles on these topics to justify a separate subject heading. If, however, you search for articles under a broader subject, such as “Motion pictures—American,” you may have to scan through hundreds of citations before you find appropriate ones. With a keyword search, by contrast, you can type in a word (or name) such as “Toland,” and the computer will reply with every article in its database that contains the keyword you have typed.

**Boolean search.** A Boolean search enables you to narrow your search by combining two or more keywords. Suppose you need information about the Detroit Lions football team. If you searched under the subject “Detroit,” “Football,” or “Lions,” you would have to scan thousands of citations that have nothing to do with your particular topic. But by searching for titles that contain both keywords—“Football” and “Lions”—you are likelier to pinpoint articles that deal directly with your topic.

These computerized indexes have some advantages over bound indexes and some disadvantages as well.

**Use Bound Indexes** Despite the abundance of computerized options for searching periodicals, some bound indexes remain. The most useful of these is the *Reader’s Guide to Periodical Literature*. Each volume lists by author and subject all the articles that appeared in several dozen magazines during a given year. To locate articles on your topic, consult the years in which you think those articles may have been published. Each entry in the *Reader’s Guide* gives you the information you need to locate the appropriate journal or magazine.

Your paper topic may pertain to a subject that has its own index. For example, if you are doing research in psychology, you can refer to several indexes that deal specifically with psychology and that include journals and magazines that aren’t listed in the *Reader’s Guide*. A number of other subjects, such as business and education, have their own indexes. In addition, large newspapers such as the *New York Times* publish indexes of their articles.

**Consult Book Indexes** Although some libraries may consolidate their search tools, books usually have their own indexes. Like the traditional card catalogs that came before them, most computer-based catalogs allow you to search for a book based on its subject, title, or author. In addition, many computer catalogs include advanced commands similar to those used with the periodical index that allow for keyword and Boolean searching.

Even if all your library has is a paper card catalog, you can sometimes still use the Internet to help make your search more efficient. Use a computerized search to come up with an extensive list of possible sources, taking advantage
of the keyword searching that you wouldn’t be able to use in a card catalog. You won’t be able to search your library’s specific holdings, of course, but you will be able to come up with a pretty good list of books in print on your subject. Then, with a printout of your list, go to your library’s card catalog and see which books are actually available.

**Assemble a Working Bibliography**

As you discover magazines and books that relate to your research, add them to a *working bibliography*—a list of promising sources that you plan to consult. Be generous in compiling your list. It’s better to check out several references that do not help than to miss a good one because its title isn’t appealing.

Instead of listing all these references on a large sheet of paper, you can use a separate index card for each reference. Then later on, if you decide that a particular reference doesn’t help, you can simply throw away its card.

Figure A.2 provides an efficient format for putting your bibliography on index cards. On the front of the card, record the following information:

- The name of the library where the periodical or book is located
- A short title of your subject. A title will make it easier to locate a particular card and will aid in clustering your information.
- The library call number
- The reference information—that is, the author, title, publishing data, and any page references—in exactly the form that you plan to use it in the bibliographical portion of your paper. This ensures that you will include all the essential parts of the reference and that typing your paper will be much easier.

On the back of the card, jot down your assessment of the reference. If the source doesn’t seem useful, then briefly explain why. If the source appears helpful, jot down how. Then when you have a chance to take another look at
the article or book, you'll know why you thought it would or would not be useful. And if you shift the focus of your paper, you'll be able to determine whether sources you had eliminated should now be consulted and whether previously promising sources will no longer be of help.

**Take Notes**

Using your bibliography as a springboard, you can investigate your sources and begin taking notes. There's no getting around it—taking notes is time consuming. But if your notes are easy to use, neat, brief, and accurate, then the bulk of your paper will be written by the time you have completed the note-taking step.

**Make Sure Your Notes Are Easy to Use**

To make your notes easy to use, jot each note on a separate piece of paper rather than writing them one after the other on regular-sized sheets. Index cards are commonly used for notes, although you can use slips of paper instead. Whether you use cards or slips, you will be able to rearrange them easily and often because each note is separate.

Another way to make your notes easier to use is by conscientiously identifying each card or slip. In the top left corner, write the author's name or the title of the source you consulted. Then at the bottom right, jot down the specific page on which you found the information. With these two markings on every note card, you can easily verify or add to any information you’ve gathered for your paper. In addition, you’ll have all the information you may need for your citations (see Figure A.3).

**Keep Your Note Cards Neat**

Detailed notes are useless if you can’t read them. Write your notes neatly the first time, even if it takes a little longer to do so. Use the modified printing system (see Chapter 10) to write quickly but legibly, and write in pen, instead of pencil, to avoid smears and fading.

![Figure A.3](image-url)
Keep Your Note Cards Brief
Brevity is the secret behind a useful note card. Get to the heart of the matter with each note you take. Make your notes concise, yet sufficiently detailed to provide accurate meaning.

One simple way to limit the length of each note card is by abbreviating common words. For example, use w/ instead of “with,” co. instead of “company,” and govt in place of “government.” Develop your own abbreviations for words you commonly use. For example, if you’re doing research on earthquakes, you may want to use RS to stand for “Richter scale” and tect plates to abbreviate “tectonic plates.” Be careful not to go overboard with abbreviations, however. Abbreviating words may save you time to begin with, but you don’t want to waste that time later trying to decipher your unfamiliar shorthand.

Strive for Accuracy
Because you’re dealing in facts, you must make certain that the information you jot down is accurate. It’s relatively easy to remember as you’re taking notes who said what and which of the thoughts you are writing down are your own and which are the thoughts of the author. But between the time you fill your last note card and the moment you write the first line of your paper, you’re liable to forget these crucial details. To counteract forgetting and to ensure the information in your paper is accurate, distinguish clearly on your note cards between quoted ideas and paraphrased ideas and between the writer’s thoughts and your own.

Copy Quotations Carefully
When you quote from a book or an article, make sure that you do so carefully. Place quotation marks on your card around the exact words you copied from the reference. Compare your version with the original quotation to make sure you copied it correctly. Don’t change the wording or the spelling of the author’s quotation. If you find a misspelling or a grammatical error in the quotation, you may use the bracketed notation [sic] to make it clear to your reader that you’re aware of the mistake.

