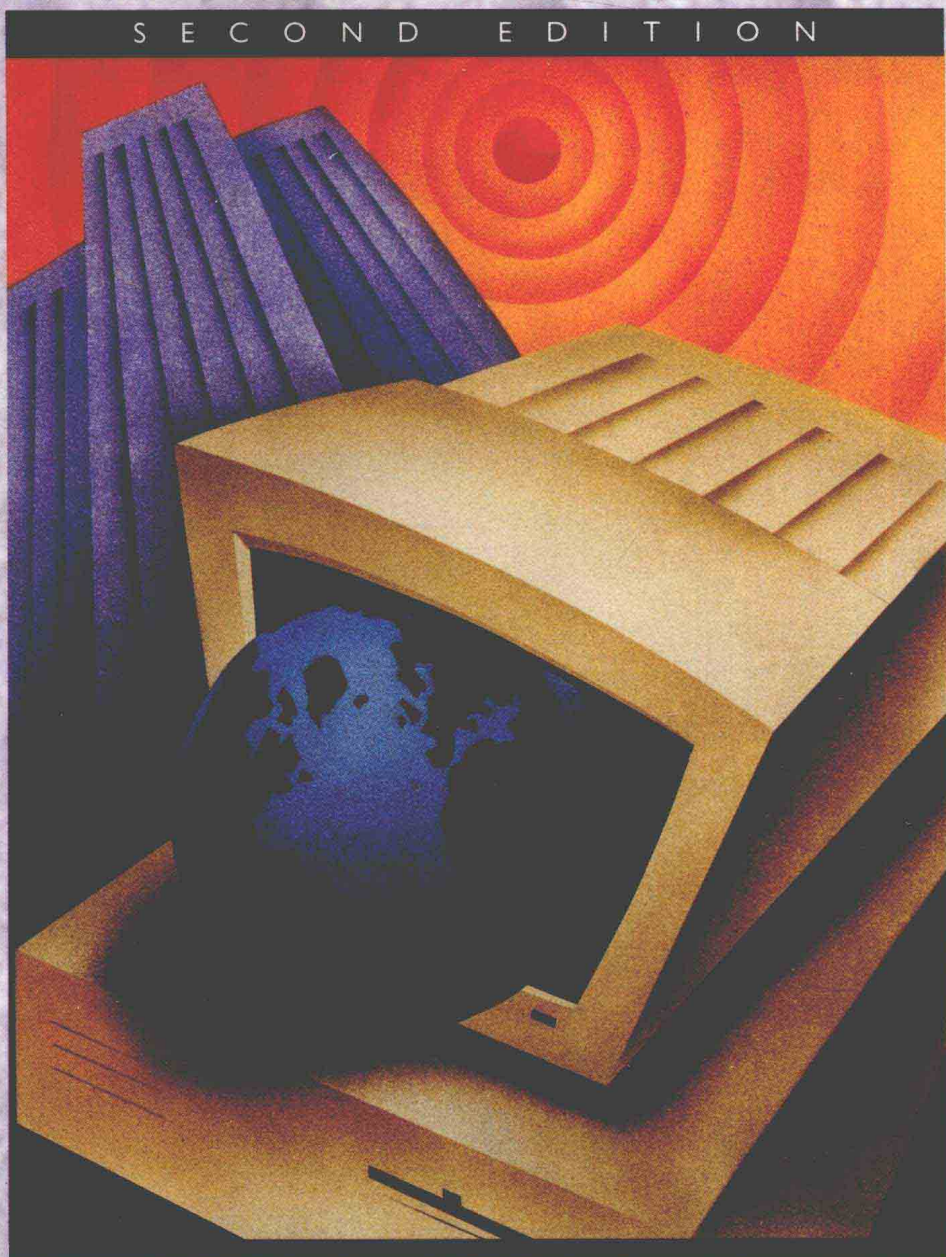


THE RESEARCH PAPER *and the* WORLD WIDE WEB

S E C O N D E D I T I O N



Dawn Rodrigues • Raymond J. Rodrigues

The Research Paper *and the* World Wide Web

SECOND EDITION

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Preface

We have designed this book to serve several different types of readers. First are those readers who may be starting to learn how to develop research papers and who need to learn how to conduct research in libraries and online through the World Wide Web. Second are those who know how to do traditional library research, but who have not yet learned how to use the Web as a major source of research. And third are those who may have begun exploring the Web, but who have not yet mastered the Web as a research tool. As a result, this book can serve as a stand-alone guide to writing research papers, or it can serve as a guide on how to integrate the research now available on the Web with the research that has always been possible through library research.

As a student or a professional involved in writing research papers or reports, you may have already begun to use technology as a tool for information gathering. You may have even used the World Wide Web for research or used online databases for information gathering. But chances are that you still have unanswered questions about such topics as which search engines are best for which types of research, how to validate sources, how to search more efficiently, or how to organize the information that you find so that you can, at some point, incorporate it into a research paper or project report.

This book will help you learn how to locate answers to your questions as you learn how to integrate Web searching with library searching. Beginning with a discussion of the research process, early chapters help you learn how to adapt your research process to the information age, moving between Web and library as appropriate, locating sources in your discipline, even doing e-mail or listserv research along the way. A later chapter explains how to use bookmarks to organize your notes from electronic sources, and the final chapter presents proper documentation style in your paper.

How the Chapters and the Book Are Organized

Each chapter begins with the major goals that the chapter is designed to help you learn. Within each chapter, there are Practice Boxes with exercises based upon the material that has immediately preceded them, usually asking you to

