WRITING RESEARCH PAPERS

A COMPLETE GUIDE

JAMES D. LESTER
JAMES D. LESTER, JR.

SIXTEENTH EDITION

Pearson

Writing Research Papers

A Complete Guide

Sixteenth Edition

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Preface to the Instructor

The 16th edition of *Writing Research Papers: A Complete Guide* now marks the 50th anniversary of this text. First published by Scott, Foresman in 1967, I recall that the artwork on the front of the book featured a typewriter. To that end, I can remember the countless hours that my father and mother both spent toiling at the keys of that typewriter to perfect the first edition. What started as a typed version that was run off on a mimeograph machine and sold in the campus bookstore at Emporia State University in Kansas has expanded into the detailed guidebook that it is today. This new edition is dedicated to my father, Dr. J. D. Lester. Although he is no longer with us, his love of literature, writing as a craft, his students through forty years of instruction, and my mother helped to establish *Writing Research Papers* as the foremost handbook for current, detailed guidance about academic research, writing, and documentation.

For decades, this text has been the leader in offering current, detailed guidance about academic research, writing, and documentation. Over the last two decades, the world of academic research has changed dramatically. Most research is now done online, and this new universe of information has not only put an almost unimaginable wealth of new sources at our fingertips, but it has also brought challenges in evaluating the credibility and usefulness of those sources. Questions of academic integrity and unintentional plagiarism have arisen around the integration of electronic sources. This new sixteenth edition of *Writing Research Papers: A Complete Guide* confronts these new challenges and offers clear, detailed guidance to assist student researchers as they struggle to keep pace with online research, electronic publishing, and new documentation formats.

What Is New in This Edition?

- **New "Goals and Outcomes" at the beginning of each chapter** provide students with a list of learning objectives that serve as a ready guide for finding documentation information quickly and that provide students with the key goals of the chapter.
- **New explanations of research techniques** in Chapter 4 show students how to apply cutting-edge tools and strategies in their research, including keyword searches with expanded Boolean operators and social networking sites.
- **Three new student papers** plus a new annotated bibliography provide fresh models of student research work.
- **Updated coverage of MLA and APA documentation style** brings students up to speed with the latest revisions, especially how to handle electronic source documentation.

Key Features

The world of academic research is changing rapidly, especially with the ascendance of online research. Virtually every college student now writes on a computer and researches online. The sixteenth edition of *Writing Research Papers* continues to offer a wide array of resources to help students successfully plan and execute their research papers.

HELP WITH DIGITAL RESEARCH The digital revolution is so pervasive in research writing today that a single chapter cannot properly encompass the topic. Instead, every chapter of this text has been updated to reflect the current context for academic writing, including the impact of

technology on searching for appropriate topics, finding and evaluating source material, gathering notes and drafting the paper, avoiding plagiarism and embracing academic integrity, and, of course, documenting sources. Students are directed step by step through the various formats for documenting online sources and are offered clear, detailed guidance on blending electronic citations into their writing. The most extensive updated content is included in Chapter 4, where explanations are provided about new research techniques using social networking sites and keyword searches with expanded Boolean operators.

CURRENT DOCUMENTATION GUIDELINES Since discipline-specific style guides offer very different methods for documenting sources—particularly electronic sources—depending on the academic field of research, a guide of this sort is vital to students who are responding to writing assignments in a variety of disciplines. To enable students to document sources correctly, this edition includes updated guidelines for the most important documentation formats.

- **Up-to-date coverage of MLA documentation style**. The Modern Language Association (MLA) significantly revised its documentation style for both print and electronic sources in the most recent edition of the *MLA Style Manual and Guide to Scholarly Publishing*, and the *MLA Handbook for Writers of Research Papers*. All sample citations and student papers in Chapters 1 to 14 reflect the current MLA style guides.
- **Revised APA documentation coverage**. The American Psychological Association (APA) also revised its documentation guidelines in the *APA Publication Manual*. All sample citations and student papers in Chapter 15 follow current APA documentation standards.
- **Current standards for CMS style**. The most recent edition of the University of Chicago Press' *Chicago Manual of Style* emphasizes the role of electronic research. All sample citations and student papers in Chapter 16 follow current CMS documentation standards.