If you leave out a section or even one word from a quote, use three ellipsis points ( . . . ) to indicate the omission. If the words you left out came at the end of a sentence, add a period before the ellipses.

The purpose of an ellipsis is to leave out information that doesn’t relate to the point you are using the quotation to support. An ellipsis should not be used to rearrange a quotation simply to suit your needs. Ellipses are intended to abbreviate a quotation, not alter its meaning.

Mark Thoughts of Your Own
Some of your best ideas may occur as you’re taking notes. Put these thoughts on paper right away, but do so on a separate card or slip marked “my idea” or something similar. That way you’ll be sure not to confuse your original ideas with the ones you’ve encountered in your reading.
Paraphrase What You Read  Although it is important to distinguish your original ideas from the ones you have read, there’s nothing wrong with paraphrasing—expressing someone else’s ideas in your own words—as long as you give proper credit to the source. If you paraphrase as you take notes, you’ll often be able to transfer what you’ve written in your notes to your draft without changing a word.

Devising a Framework

You can devise a solid framework for your paper out of a pile of disconnected notes by deciding on a basic premise, clustering your notes under a handful of main ideas, and plotting out a clear and logical organizational pattern.

Decide on a Basic Premise

In the same way that choosing a focus helped provide direction for your research, deciding on a basic premise from the notes you now have lays the foundation for your paper’s organization. Potential arguments, apparent similarities, and possible theories all have a way of rising to the surface in the process of taking notes. Any of these can be used to form a basic premise, which is the fundamental approach that underlies your paper. If a premise doesn’t become obvious to you as you’re taking notes, go back over the information and ask yourself some hard questions. For example:

Where is this paper heading?
What are the ramifications of the information I’ve assembled?
What point is most important?
What am I saying?
What do I want to say?

If there’s a choice of viewpoint—for or against a question, for example—which view has the most evidence to support it? If you’ve done a good job of research, you should be able to decide now what you want to say in your paper, and you should have the evidence in your notes to support that view.

Cluster Your Notes

The paper’s basic premise should act as a magnet for clustering your notes, which enables you to draw out the most important ideas from the dozens and perhaps hundreds of notes you have written. In most cases, a research paper
Chapter A: Writing a Research Paper

should incorporate fewer than seven main ideas. These ideas will form the framework for your paper. The cards or slips that remain won’t be wasted but will be used as support for the more important ideas. Of course, if a note isn’t important enough to be considered a main idea and doesn’t provide support for the main ideas, that note should be left out of your paper.

Choosing the main ideas and clustering your research notes require selectivity, the same skill you used not only in narrowing your original paper topic but in studying conventional notes as well (see Chapter 4). In fact, if you find it difficult to pick out a handful of main ideas from a pile of notes, apply the following three-step system to help pinpoint the pillars that will form your paper’s supports.

1. Read through your notes and pick out those cards or slips that seem more important than the others.
2. Now that you have two piles of notes instead of one, pick up the smaller pile and repeat the process, pulling out the most important notes and using them to make up a third pile.
3. Finally, pick up the third pile, which by now should contain only a dozen or so cards or slips, and find four or five ideas that seem to be the most important ones. These ideas will be the basis of your premise and of the pattern for your paper.

Plot an Organizational Pattern

Your basic premise and personal choice largely determine the pattern your paper will follow. You could use any of the organizational patterns listed in Chapter 10 as the framework for your paper. The time pattern or the process pattern is appropriate for most college papers. For some papers, however, you may be required to develop an argument. A good pattern for such papers is to begin with a statement of your premise and then support it with logical examples that build to a conclusion. This kind of organization affords more flexibility than the others.

You may need to experiment with several patterns before you arrive at a framework that adequately accommodates the information you want to include in your paper. Don’t be discouraged by the inevitable period of trial and error.

There’s no one “correct” way of plotting your paper. You may feel most comfortable using a traditional outline. Or you may find the process of mapping easier and more enjoyable.

To map out your research paper, use the notes that contain your paper’s main ideas and subideas (or jot these ideas down on small slips of paper). On a clear surface such as a desk or a tabletop, shift these ideas around like checkers on a checkerboard, clustering them in various ways, according to the premise of your paper.
If you’re planning to structure your paper using the time or process pattern, arrange your ideas so they follow logically from the earliest to the latest or from the start of the process to the end. If you’re structuring your paper as an argument, decide which of the major points should be made first; then arrange the remaining points in an order that will make your argument smooth, logical, and easy to follow.

The chapter maps in this book provide examples of the process and argument patterns. The map in this chapter, for example, uses the process pattern, spelling out in order the steps for writing a research paper. The map for the text’s Chapter 12, in contrast, develops an argument; it asserts a premise—managing test anxiety requires preparation—and supports the premise by detailing the ways to prepare.

When you arrive at an arrangement that incorporates your information and makes logical sense, you have found a suitable pattern for your paper. Once you have arranged the cards or slips that contain your major points in an effective order, repeat the procedure by arranging the notes that contain your minor points. Think of each major point as a premise in itself. Then arrange the minor points that support a major point in a clear and effective way.

If, as you arrange your notes, you find gaps in your organization, you may need to create new categories or perhaps even return to the library to take more notes.

Finally, with all points arranged to your satisfaction, go back and number your note cards or slips according to the order in which they’ll appear in your paper.

### Writing the Paper

You already have most of your paper worked out—information, sources, organization. Now all you have to do is put your data into sentences and paragraphs and work up a first draft of your paper. Once that is accomplished, allow yourself plenty of time to go back and revise and edit what you’ve written, add the missing elements, and type the final copy.

### Race Through the First Draft

The best way to start writing is simply to write. Pausing with your pen poised over an empty page or with your fingers resting idly on a keyboard waiting for inspiration to strike is a useless endeavor. Inspiration, like concentration, seldom comes when you call it. Once your hands are engaged in the physical motions of writing, your brain will follow.
Write your first draft as rapidly and spontaneously as possible. To ensure continuity, record your thoughts as they go through your mind. Don’t stop to ponder alternatives. Although you will probably write too much, don’t be concerned; it’s easier to cut out than to add.