apply a specific technique and suggesting ways that you can share what you learn with your classmates. At the end of each chapter is a set of exercises designed to lead you through the processes of developing research topics, finding and validating sources, organizing notes, and citing sources appropriately, while writing drafts of the research paper. For your convenience, inside the back cover we have outlined the process of writing a research paper and referred to the places in the book where the relevant skills are to be found. Finally, for those of you who may be seeking research topics about research processes themselves or how they may be used among various professions, we suggest some topics in Chapter 1.

Ideally, you will do two types of research projects while reading through this book: (1) projects in which your focus is more on learning the processes of research than on doing an extensive examination of a topic and (2) a formal research paper for which you have been prepared by moving through all the chapters of the book. If circumstances require you to read this book both to learn research techniques and to do a research project at the same time, you may need to move backward and forward in the book as needed, reading chapters that are most useful to you at any given point in your research process. Here, the guide inside the back cover can help.

In the first chapter you learn the basics of the research process, allowing you to begin work on your research paper before reading subsequent chapters.

The second chapter focuses on library Web searching, so that you can learn how to incorporate the Web into your traditional research process. It also discusses how to use the library and traditional library resources.

The third chapter focuses on the kinds of library and Web resources accessible through the Web. You continue to learn how to integrate library searching with Internet searching.

The fourth chapter, “Finding Resources in the Disciplines”, discusses specific Web sources designed for specific disciplines, because knowing their availability may make your search processes more efficient.

The fifth chapter on evaluating sources deals with ways of determining how valuable the sources you find on the Web—and in libraries—may be. There is no shortage of research sources, but some are worth using more than others.

The sixth chapter guides you through the techniques of using other Web tools that researchers may at first overlook: e-mail, listservs, focus groups, and newsgroups.

The seventh chapter on note taking is designed to make your research more efficient and better organized so that, when it is time to draft your research paper, you are ready.

The eighth chapter explains how to document online sources and cite them properly. Equally important, the chapter reviews how and when to summarize, to paraphrase, and to quote sources. It includes a sample research paper as a model.