RESEARCH TIPS FOR AVOIDING THE PITFALLS OF PLAGIARISM Chapters 1 to 10 provide at least one "Research Tip," a feature that offers instruction and examples for citing sources appropriately and ethically, and avoiding plagiarism. Beginning with the section "Understanding and Avoiding Plagiarism," in Chapter 1, *Writing Research Papers* clearly explains what plagiarism is and presents strategies students can use to avoid unintentional plagiarism. Moreover, there is a special emphasis on how to blend quotations into academic writing and document Internet sources.

GUIDELINES FOR EVALUATING ONLINE SOURCES Understanding what constitutes an appropriate source for an academic paper is more and more challenging for students, as more and more sources become instantly available online. *Writing Research Papers* assists student researchers in deciding if and when to use familiar search engines such as Google or Yahoo!, and also offers detailed advice on how to find respected scholarly sources—and how to determine whether a source is in fact credible. A checklist, "Evaluating Online Sources," helps students gauge the quality of online articles.

STUDENT PAPERS Student writing examples provide models for student writers of how other students have researched and drafted papers on a wide range of topics. With seven annotated sample papers, more than any other text of this kind, *Writing Research Papers* demonstrates format, documentation, and the different academic styles. Student papers include:

Ashley Irwin, "Sylvia Plath and Her 'Daddy"' (MLA style)
Anthony Ruvolo, "The Temple of Jupiter Optimus Maximus and a New Interpretation of the Capitoline Triad" (MLA style)
Whitley Rentfro, "Of Highways and Bikeways: Filling the Lane for the Future" (APA style)

Clare Grady, "The Space Race: One Small Step—One Giant Leap" (CMS style)
Charlotte Dawn Fullerton, "The Human Glow Bug: Tanning Bed Dangers and Effects" (CSE style)
Sarah Morrison, "Annotated Bibliography: Media Ethics" (MLA style)
Sarah Morrison, "Media Ethics: A Review of Literature" (MLA style)

Sample abstracts in MLA and APA style are also displayed. Additional sample research papers are available in the *Instructor's Manual, Model Research Papers from across the Curriculum,* and on MyWritingLab.

REFERENCE WORKS BY TOPIC The list of references in the Appendix, "Finding Reference Works for Your General Topic," provides a user-friendly list of sources for launching your research project. Arranged into ten general categories, the Appendix allows a researcher to have quick access to relevant library books, library databases, and Internet sites.

ACCESSIBLE, NAVIGABLE DESIGN As in previous editions, *Writing Research Papers* is printed in full color, making information and features easier to find and more pleasing to read, and bringing strong, visual elements to the instruction. Icons identify special features, like the "Where to Look" boxes signaling cross-references. The spiral-bound version of *Writing Research Papers* also includes tab dividers to make information easier to find. The tabs include additional websites, as well as tables of contents for the following sections.

Additional Resources for Instructors and Students

REVEL™

Educational Technology Designed for the Way Today's Students Read, Think, and Learn When students are engaged deeply, they learn more effectively and perform better in their courses. This simple fact inspired the creation of REVEL: an interactive learning environment designed for the way today's students read, think, and learn.

REVEL enlivens course content with media interactives and assessments—integrated directly within the authors' narrative—that provide opportunities for students to read, practice, and study in one continuous experience. This immersive educational technology replaces the textbook and is designed to measurably boost students' understanding, retention, and preparedness.

Learn more about REVEL at www.pearsonhighered.com/revel/.

INSTRUCTOR'S MANUAL This extensive guide contains chapter-by-chapter classroom exercises, research assignments, quizzes, and duplication masters. Instructors can visit www.pearsonhighered.com/IRC to download a copy of this valuable resource.

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Many key people supported the development of *Writing Research Papers: A Complete Guide,* Sixteenth Edition. I am grateful to the following students for their help and for allowing me to use their work as models in this book: Ashley Irwin, Whitley Rentfro, Clare Grady, Charlotte Dawn Fullerton, and Sarah Morrison.

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Chapter 1
Writing from Research

Goals and Outcomes

Communication begins when we make an initial choice to speak or to record our ideas in writing. Regardless of the writer's experience, writing is a demanding process that requires commitment. This chapter charts a direction for your research project:

- **1a** Understand why research is an important method of discovery.
- **1b** Apply the conventions of academic writing to your research project.
- **1c** Overcome the pitfalls of plagiarism with proper documentation.
- **1d** Analyze a research assignment's terminology to understand its purpose.
- **1e** Establish a schedule for your research project.