In your first draft your goal is simply to transfer information from your notes to your paper or computer screen. Take each card or slip in order and write. Start with major point one. State what it is, and then use supporting evidence to show why it is so. As you use a reference from the card, note the card number on your paper. You can put the footnotes in later, taking the exact information from the card. Continue to write, following your organized and numbered notes.

Only after you’ve completed your first draft should you step back and take a look at what you’ve written. If you typed your draft using a computer, print out a hard copy so you can jot down your comments. Regardless of whether your draft was handwritten or output by a computer printer, go over what you’ve written and pencil in changes, adding words or phrases and circling lines or paragraphs you want to move or remove. Figure A.4 shows a page from a handwritten first draft, complete with annotations, insertions, and other marginal markings.

While your markings are still fresh in your mind, write or type a clear copy that incorporates all your changes. Don’t wait before adding in these corrections. If you delay even a day, you may lose a lot of time trying to recall exactly what you meant by some of your notes. And if you type or rewrite the material while it’s still fresh, you may find that you do some spontaneous revision.

Once you have made these changes, put your draft aside for a while. To gain objectivity about what is in the paper and what is still missing, you need a cooling off period of at least a day. When you return to your paper, you’ll then more easily spot errors and weaknesses in your writing.

**Revise and Edit Your Paper**

The hardest part of writing a research paper is completing the first draft. From that point on, you’ll be refining what you’ve already written. In the next drafts—and you may write two, three, or even four drafts before you are satisfied with your paper—you’ll focus on strengthening supporting evidence and fine-tuning technical details such as transitions, grammar, and spelling.

**Strengthen Supporting Evidence**

Students often state a main point and then go on to something else without supporting it. The kinds of evidence you need to support a major point are statistics, quotations from other published works, facts, examples, comparisons and contrasts in views, expert opinion, and description. If you make statements and
follow them up with generalities, you will not convince your reader that your main point is true. Use what you have collected on your cards to support your points. Here, with examples, are the steps you can take to develop a major point:

1. State your point clearly.
   
   The two sides of the human brain perform distinct functions.
2. Develop the point beyond a brief statement.
   According to the theory of brain laterality, the left hemisphere of the brain handles
   analytical thinking, while the right hemisphere is the home of abstract thought.

3. Support with data from authorities and with statistics.
   Drs. Michael Gazzaniga and Roger Sperry found that the cerebral hemispheres
   process information differently (add reference here). Subsequent research deter-
   mined that the brain’s left and right sides contrast information that is symbolic and
   conceptual versus information that is nonsymbolic and directly perceived.

4. Illustrate with examples.
   For example, if you were to add up a column of numbers, you would probably be
   using the left side of your brain. But if you were sketching a picture, you would be
   engaging the right side.

   Be sure that all the main points are supported equally with this kind of evi-
   dence. If you can’t find enough evidence to support one point, perhaps it’s not
   a major one. You may need to reorganize the structure of your paper to include
   that point under one of the other major points.

   Avoid padding. You may be tempted to add words or to rephrase a point to
   make the paper longer. Such padding is obvious to the reader, who’s looking
   for logical arguments and good sense, and will not improve your grade. If
   you haven’t enough evidence to support a statement, leave it out or get more
   information.

**Fine-Tune Technical Details**
Although awkward transitions, clumsy grammar, and poor spelling may not af-
fect the basic meaning of your paper, they do affect the reader’s perception of
how you have thought about your topic and what you have written.

**Provide Transitions**  In writing your paper, consider how to help your read-
ers move easily from one main point to the next. If they feel that there’s no
connection, they will find it hard to follow the logical sequence that you have
established in your own mind. You must therefore use transitional words and
phrases to make your paper easy to follow. (See Chapter 10 for a list of these
words.) Check carefully for transitions, and insert them where they are needed.

**Correct Grammar**  Students who use the English language correctly get their
ideas across to other people more clearly and forcibly than do those who stum-
ble over every sentence. Moreover, students who apply the rules of grammar in
their papers earn better grades. If you are unsure about these rules or careless
with them, your meaning may get lost. If you feel that you could use a review
of grammar, there are good texts that give you the elements of English gram-
mar by a programmed method. Some of them are even fun to read.
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Supplement: Specialized Skills

Here’s a brief list of some popular handbooks of English grammar:


Check Spelling  If your spelling problems are not severe, you will find a dictionary helpful. If your spelling is poor, look for one of the paperback books that list the most commonly misspelled words. If you cannot recognize that you are spelling words incorrectly, have someone who is good at spelling read your paper and mark, not correct, the words that are wrong. Then look up and insert the correct spellings. If you do this conscientiously over a period of time, you will improve your spelling.

Of course, if you are writing your paper using a computer, you can use a spell-checking program to pinpoint your spelling mistakes. The spell checker compares each word you have typed with the words stored in its dictionary and calls your attention to words that don’t appear there. Although the computer can catch many of your spelling errors, it isn’t infallible. The size of the dictionary is limited, and the spell checker is unable to recognize words that are spelled correctly but used incorrectly (such as *there* instead of *their*).

Add the Missing Elements

Having revised and edited your writing, you can now add the missing elements that will make your paper complete. Because your paper is a research paper, you must give credit for your information by including citations and a bibliography. In addition, the paper will need a title, an introduction, and a conclusion.

Give Credit Where It’s Needed

To avoid any appearance of plagiarism and to demonstrate the depth of your research, attribute quoted or paraphrased material and include a bibliography.

Don’t Plagiarize  Plagiarism is stealing other people’s words and ideas and making them appear to be your own. It need not be as blatant as copying whole passages without giving credit. If you paraphrase something from already pub-
lished material and do not cite your source, you’re guilty of plagiarism even though you may have no intention of stealing. Simply rearranging sentences or rephrasing a little without crediting is still plagiarism.

Those who grade papers are quick to notice a change in writing style from one of your papers to another or from one part of your paper to another. Your writing is like your fingerprints—individual. If you try to use another’s work, his or her style will not match the rest of your paper, and the difference will be obvious. If you stole some sentences or paragraphs outright, your theft will be easy to detect, especially if you took from material that is available on the Internet. Instructors may give you the benefit of the doubt if they cannot prove where you got plagiarized material. But if they can—and doing so is usually not difficult—plagiarism is grounds for expulsion from college. In a world where the written word is a major product, stealing it from someone else is a serious offense.