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Contents

PREFACE ix

1 THE RESEARCH PROCESS IN THE INFORMATION AGE 1

The Research Paper in the Information Age 1

The Research and Writing Process 2

Establish a Topic or Research Project by Reading and Searching 3

Establish Research Questions 5

Plan Research Methodologies 7

Identify Keywords through Research Questions 8

Develop a System for Note Taking and Organizing Sources 10

Prepare a Working Bibliography 11

Validate Your Sources 12

Draft, Revise, and Edit Your Paper 12

Conclusion 13

Exercises 14

Suggestions for Research 14

2 RESEARCHING LIBRARY AND WEB 16

What is the Library? What is the Web? 17

Exploring Your Library 18

The Physical Library 18

The Card Catalog 19

Indexes and Databases 21

Exploring the Web 23

Navigating and Basic Searching 23

Using the Navigation Panel 23

Using the Location Bar to Enter URLs 23

Using Search Tools and Search Strategies 24

Using Bookmarks 28

Advanced Searching	28
<i>Standard Search Engines</i>	29
<i>Metasearch Engines</i>	29
<i>Unified Search Interfaces</i>	30
Conclusion	31
Exercises	32

3 LIBRARY RESOURCES ON THE WEB 33

Finding Libraries on the Web	33
<i>Using a Library Access Site to Find Your Library</i>	34
Exploring Library Catalogs	35
Traditional Library Resources on the Web	37
<i>Books on the Web</i>	37
<i>Journals and Magazines on the Web</i>	38
<i>Online Journals and Zines</i>	40
<i>Indexes and Abstracts on the Internet</i>	40
<i>Encyclopedias and Other References</i>	41
<i>Newspapers</i>	42
<i>Government Publications</i>	43
Conclusion	44
Exercises	44

4 FINDING RESOURCES IN THE DISCIPLINES 46

Finding Resources in Your Field	46
Using Subject-Area Collections as Starting Points	48
<i>Locating Subject-Area Collections</i>	49
<i>Evaluating Subject-Area Collections</i>	50
General Purpose Subject-Area Collections	50
<i>The World Wide Web Virtual Library</i>	51
<i>The Argus Clearinghouse</i>	51
<i>Einet Galaxy</i>	51
<i>BUBL (Bulletin Board for Libraries)</i>	52
<i>Librarians Index to the Internet (Berkeley)</i>	52
A Collection of Resources in the Disciplines	52
<i>Humanities</i>	52
<i>Social Sciences</i>	53
<i>Natural Sciences and Mathematics</i>	54
<i>Business</i>	55
<i>Education</i>	57
<i>Engineering</i>	57

Conclusion 58

Exercises 58

5 EVALUATING SOURCES 59

Evaluating Information: The Early Stages of a Research Project 60

Preliminary Evaluation of Web Sources 61

Determining Whether the Journal or Magazine is Appropriate for Your Topic 62

The Importance of Exploring Varied Sources 63

Evaluation at the Drafting Phase 63

Determining What Kinds of Sources to Explore 64

Conclusion 66

Exercises 66

6 E-MAIL, NEWSGROUPS, FORUMS, AND LISTSERVS AS RESEARCH TOOLS 67

E-mail 68

Using E-mail for Data Gathering: Questions to Ask 68

The Etiquette of E-mail: Netiquette 69

Creating and Sending E-mail Messages to Request Information 71

Attaching Documents to E-mail Messages 73

Saving and Filing E-mail Messages 73

Mailing Lists 75

Subscribing to a Mailing List 76

Mailing List Basics 77

The Etiquette of Mailing Lists 78

Using Mailing Lists for Research 81

Using Newsgroups for Research 81

Forums 83

Other Research Tools 84

MOOs 84

Conclusion 87

Exercises 87

7 TAKING NOTES AND ORGANIZING INFORMATION 88

Bookmarking 88

Organizing Bookmarks 89

Setting Up Your Electronic Work Space 94

The Research Project Directory	95
<i>Research Notebook Directory</i>	95
<i>Subtopic Directories</i>	97
<i>Electronic Note Cards</i>	97
<i>Draft Files</i>	100
E-mail as an Organizational Tool	100
Summarizing the Organizational Process	100
Conclusion	102
Exercises	102