Whether it is a history paper, a field report, or a research project, the written word creates a public record of our knowledge, our opinions, and our skill with language; hence, we must strive to make our writing accurate, forceful, and honest.

Discovering a well-focused topic, and more importantly a reason for writing about it, begins the composing process. Choosing a format, exploring sources through critical reading, and then completing the writing task with grace and style are daunting tasks.

Despite this, writing is an outlet for the inquisitive and creative nature in each of us. Our writing is affected by the richness of our language, by our background and experiences, by our targeted audience, and by the form of expression that we choose. With perceptive enthusiasm for relating detailed concepts and honest insights, we discover the power of our own words. The satisfaction of writing well

and relating our understanding to others provides intellectual stimulation and insight into our own beliefs and values.

As a college student, you will find that your writing assignments will extend past personal thoughts and ideas to explore more complex topics. Writing will make you confident in your ability to find information and present it effectively in all kinds of ways and for all sorts of projects, such as:

- A theme in a freshman composition course on whether the current digital age is leading to a decline in open communication and interpersonal skills.
- A paper in history on the influence of attempted slave rebellions in the early 1800s led by Nat Turner, Gabriel Prosser, and Denmark Vesey.
- A report for a physical education class on the benefits of Title IX legislation for women's athletics and the on men's competitive sports programs.
- A sociology report on whether cyber-bullying is as damaging as face-to-face bullying among school-aged children.
- A brief biographical study of a famous person, such as Native American activist and leader Russell Means.

All of these papers require some type of "researched writing." Papers similar to these will be assigned during your first two years of college and increase in frequency in upper-division courses. This book eases the pressure—it shows you how to research "online discussion groups," "the Industrial Revolution of the 1800s," or "agrarian labor leader César Chávez," and it demonstrates the correct methods for documenting your sources.

We conduct informal research all the time. We examine various models and their options before buying a car, and we check out another person informally before proposing or accepting a first date. We sometimes search online for job listings to find a part-time job, or we roam the mall to find a new tennis racket, the right pair of sports shoes, or the latest video game. Research, then, is not foreign to us. It has become commonplace to use a search engine to explore the Internet for information on any subject—from personal concerns, such as the likely side effects of a prescribed drug, to complex issues, like robotics or acupuncture.

In the classroom, we begin thinking about a serious and systematic activity, one that involves the Internet, print sources, or field research. A research paper, like a personal essay, requires you to choose a topic you care about and are willing to invest many hours in thinking about. However, unlike a personal essay, a research paper requires you to develop your ideas by gathering an array of information, reading sources critically, and collecting notes. As you pull your project together, you will continue to express personal ideas, but now they are supported by and based on the collective evidence and opinions of experts on the topic.

Each classroom and each instructor will make different demands on your talents, yet all stipulate *researched writing*. Your research project will advance your theme and provide convincing proof for your inquiry.

- *Researched writing* grows from investigation.
- *Researched writing* establishes a clear purpose.
- *Researched writing* develops analysis for a variety of topics.

Writing Research Papers introduces research as an engaging, sometimes exciting pursuit on several fronts—your personal knowledge, ideas gleaned from printed and electronic sources, and research in the field.

1a Why Do Research?

Instructors ask you to write a research paper for several reasons:

Research Teaches Methods of Discovery. Explanation on a topic prompts you to discover what you know on a topic and what others can teach you. Beyond reading, it often expects you to venture into the field for interviews, observation, and experimentation. The process tests your curiosity as you probe a complex subject. You may not arrive at any final answers or solutions, but you will come to understand the different views on a subject. In your final paper, you will synthesize your ideas and discoveries with the knowledge and opinions of others.

Research Teaches Investigative Skills. A research project requires you to investigate a subject, gain a grasp of its essentials, and disclose your findings. Your success will depend on your negotiating the various sources of information, from reference books in the library to online databases and from special archival collections to the most recent articles in printed periodicals. The Internet, with its vast quantity of information, will challenge you to find reliable sources. If you conduct research by observation, interviews, surveys, and laboratory experiments, you will discover additional methods of investigation.