Include Citations Avoid plagiarism by crediting material you’ve quoted or paraphrased to its source. You may include a credit right after the quoted material, within the body of the paper, in a format like this: (Jones 2003, p. 264). This citation refers to page 264 of the work by Jones that was published in 2003 and is listed in your bibliography. Or you can use a superscript ¹ and cite the full source at the bottom of the page or in a complete listing at the end of the paper. Credits that appear at the bottom of the page are called footnotes. Figure A.5 shows a format for footnotes and for credits at the end of the paper. References are numbered in the order in which they appear in your paper. Other forms are given in handbooks on English usage.

Supply a Bibliography The bibliography lists the sources you cite in your credits and may include other books or published material that you read as background for the paper but did not quote. A bibliography is not “notes,” “endnotes,” or “sources.” It is a listing of the books that you used in preparing the paper, and you should use the correct title for this listing. When you compile the bibliography, use the index cards you prepared earlier. Each entry should include enough information so that a reader can identify the work and find it in a library.

Entries are listed alphabetically by author. Different bibliographic forms are used in different fields of study. Either select a standard form from a handbook on English usage, or follow the form used in one of the journals on your subject.

Ask your reference librarian to assist you in finding the style manual for a specific field such as biology, chemistry, law, mathematics, physics, psychology, and so forth.

The following three widely used general style manuals will provide you with a form for your citations and bibliography:


No matter what form you use, follow it consistently for every entry in your bibliography. Figure A.6 shows a common bibliographic form.

**Choose a Suitable Title**

It is often a good idea to wait until you have written the paper before you decide on a title. Although the title should reflect the content of the paper, you can give it an interesting twist or perhaps make use of part of a quotation that seems particularly appropriate. Of course, there’s nothing wrong with a straightforward title. In many cases, a no-nonsense title that gets straight to the point is your best choice.

**Write an Introduction**

The paper’s premise serves as the basis of the introduction. In revising your paper, you can expand on this premise and come up with the introduction in its final form. In addition to stating your premise, the introduction explains how
you plan to support it and can include an apt example, anecdote, or quotation. Choose any of these devices carefully; they must be right on target. If you’re not sure they will contribute to the paper, then write a straightforward statement.

**State a Conclusion**

Don’t end the paper without a concluding passage. If you do, your readers will be left dangling, wondering what happened to you and the rest of the paper. Let them know they have come to the end.

By now, all your major points should have been made and adequately supported. The primary purpose of your conclusion is to restate or summarize your basic premise. In addition, you may want to use your premise to draw a related conclusion. For example, if your premise states that alcohol is one of the country’s leading causes of death and your paper has supported that contention with data and examples, you may want to conclude with some suggestions for dealing with the problem of alcohol abuse:

- Taxes on alcoholic beverages should be increased.
- Beer, wine, and liquor companies should be made to subsidize alcohol treatment programs.
- Americans must overcome their tendency toward self-destructive, addictive behavior.
- Alcohol education should begin at the elementary school level.

Although the rest of your paper should be backed up with information you discovered through research, the conclusion affords you the opportunity to state your own opinion and draw a personal conclusion.

In general, of course, the kind of conclusion you write depends on the paper and the subject. In most cases, the conclusion need not be long and involved. But be certain you include one.

**Print the Final Copy**

All the time and energy you have spent on your research paper should be reflected in the appearance of the final copy. Make it neat, clean, and attractive.

1. Use only one side of white paper. Although instructors seldom specify, most assume that your paper will be written on 8½ × 11 inch sheets.
2. Leave a generous margin at the top and bottom of each page and a margin of 1½ inches on both sides to provide room for the instructor’s comments.
3. Type your paper or have someone type it for you. Of course, if you’ve composed your paper on a computer, simply print it out. Handwritten papers are time consuming to produce, difficult to read, and are rarely accepted.
4. Set up long, direct quotations (of five or more lines) in block style—that is, single-space and indent the lines from both sides about a half inch or five spaces. Omit the quotation marks when you block a quotation in this way—the block setup shows that you are quoting.

5. Proofread your final copy. Go over it carefully to catch spelling errors and other minor flaws. Don’t rely entirely on a spell checker. This is a very important step.

**SUMMARY**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you arrive at a research topic?</td>
<td>Start by selecting a general subject that interests you. Then narrow it down to a topic that’s specific enough to cover in depth but large enough to allow you to find a sufficient amount of information. Finally, focus your topic by asking a question that gives your paper direction and purpose.</td>
</tr>
<tr>
<td>What sort of information should you look for, and where can you find it?</td>
<td>Look for books and magazine articles that deal with your specific topic. You can find them by searching the library’s catalog for books and by consulting a periodical index for magazine articles. If you get stuck in your search, ask a reference librarian for help.</td>
</tr>
<tr>
<td>How do you assemble a working bibliography?</td>
<td>Write the bibliographical information for each reference you plan to consult on the front of an index card or slip. Use the back to summarize your opinion of each article or book.</td>
</tr>
<tr>
<td>How can you ensure that your notes are easy to use?</td>
<td>Jot each note on a separate card or slip. On each, write the author and the page number of the source so you’ll be able to verify the accuracy of your notes with ease and have all the information you need for citations. Use the modified printing style to write both quickly and neatly, and write in pen to prevent your notes from fading or smearing. Take concise but detailed notes. Use abbreviations for common words.</td>
</tr>
<tr>
<td>How can you ensure that your notes are accurate?</td>
<td>To ensure that the information in your notes is accurate, make a clear distinction among your own ideas, paraphrased information, and quoted material. Copy quotations exactly as they appear in the source. If you shorten a quotation, insert an ellipsis in place of the words you’ve removed.</td>
</tr>
<tr>
<td>How do you decide on your paper’s basic premise?</td>
<td>The premise for your paper can grow out of potential arguments, apparent similarities, or possible theories that you’ve developed from going over your notes. Select the notes with the most important ideas you have jotted down, and then group the other notes beneath the idea they support. If a note doesn’t support any of the main ideas, do not include it in your paper. Use your premise as a starting point to organize your clusters of information into a logical pattern. Most college research papers follow one of three basic forms: the time pattern, the process pattern, or the development of an argument.</td>
</tr>
<tr>
<td>How do you cluster your notes?</td>
<td></td>
</tr>
<tr>
<td>How do you plot out a pattern for your paper?</td>
<td></td>
</tr>
</tbody>
</table>
Speed, not style, is the key to completing your first draft. For now your goal is simply to get everything written down. Move systematically through your cards or slips, turning notes into sentences and combining sentences into paragraphs.