8 DOCUMENTING SOURCES 103

Different Citation Styles in Different Disciplines	104
Summarizing, Paraphrasing, and Quoting	104
<i>Summarizing</i>	104
<i>Paraphrasing</i>	106
<i>Quoting</i>	107
What to Cite? Avoiding Plagiarism	108
Internal Citation and Bibliographic Citation	109
<i>Guidelines for Internal Citations</i>	110
<i>Guidelines for Bibliographic Citations</i>	115
Guidelines for Electronic Citation	120
<i>General Guidelines</i>	121
<i>MLA Electronic Citation Style</i>	122
<i>APA Electronic Citation Style</i>	125
<i>Alternate APA Electronic Style</i>	128
Formatting the Research Paper: MLA and APA Examples	132
Exploring Citation Problems	159
Copyright Considerations	161
Conclusion	161
Exercises	162

APPENDIX: INTERNET BASICS 163

GLOSSARY 167

WORKS CITED 173

INDEX 177

The Research Process in the Information Age

After completing this chapter, you should be able to do the following:

- Select a topic for a research project.
 - Visit your library and become familiar with the basic strategies of using a library, including how to check out a book and how to locate a library database
 - Learn how to use the Web sufficiently so that you can do preliminary Web searching on your topic.
 - Do background reading on your topic in the library and on the Web.
 - Establish research questions.
 - Develop a research agenda.
-

THE RESEARCH PAPER IN THE INFORMATION AGE

Writing a research paper or report used to mean spending hours on end in a library, wading through card catalogs and taking notes from whatever books and journals were available to you. With vast resources of information having moved outside library walls and onto the World Wide Web, research and writing processes are changing. Clearly, research that excludes the Web and other online resources is not comprehensive research. Not only library collections but also online databases and periodical indexes are accessible through the Web.

Before the Web was a reality, the topics students could select for research were limited to the sources available in their own institution's library or to the books they might reasonably expect to get through interlibrary loan. If, for example, you wanted to do a research paper on Hispanic folklore, you might

not have found more than a few books on the topic in your library. But with the Internet, you have access to many Web resources developed by scholars at colleges and universities across the nation and around the world. You also have access to libraries worldwide: you can search their collections, locate the material you need, and then order it through the interlibrary loan services at your institution.

The Web offers other new possibilities:

- You can locate experts on your topic and conduct e-mail interviews with them.
- You can determine what people think about your topic by searching newsgroup through dejanews.
- You can discuss ideas and collaborate with colleagues in chat groups, listservs, or forums (see Chapter 6).

If you use the Web and online databases extensively for your research, your research process is likely to change. In the dynamic environment of the Web, research becomes a dialogical process: you interact with databases and the results change your understanding of your topic; or you interact with other students or researchers, and their responses help shape your views. A reference that you find using a search engine may cause you to shift the direction of your search; a note from a colleague on e-mail or a response to a posting on a newsgroup (see Chapter 6) might cause you to reexamine your topic or to think of new angles for your investigation.

THE RESEARCH AND WRITING PROCESS

This chapter provides you with suggestions for moving through the research process and offers advice for integrating library and Web searching throughout your research and writing process. You can also find resources on the Web to help you with research writing. Here are a few useful sites:

Cornell University Library, Library Research: A Hypertext Guide
<http://urisref.library.cornell.edu>

Oregon State University, Library Research Process Home Page
<http://www.orst.edu/dept/library/tutorial/library.htm>

University of California–Santa Cruz, Using the Web for Research: Tutorial
<http://bob.ucsc.edu/library/media/research.html>

To locate other sites for tutorials, go to a search engine such as Alta Vista, Lycos, or Infoseek, and type in a search phrase such as “library research tutorial” or “research tutorial,” for new ones are being added regularly.