Finding research materials in electronic sources and on the Internet, consult Chapter 4.

Research Develops Inquiry-Based Techniques. With the guidance of your instructor, you are engaging in inquiry to advance your own knowledge as well as increase the data available for future research by others.

Research Builds Career Skills. Many career fields rely on investigation and inquiry for fact-finding purposes. Researchers work across a broad spectrum of disciplines, including the physical and life sciences of biology, chemistry, and physics. Engineering sciences in the aerospace, computer science, and automotive production fields must rely on past research while forging new product development trends. Social scientists in the fields of economics, sociology, psychology, and political science foster advancements in society through investigative studies. Research professionals are on the cutting edge of scientific and technological developments, and their work leads to new medicines, consumer products, industrial processes, and numerous other developments.

Research Teaches Critical Thinking. As you wade through the evidence on your subject, you will learn to discriminate between useful information and

unfounded or ill-conceived assertions. Some sources, such as the Internet, will provide timely, reliable material but may also entice you with worthless and undocumented opinions.

Research Teaches Logic. As a perceptive observer, you must make judgments about the issues surrounding a specific topic. Your decisions, in effect, will be based on the wisdom gained from research of the subject. Your paper and your readers will rely on your logical response to your reading, observation, interviews, and testing.

Making a claim and establishing a thesis, see section 2f.

Research Teaches the Principal Components of Argument. In most cases, a research paper requires you to make a claim and support it with reasons and evidence. For example, if you argue that "urban sprawl has invited wild animals into our backyards," you will learn to anticipate challenges to your theory and to defend your assertion with evidence.

1b Learning the Conventions of Academic Writing

Scholarly writing in each discipline follows certain conventions and forms. Varied methods, organizational forms, or proposals for problem solving are used by scholars in all fields of study, including special forms as required for citing sources in documented research projects. Documentation is only one facet of the conventions of academic writing. Each documentation style exists and differs because it has a unique rhetorical purpose. Developed by the Modern Language Association, MLA style for documentation is widely used in the humanities, especially in scholarly writing on language and literature. Similarly, the American Psychological Association has its own APA style, which includes a date in the citation stem for an emphasis on the currency of research in the social sciences. Other groups of scholars prefer to use the footnote or numbering system, not because one documentation is superior to another, but because each discipline offers precise references that are pertinent to their field of study.

MLA Style, Chapter 14; APA Style, Chapter 15; Chicago (CMS) Style, Chapter 16; CSE Style, Chapter 17.

What is important for you, right now, is to determine which format to use. Many composition instructors will ask you to use MLA style, as explained primarily in Chapters 11–14. If your topic concerns one of the social sciences such as history, philosophy, or economics, your instructor will likely require APA style (Chapter 15). Moreover, your art appreciation instructor might expect the footnote style but could just as easily request the APA style. Ask your instructor early which documentation style to use and organize accordingly.

Regardless of the research style that you employ, your writing should advance substantive issues and inquiry. Keep in mind three key investigative conventions:

Analysis	Classify the major issues of your study and provide detailed analysis of each in defense of your thesis.
Evidence	Provide well-reasoned propositions and statements that are supported by facts, details, and evidence with proper documentation.
Discussion	Relate the implications of your findings and the merits of the study, whether an author's poetic techniques, a historical movement, or a social issue.

1c Understanding and Avoiding Plagiarism

The most important convention of academic writing is the principle of giving proper credit to the work of others. **Plagiarism is defined as the act of claiming the words or ideas of another person as your own.** Plagiarism is a serious violation of the ethical standards of academic writing, and most colleges and universities have strict penalties, including academic probation or expulsion, for students who are guilty of plagiarism. Most schools publish an official code of student conduct (sometimes called an academic integrity policy), and you should be familiar with this document as it applies to your research and writing.

Checklist

Avoiding Unintentional Plagiarism

The following guidelines will help you avoid unintentional plagiarism.

- **Citation.** Let readers know when you borrow from a source by introducing a quotation or paraphrase with the name of its author.
- **Quotation marks.** Enclose within quotation marks all quoted words, phrases, and sentences.
- **Paraphrase.** Provide a citation to indicate the source of a paraphrase just as you do for quotations.
- **Parenthetical citations and notes.** Use one of the academic documentation styles (MLA, APA, CMS, or CSE) to provide specific in-text citations for each source according to the conventions of the discipline in which you are writing.
- **Works cited or references pages.** Provide a complete bibliography entry at the end of your paper for every source you use, conforming to the standards of the documentation style you are using.