You can do so by double-checking your paragraphs to make sure that each idea is sufficiently developed. If an idea lacks support, bolster it with further explanation, data from authorities, statistics, or examples.

Use transitional words and phrases to guide your reader through your paper. Make sure your grammar and spelling are correct. Consult an English handbook or a dictionary when in doubt.

You should include a citation for every reference you make, a bibliography of the sources you used, a title, an introduction, and a conclusion. These make your paper complete.

Your final copy should be neat, clean, and attractive. Type it carefully with generous margins, using only one side of each sheet of white paper, and double-check each page to make sure it is free of errors.

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My First Research Paper

By Walter Pauk

Registration was like a game of chess. The smart students made their moves early. Some lined up before dawn, while others used the university's new computerized system to register from home. They registered early, not especially to get the best courses, but to avoid being "stuck" with one—the one taught by Professor Wilbur Hendricon.

The word on the grapevine was that this was a course to be avoided by the faint of heart. The chances of being forced into Professor Hendricon's course were slim but still too terrifying to take a chance. Professor Hendricon had, as the students said, "a special deal with the administration." He could handpick twenty-five students for his class, but had to take another ten at general registration.

This unusual procedure was a compromise. It came about this way: Professor Hendricon had originally taught only graduate courses; but ten years ago he decided that he would like to teach one section of English 105. So Professor Hendricon suddenly proclaimed to the dean that he would take twenty-five first-year students and turn them into scholars.

The dean was faced with a dilemma. On the one hand, the proud and sensitive Hendricon might take a negative answer as a rude rebuff. Also, the dean thought, "If he resigns, I will have to answer to the president." Hendricon was the university's brilliant light and other universities eagerly tried to woo him. On the other hand, a
positive answer would be a blow to the morale of the other members of the English Department, who had no choice but to take their usual thirty-five students per class. The dean consulted her colleagues and persuaded them to accept the compromise. Needless to say, I was one of the unlucky ten.

Right from the very first day in class, I could see how well Hendricon had chosen. The twenty-five were geniuses. I later discovered that they all had straight As in high school and that they were clustered at the top of the scholarship list. Furthermore, they excelled in language and literature, while my strengths were in mathematics and music. Math skills and musical talent did not count for much in an English course.

At first I thought Professor Hendricon’s legendary standards might just be rumor, but after the first test any hopes evaporated. We unfortunate ten compared notes and found our grades in the 30s and 40s. But no one questioned Professor Hendricon’s honesty and sincerity. Our papers were filled with notations, symbols, and helpful comments. We did, however, question his standards. They were not for us mere mortals.

Six of the ten transferred to other sections of the course immediately; the other three students transferred after the second test. Everyone knew that transferring was possible. The other instructors expected to get all ten of us in their classes within the first few weeks of term. In this way, morale was preserved, because administratively, at least, all the classes started out with thirty-five students each.

Perhaps it was the lemming instinct in me or perhaps it was Hendricon’s appeal, but I decided to hang in. On the day after the last date for changing classes, I took my usual seat. The other twenty-five students, who usually chatted loudly until Professor Hendricon entered the door, were strangely silent today. You see, in all these past ten years, not one of the unchosen had ever stayed in Hendricon’s class. Everyone knew this.

We could hear Hendricon’s brisk but firm footsteps drawing closer to the open door. The pace was faster than usual. We saw the toe of his left foot puncture the blank space of the doorway. The blood was pounding at my temples. My breathing was fast and shallow. Hendricon always walked straight to the lectern, put down his notes, and said, “Good afternoon” to the class. As he entered today, he glanced at me with a curious look. He did not greet the class as usual. He just lectured, but more seriously. I could not keep my mind on the lecture. No one could. It seemed that I had spoiled the atmosphere of this select club. Why had I not been less foolhardy?

On Monday, however, the class resumed its normal pace and atmosphere. I was present but not accepted. The chosen twenty-five sat in a solid square. I sat outside the square, separate but linked like an appendix. But that did not bother me, for I was really fascinated by Professor Hendricon. He was a great teacher. I took copious notes and studied the assignments carefully. I occasionally forgot myself and spoke out during discussions. I worked hard on tests and examinations, but they were never quite up to standard. I could usually understand the ideas and concepts, but
time always ran out. I needed more time to think. But I was not discouraged because I was enjoying the course and learning a lot.

It was just after the Christmas holidays that Professor Hendricon announced it. “It” was the research paper—3,500 words and counting for one-third of the final grade. I should have been petrified because I could not write, and yet, I was glad. This was my chance to raise my present hard-earned average of 62.7% to the necessary 70.

This would be the first instance where I would have an advantage over the students—I would have the advantage of time. I needed time. Time is the great equalizer; time is democratic. We all receive the same amount of it every morning. No distinction is made between the genius and the plodder. This is what I told myself; it helped me feel a little better.

There should not have been any excitement because everyone knew about the Hendricon paper. It was indeed another factor that encouraged the rush to register early for other courses. The paper was not due until after the late winter break—almost two months off. But still, there were groans and whisperings. I could hardly hear the professor’s caution against plagiarism. “Use both the primary text as well as secondary critical sources,” he instructed against a background of restless inattention. Very few paid attention to his next point about thinking carefully before choosing a topic. I somehow caught, “Once you have decided on your topic, it should be narrowed three or four times.” What did he mean by this?

After the others had left, I edged up to Professor Hendricon, who was gathering up his lecture notes, and asked about the idea of narrowing the topic. He said, “If, for example, you were doing a history course, and you chose as your topic the ‘Civil War,’ you would be almost sure to fail. You simply could not do justice to such a large topic—dozens of books would be necessary to cover that subject, not an undergraduate research paper. Even a second narrowing of the topic to the ‘Battle of Gettysburg,’ a major engagement in the war, would still be too broad. A third stage of narrowing such as the ‘Battle of Cemetery Ridge’ would be more manageable, but your focus might not be sufficiently defined yet. So perhaps a further narrowing to the ‘Tactical Importance of Cemetery Ridge’ might be necessary. This would be an aspect of the original broad topic on which adequate information could be found to write an in-depth paper.”