Establish a Topic or Research Project by Reading and Searching

Don't begin by finding a topic or selecting a research project at random. Rather, begin by thinking about a range of possibilities and delaying your selection of a specific topic or a project until after you've done preliminary searching and reading.

Your research project should be meaningful to you personally, whether it is assigned by a teacher or self-generated. If you select a topic that you *want* to investigate critically, then you are certain to benefit from the research process. If you customize and personalize assigned topics, you will enjoy your research. If you incorporate the Web and online database searching into your research process, you will have the added satisfaction of developing important information age literacies while completing your required assignment.

You can begin to determine your research topic in many ways: you can read encyclopedia entries, you can search for Web sources, you can explore library catalogs, you can talk with your friends face-to-face, or you can chat with people from around the world in an online chat area. Take your time. As Ken Macrorie says in *Searching Writing* (1980), it is better to let a topic find you than to settle on a topic just because you have to write a paper. Even if you have a more narrow topic already assigned as part of a class, there are probably many ways to define the topic, narrow it further, and arrive at some aspect of the topic that truly interests you.

Browsing versus Searching

Instead of searching—an active process in which you are looking for specific kinds of sources—begin by “browsing,” exploring casually, with an open mind. Use subject-area directories such as those available at Yahoo! <<http://www.yahoo.com>> or Galaxy <<http://galaxy.einet.net/>>. Although these sites have search engines available for you to explore the entire Web, these subject collections feature sites that people have collected and organized into categories. When you don't yet know a specific topic, you should consider beginning your research by browsing for information rather than searching for specific topics. By browsing, you see a range of possibilities, and you have a chance to consider many aspects of the topic you are examining.

Explore the Web to see what is available and to get a sense of what businesses are doing and publishing. The page in Figure 1.1 is one of many pages that can be located through a simple Web search for “electronic commerce.”

Even though you might give the page a low evaluation—since it is filled with popular articles, not scholarly ones—nonetheless, it may yield some insights. If so, you can take notes.

Browse through library catalogs to get a sense of the possibilities. Read through the list of books available at the Rutgers Library in Figure 1.2 and notice how, just by reading titles, you are able to come up with several topic possibilities for a research project. Of course, when you begin reading your sources, you will have an increased sense of the possibilities.