I was so excited about writing the term paper that I went straight to the library, eager and determined to find an interesting topic on which to use this technique of narrowing. I was surprised to find the cavernous library so empty of students. But of course, there would be time during “reading week” and the late winter break—there was no pressure yet. I went directly to the reference librarian, who showed me how to use the various special reference books. Another librarian, who joined us, had an interesting idea. She said, “If you choose a subject area carefully in your first year, and continue throughout your university years to research and write in that area, you could probably become quite an expert.” This idea intrigued me.
Over the next few days I brainstormed possible topics for my paper. First, I scrutinized Professor Hendricon’s course outline, mulling over his lecture themes and the prescribed authors and texts. Then I returned to the library to peruse reference books such as encyclopedias, surveys of literature, and biographical dictionaries. I developed a list of nineteen topics that interested me. I reflected on these over the weekend and after careful deliberation rejected fourteen of them.

The remaining five topics I decided to discuss with Professor Hendricon. He seemed happy to see me. In about five minutes we eliminated two. As far as the other three were concerned, he suggested that I talk about each with professors who were experts in the respective areas.

These talks were especially stimulating. I got to know three new professors from whom I received not only useful insights about narrowing the topics, but also details of important sources and prominent authorities as well. After thinking through the suggestions made by these professors, I settled on the area that was most appealing to me.

I arranged another session with Professor Hendricon to inform him of my decision and to obtain advice on the direction my assignment should take. We discussed the precise purpose of my paper, and, over a cup of tea, we juggled words and finally formulated a challenging question to launch my research. I emerged from his Dickensian study aglow with inspiration and enthusiasm. The stern and serious Hendricon of the lecture hall had a warm and sensitive side that few students had glimpsed.

So, with the topic narrowed and a clear sense of direction established, back to the library I went to search for sources and to start my research. With the first week over I was surprised to find none of the class in the library. During the first term I had learned how to use the library’s computerized catalogue. Why not explore other searching opportunities offered by the computer system, such as using a keyword to locate titles relevant to the focus of my research? I was amazed at the wealth of material available through the computer catalogue, and soon I had an impressive list of titles in my working bibliography. Gaining confidence, I decided to use the CD-ROM databases and discovered a number of periodical articles pertaining to my research question.

I gathered some of my sources and began taking notes on pages of paper. The reference librarian, ever helpful, wandered over and asked if I knew the advantages of recording my notes on index slips. Without waiting for an answer, she said that the ability to categorize my notes would ensure a much more efficient research system. Her specific suggestions were these:

- Record only one point, or a small cluster of related points, on one card.
- Record only information that is relevant to the purpose of your research.
- Use only one side of the card.
- Each card should indicate the author and page numbers of the source.
- Enclose all verbatim notes in quotation marks.
• Most notes should be paraphrased or summarized.
• Whenever you have a thought or insight of your own, jot it down and enclose it with brackets to signify “my own.”

Noticing that I had no slips, she darted to her desk and pulled out the bottom drawer and thumped several rubber-banded stacks of cards on my table. “These are old cards left over when we converted the catalogue to a computer system. They are used on only one side. You are welcome to use them for your research notes.”

The card method intrigued me and now that I had a wide-ranging list of sources, I was anxious to get started on the research. I worked steadily in the library for the next two weeks, averaging two to three hours a day. It was surprisingly easy jotting down important information and ideas on cards and indicating the sources and page numbers. Rather than waste time writing out the author’s name or the title on each card, I used a simple coding system to identify each source. I did not have a written outline. I had tried to prepare one after formulating my question, but I could not anticipate the material I would find. I also sensed that it would be too restricting. However, although I did not have an outline, it would be unfair to say that I selected the material for my note cards haphazardly. I selected material that had a bearing on my specific question. Once I immersed myself in the research, I began to sense what was relevant and what was not.

After two weeks, I had a shoebox full of cards. I was ready to start structuring and drafting the paper. During the course of the research I had sketched out a tentative list of sections that might serve as an outline. I stepped back from my intense two-week spell of research to reflect on the provisional outline. Keeping the research question uppermost in my mind, I modified the sections so that they would provide a structure around which I could shape my answer. Next, I read through all my note cards and moved them into categories corresponding to my outline. Having notes on each card that pertained to only one idea permitted me to place the cards in separate categories. If I had put two different notes on one card, I would have had to rewrite the information onto two separate cards now. I was glad that I had a system. It was like playing a card game.

My outline required further modification because not all the cards fitted the major sections. I added another section to accommodate some of the cards, while a number of cards simply did not fit into any of the sections. So, with the cards in categories, I started to follow the second step of the librarian’s advice. I began to shift the piles of cards into an order that seemed logical for my paper. It was surprisingly easy to reorder the piles of cards so that there was a logical flow in the sequence of the sections.

With the categories of cards spread out before me, I began to study each category independently to create a detailed outline. As I wrestled with sections, subsections, and supporting material, I began to see where I had gaps in data and weak spots in the argument. My detailed outline revealed plainly the areas in which my paper lacked balance.
and completeness. My work was cut out for the next few days since I needed specifics that the paper at that point lacked. I was glad that each card carried a reference to the source, so that I could locate not only the source but the precise page as well.

After a few hours of additional research in the library, I was able to augment my note cards. I felt that the more complete I could make my collection of cards, the more effective the first draft would be. I remembered Professor Hendricon’s advice: “If you do not gather enough first-class material, you will have trouble writing a major paper.” I used some of the new research information to revise and refine my detailed outline.

Finally, I was satisfied with my outline. Then I began to write the first draft. It surprised me to see how easy it is to write a long paper once the material is placed in order. I actually enjoyed the process. It took four days of writing in my spare time to complete the draft. I preferred writing my first draft in longhand because I seemed to think more clearly when writing rather than typing. On each day, I concentrated on writing one of four major parts of the paper. When I had finished, I immediately read it over and it sounded good to me—so good that I knew I would be able to enjoy the late-winter holidays. A wonderful reward. First, I had to type up my draft on the computer, and after saving it carefully on the hard drive, I took the floppy disk over to the computer center and printed a copy. I proudly left the copy on my desk to “cool” while I went home for the holidays.