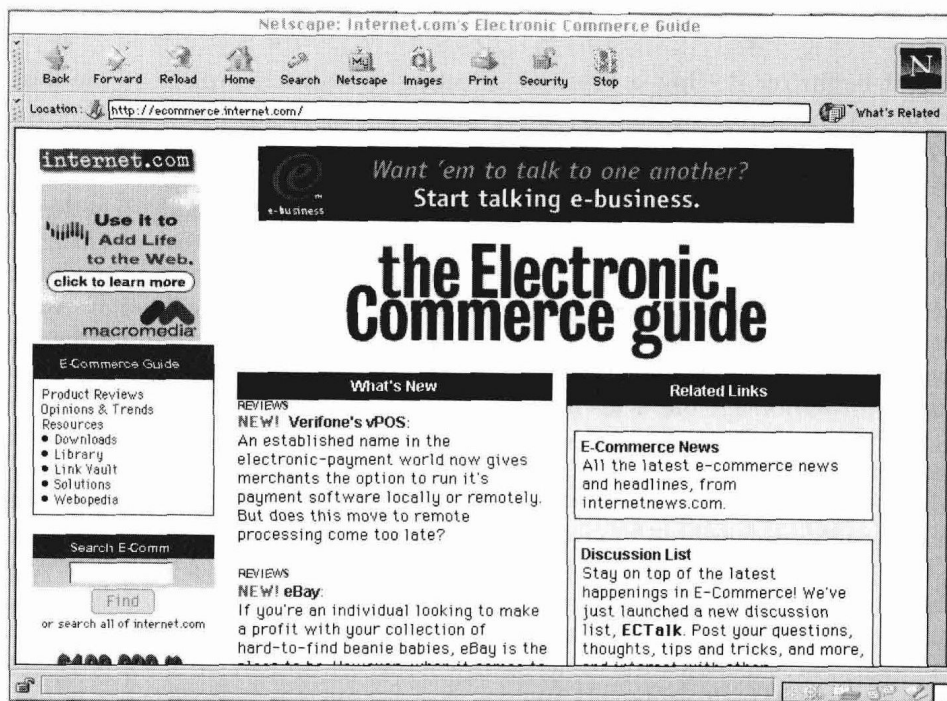


FIGURE 1.1 E-commerce Web site.

Skimming versus Reading

As you locate possible ideas, skim through the sources, allowing topic possibilities to percolate in the back of your mind. As you pour through a range of sources, you will gradually gain a sense of what interests you, and you will develop a sense of what has been said about your topic by others. Here are some questions to guide you as you browse and skim sources:

- What are the restrictions on my topic? What is the range of possibilities?
- What standard library sources should I consult?
- How can a reference librarian help me?
- What library resources should I consult?
- Is this a Web-intensive kind of project? (Recent topics such as immigration reform, affirmative action, current events, etc., might be more appropriate for Web searching than a library search.)
- Are there any Web collections of resources on the topic that have been assembled by others (sometimes called "pathfinder sites")?
- What aspects of my research topic are especially intriguing?
- What do I know already about my topic?
- What do I need to learn?

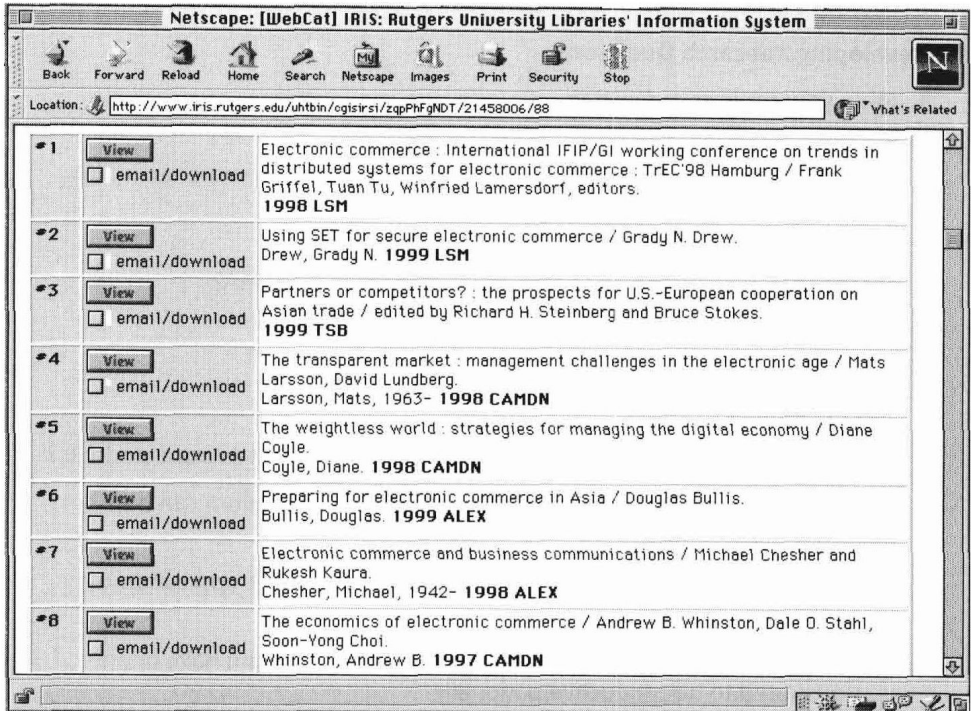


FIGURE 1.2 Books on E-commerce in Rutgers Library.