On the last day before we departed for our week’s holiday, Professor Hendricon did his duty as a teacher to remind us to work on our papers because they were due five days after our return to campus. The students fidgeted, a nervous laugh or two mingled with some of the spontaneous whispering, but no one said anything. I thought to myself that I had not seen any of the chosen twenty-five in the library; but then they could have been there at other times. Also, the thought struck me that they loved to discuss every moot point and debate hypothetical issues. They seemed to excel at writing creative papers, often at the last minute, with information they already had in their heads. Perhaps a research paper that demanded hard and dogged work was just too rigorous for their creative souls. Well, I just thought these thoughts and was a bit ashamed at my suspicious mind.

Even though I was still failing Professor Hendricon’s course, the warm feeling generated by my completed draft provided the tone that I needed to enjoy my holidays. I had a good rest.

I arrived back on campus on Friday to avoid the weekend traffic. That evening, feeling proud of myself, I casually picked up my draft and, to extract the maximum amount of satisfaction from my accomplishment, I began reading. By the time I had finished page 3, my smile had vanished, and by page 10 fear had gripped me. The development of my thesis, which sounded so smooth upon completion, was now disjointed and repetitious and some paragraphs were meaningless. How could that be?
I pacified myself after the initial shock by realizing that I still had seven days, while many of the other students in the class had not even started their papers. Most of them would only arrive back on campus on Sunday evening, and that would leave them but a scant five days. As I pondered how to fix up my research paper, I realized, for the first time, the truth of the words that I had discarded as "teachers' preachings": “No paper should ever be handed in unless you have revised it. For the revision to be effective, you must always put your paper away for a few days so that you will lose some familiarity with it. Then, when you reread it, you will be better able to spot the weaknesses and the rough sections. Once these are spotted, revise, revise, revise.”

My paper was certainly rough. I recalled the steps for revising: First, look through the draft to make sure the ideas are understandable and supported by details and examples. Second, make sure the organizational plan for the paper is clear and that the sections follow in logical sequence. Third, check for consistency of style, and, finally, ensure that the mechanics such as spelling and hyphenating are correct. I discovered that I had scattered throughout the paper bits of interesting information—interesting but not always pertinent. I added some of the misplaced material to the introduction and eliminated the rest. It was tough to throw away these gems that I had worked so hard to extract from my sources, but I heard ringing in my ears: “Good writers don’t put everything down that is interesting. Remember the iceberg with its nine-tenths underwater and only one-tenth showing above the surface. This submerged part—your background work—gives the iceberg its strength and power.”

After weeding out the irrelevant material, I concentrated on the structure of the paper and discovered that it, too, was a bit vague. Parts of the general statement that should have been at the beginning were in the body of the paper. So I sharpened the introduction by stating the thesis and then broke it down to the five main points that I had planned to establish and support. By the time I had reworked the introduction, I really knew for the first time what I was attempting to do. I was shocked to realize that my own understanding of what I was trying to do had not been clear. By the time I went to sleep on Sunday, I had hammered out a clear statement of what I was trying to establish and support.

Monday rolled around all too soon. The vacation was over. There was a lot of activity on campus as students accelerated into a faster tempo of study. Papers were due, final examinations hovered on the horizon, and most plans to complete work during the holidays had fallen through. Hendricon reminded the class of the Friday deadline. There was no whispering this time, just grim silence. I, too, contributed to the silence. I had to write not only a passing paper, but a paper good enough to earn an 85 if I was to raise my average to the passing grade of 70. I had, perhaps, counted too heavily on time and technique. Time was running out and technique was not holding up. But I still had a chance. Most of the chosen twenty-five, I was sure, had not even started.
I worked hard to strengthen the body of the paper by realigning my main sections in the same order as in the statement of thesis in the introduction. I made sure that each main section led off with a brief paragraph that introduced the section. Then I grouped the supporting information in a number of separate paragraphs all focused on the central idea of the section. As I worked through the other sections, checking the paragraph structure, I was surprised to discover that some of the supporting materials were still widely scattered even though I had carefully laid out a sequence when I grouped my note cards. By moving some of the information to more appropriate sections, I was able to eliminate repetition. I reworked each main section, especially those that seemed vague or hastily composed. Occasionally, I dug back into my collection of note cards when an idea needed additional support.

On Tuesday I fashioned a concluding summary that was not repetitious, synthesizing the thesis and key points in such a way to show mastery of the material. After dinner I took my disk over to the computer center and printed a copy of the complete paper. I was immensely relieved and satisfied when I fell asleep that evening.

After the 9 o'clock class on Wednesday, I was free to devote the whole day to the final editing of the essay. I first read the entire paper aloud, checking for style. By reading aloud I could better detect redundant words, vague phrases, and awkward-sounding sentences. I corrected the flawed sentences so that they flowed smoothly and naturally. As part of the editing process, I made frequent use of a dictionary and a thesaurus to ensure that the vocabulary was precise. Also, I worked on internal transitions to give my paragraphs and sentences better cohesion. After I had edited the printed copy, I corrected the computer version and saved it carefully. I was meticulous in backing up copies on disk in the event my computer malfunctioned.

I woke early on Thursday, excited to see the final copy in print at last. I rushed down to the computer room after breakfast and printed out my "magnum opus." I was so eager to start proofreading that I toyed with the possibility of skipping my morning lectures. But with final examinations looming, common sense won out! After lectures, I gobbled my lunch down and headed for my room and my prized paper. I proofread it meticulously, from title page to bibliography. All my thoroughness had paid off—not a single error was apparent. I was flushed with that warm feeling of satisfaction that the completion of a creative assignment brings.

This was it. This was the day! I never heard such an outpouring of incidents to a professor from frantic, frightened students who tried so hard to look and act sophisticated. "The library is so full, you can't find a table to write on." "Two other students are working on the same topic as I am and I cannot get hold of the sources." "My computer crashed." "My printer overheated and seized up." "I'll need more time, because all the typists in town are busy, and they can't get to mine until after the weekend."

Hendricon was calm but exceedingly serious. He looked around the room solemnly, making no attempt to answer any of the excuses. After a moment, he held up his hand for quiet and went on with his lecture as if nothing had happened.
There was deep silence that hour. Professor Hendricon was always good, but he was especially good that day. He talked hard and earnestly. Most of the students sat glumly, motionless and glassy-eyed. Only a few had the discipline to take notes. For some reason, the professor’s words seemed to be aimed at me. He was trying to make scholars of us, as well as mature men and women. About half the students handed in papers that day. Spurred by the announcement, “Five points a day will be deducted on all late papers,” the rest were in on the following Monday. I was pleased and proud that mine was in on time.

With only two and a half weeks to go, Professor Hendricon lectured hard and fast, determined to complete his schedule of topics. By now, I had reconciled myself that failure was a possibility. Though I still wanted to pass the course, I was not too worried about it. I was just glad to have had the opportunity to attend Professor Hendricon’s class.

On the last day of class, Professor Hendricon strode in with our research papers. “Before I hand them back to you,” he said, “I want to talk about them both generally and specifically.” He continued, “A few of the papers were excellent, a few poor, and the majority mediocre. The excellent ones were creative and imaginative in their use of technique; but the poor ones seemed as if they had been put together artificially and mechanically with scissors and paste.”

That last remark hit me. Of course, I should have known that Professor Hendricon would be quick to see the artificial way my paper was put together: how I took notes on cards; distributed them in piles; mechanically shifted stacks of cards around; made an outline last, not first; filled gaps by digging out more material; mechanically revised; looked up words; read aloud to detect faulty intonation—all done like a “hack” in mechanical and piecemeal fashion. The rest of the class had real talent—they were truly gifted. In four or five days, they were able to write down their thoughts directly, fully developed, like true artists. And like true artists, they made good with one chance, whereas I had dozens of chances to write and rewrite.

As Professor Hendricon continued to talk about “scissors and paste,” he suddenly picked up a paper to illustrate a point. I was shocked. I just couldn’t stand the embarrassment. All I wanted to do was to get out of that room, fast! Then I suddenly realized that though I knew it was my paper, no one else did. So I steeled myself. Professor Hendricon read one paragraph after another. He jumped to the first part of the paper for a paragraph, then to the end for another. Then I noticed that the rest of the class was listening attentively, and though Professor Hendricon’s voice was excited, it was kindly. As I calmed and composed myself, I heard, “Note the smooth rhythm of the prose and the careful choice of words. This is what I mean by scholarship. The technique is discernible. Yes! But put together with a scholar’s love, and care, and time.”

P.S. You guessed it! I passed the course.
A-31

Supplement: Specialized Skills

HAVE YOU MISSED SOMETHING?

**SENTENCE COMPLETION** Complete the following sentences with one of the three words or phrases listed below each sentence.

1. Give your research purpose, direction, and focus by developing a ______________ about your topic.
   - scientific discovery
   - fascinating misconception
   - compelling question

2. When you are using the computerized magazine indexes of a library, a Boolean search enables you to narrow your search by ________________.
   - using a prominent keyword
   - combining two keywords
   - using a full sentence

3. As you discover magazines and books that relate to your research, add them to a working bibliography that is ________________.
   - in your notebook
   - on separate cards or slips
   - kept by the reference librarian

**MATCHING** In each blank space in the left column, write the letters preceding the phrase in the right column that matches the left item best.

1. Compelling question
2. Spell checker
3. Abstract
4. Index
5. Ellipses
6. Concept map
7. Preliminary research
8. Library

   a. Can help you find a suitable topic
   b. Synopsis found at the beginning of some journal articles
   c. Can be used to plan your paper visually
   d. Helps provide a focus for your paper
   e. Primary source for most of your paper’s information
   f. Good starting point in the search for books or magazines
   g. Helpful but not infallible tool for correcting your paper’s errors
   h. Indicate that part of a quotation has been omitted
Chapter A: Writing a Research Paper

**TRUE-FALSE**

Write T beside the true statements and F beside the false statements.

1. Three or four narrowings should reduce your general topic to a suitable size. ___
2. The Readers’ Guide is the best known bound periodical index. ___
3. A computerized catalog enables you to search by subject, author, or title. ___
4. Paraphrasing is permitted in a research paper. ___
5. A conclusion isn’t always necessary in a research paper. ___

**MULTIPLE CHOICE**

Choose the word or phrase that completes each sentence most accurately, and circle the letter that precedes it.

1. The basic skills for writing a research paper are similar to those for
   a. writing a novel or short story.
   b. preparing for a test or quiz.
   c. taking notes during a lecture.
   d. doing none of the above.

2. The most common criticism of research papers is that they are
   a. too broad.
   b. too long.
   c. poorly written.
   d. carelessly researched.

3. A research librarian is an expert on
   a. most research paper topics.
   b. the proper form for footnotes.
   c. use of the library.
   d. all of the above.

4. Your notes will be easier to use if you
   a. recopy them so they are easy to read.
   b. copy all your information verbatim.
   c. jot down each note on a separate card or slip.
   d. fit them on as few pages as possible.
5. You can avoid the appearance of plagiarism by including
   a. quotation marks.
   b. citations.
   c. a bibliography.
   d. all the above.

Supply a brief answer for each of the following items.

1. Explain the role of selectivity in writing a research paper.
2. How can Boolean searching be used to pinpoint references?
3. How can concept maps be used in organizing a research paper?

Make a light check mark (✓) alongside one of the three words (choices) that most nearly expresses the meaning of the italicized word in the phrases that are in the left-hand column.

<table>
<thead>
<tr>
<th>1. brevity is the secret</th>
<th>seriousness</th>
<th>lengthiness</th>
<th>briefness</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. jot down your assessment</td>
<td>appointment</td>
<td>function</td>
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<td>6. delve into books</td>
<td>grow</td>
<td>probe</td>
<td>put away</td>
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<td>7. clearly and forcibly</td>
<td>predictably</td>
<td>lightly</td>
<td>powerfully</td>
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<td>8. it isn’t infallible</td>
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<td>obvious</td>
<td>inconspicuous</td>
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<td>10. cite your source</td>
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<td>reveal</td>
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<td>predicament</td>
<td>preposition</td>
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<td>13. an apt example</td>
<td>incongruity</td>
<td>illustration</td>
<td>argument</td>
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<td>it portends a decline</td>
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<td>foretells</td>
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*Chapter A: Writing a Research Paper*