Establish Research Questions

Research is the exploration and investigation of a question or set of questions you want to know more about. You will take your work more seriously if you first formulate research questions, regardless of whether the research is an exploration of technology use in schools and colleges, an investigation of the North American Free Trade Agreement (NAFTA), an examination of the complex of issues surrounding various cancer treatments, or an inquiry into the latest methods of teaching reading.

Using the Web as a key tool or as a part of your research process, you need to go through the same basic steps researchers have gone through for ages. Begin by establishing research questions to help clarify your topic and to direct your research process. By "research questions," we mean the answers to the questions "What do you really want to know about your topic?", "What is really worth learning?", not "What is the topic?". Taking time to select and identify a research question helps turn even a dull writing assignment or research project into a meaningful and perhaps exciting one. The following box includes some suggestions for developing your research questions.

Developing Research Questions

1. State your topic as a question.

Topic: Technology in Colleges and Universities

Question: What are the most cost-effective ways to incorporate technology into college instruction?

Topic: The North American Free Trade Agreement

Question: What are the strengths and weaknesses of NAFTA?

2. Pose several sub-questions.

Topic: Technology in Colleges and Universities

Subquestions:

What kinds of opposition to technology use can be expected from students?

What opposition to integrating technology into the curriculum can be expected from faculty?

Can effective use of Internet research address some of the opposition to using technology in the curriculum?

What methods of integrating technology into the curriculum have been demonstrated to be productive nationally?

Topic: The North American Free Trade Agreement

Subquestions:

Has the North American Free Trade Agreement taken jobs away from our citizens?

What industries have grown or decreased in our country as a result of NAFTA?

What danger to trade might exist if Mexico decides to increase taxes on the maquiladoras?

Are maquiladoras environmentally safe?

Sample Research Questions

Below are samples of good research questions on a couple of topics, including “technology in the schools” and “the North American Free Trade Agreement.”

1. **How has the North American Free Trade Agreement affected industry and business in the United States?** Find out what some of the factors are that can cause industry or business to decline as a result of NAFTA. Is there any direct proof that NAFTA has harmed or helped industry and business in the United States? What organizations measure the effects of NAFTA? Are all of the measures equally objective, or are some reported with a particular political bias? Has NAFTA affected

all parts of the nation equally? What caused some industries to grow, while others have declined as a result of NAFTA?

Possible methods for answering preliminary questions:

- Interview business or industry leaders in your community or region.
- Locate descriptions of NAFTA, including the laws and regulations that define NAFTA.
- Search your library catalog for possible sources.
- Search government documents for policies, regulations, and laws.
- Use Web search tools to do Web research on maquiladoras, community economic development council reports, or university research centers that study NAFTA and other sites that explore aspects of NAFTA.
- Join a listserv that discusses NAFTA-related topics.

2. **To what extent is technology changing instruction on campuses across the nation?** What is driving the use of technology: a desire to improve instruction or a dream of saving money? Are students satisfied with their access to computers on your campus? How does your campus compare to other campuses with regard to technology use? Are students encouraged to create their own home pages? Do students on your campus who come from secondary schools with high tech environments have a decided advantage over other students? Do faculty who use computing technology teach differently or better than they would without the technology, or have they simply transferred traditional lectures to the technology? What factors determine whether technology is used effectively?

Possible methods for answering preliminary questions:

- Interview professors who use technology in teaching.
- Use e-mail to interview students who have taken computer-intensive courses.
- Find out if your college or university offers distance learning. If so, learn as much as you can about how these courses are conducted.
- Read different articles presenting different views of the technology integration topic and note what the key questions seem to be (e.g., *Educom Review* <<http://www.educom.com>>; *Syllabus* <<http://syllabus.com>>).
- Do a web search on the topic.
- Join the American Association of Higher Education's discussion list on technology to tune in to the kinds of issues that interest university professors and administrators.

Plan Research Methodologies

After you have established your research questions, you will be in a better position to determine what research methods are appropriate to your topic. You may need to combine library searching with interviewing, conducting