Understanding and Avoiding Plagiarism, Chapter 7.

Some students will knowingly copy whole passages from outside sources into their work without documentation. Others will buy research papers from online sources or friends. These intentional acts of academic dishonesty are the most blatant forms of plagiarism. *Unintentional plagiarism,* however, is still a violation of academic integrity. Unacknowledged use of another person's sentences, phrases, or terminology is plagiarism, so provide a citation and use quotation marks to show exactly where you are drawing on others' work. Similarly, unacknowledged use of another person's ideas, research, or approach is also plagiarism, so write careful paraphrases.

1d Understanding a Research Assignment

Beyond selecting an effective subject, you will need a reason for writing the paper. Literature instructors might expect you to make judgments about the structure and poetic techniques of Langston Hughes. Education instructors might ask you to examine the merits of a balanced curriculum for secondary students. History instructors might want you to explore an event—perhaps the rise of American industrial power and the immigrant labor force.

Understanding the Terminology

Using Academic Models, see section 9h.

Assignments in literature, history, and the fine arts will often require you to *evaluate, interpret,* and *perform causal analysis.* Assignments in education, psychology, political science, and other social science disciplines will usually require *analysis, definition, comparison,* or a search for *precedents* leading to a *proposal.* In the sciences, your experiments and testing will usually require a discussion of the *implications* of your findings. The next few pages explain these assignments.

EVALUATION To evaluate, you first need to establish clear criteria of judgment and then explain how the subject meets these criteria. For example, student evaluations of faculty members are based on a set of expressed criteria—an interest in student progress, a thorough knowledge of the subject, and so forth. Similarly, you may be asked to judge the merits of a poem, an art exhibit, or the newest trends in touchscreen cameras. Your first step should be to create your criteria. What makes a good movie? How important is a poem's form and structure? Is space a special factor in architecture?

You cannot expect the sources to provide the final answers; researched writing may grow from the scrutiny of a theory, examination of an object, or analysis of a scholarly issue.

As an avid cyclist, Whitley Rentfro examined the implications for developing a system of bikeways in urban settings. At first, her considerations focused on the

social and communal implications, yet with a further review of the literature she found a health-conscious basis for her study and the effect of bikeways on the health and quality of life for commuters. Her paper, "Of Highways and Bikeways: Filling the Lane for the Future," is found at the end of Chapter 15.

INTERPRETATION To interpret, you must usually answer, "What does it mean?" You may be asked to explain the symbolism in a piece of literature, examine a point of law, or make sense of test results. Questions often point toward interpretation:

What does this passage mean?
What are the implications of these results?
What does this data tell us?
Can you explain your reading of the problem to others?

For example, your instructor might ask you to interpret the 1954 Supreme Court ruling in *Brown v. Board of Education*; interpret results on pond water testing at site A, in a secluded country setting, and site B, near a petrochemical plant; or interpret a scene from August Wilson's play *The Piano Lesson*.

In a paper on Internet dating, one student found herself asking two interpretive questions: What are the social implications of computer dating? and What are the psychological implications?

DEFINITION Sometimes you will need to provide an extended definition to show that your subject fits into a selected and well-defined category. Note these examples:

1. A low-fat diet reduces the risk of coronary disease.

   You will need to define "low-fat" by describing foods that make up a low-fat diet and naming the benefits from this type of diet.

2. Are modern-day heroes limited to athletes and entertainers?

   This topic will require a definition of what constitutes a modern-day hero and what the characteristics are that illustrate their influence.

3. The root cause of breakups in relationships is selfishness.

   This topic will require a definition of selfishness and examples of how it weakens relationships.

A good definition usually includes three elements: the subject (low-fat diet); the class to which the subject belongs (diets in general); and the differences between others in this class (low-carb or Atkins). Definition will almost always become a part of your work when some of the terminology is subjective. If you argue, for example, that medical experiments on animals are cruel and inhumane, you may need to define what you mean by *cruel* and explain why *humane*

standards should be applied to animals that are not human. Thus, definition might serve as your major thesis.

Definition can also prompt discussion about technical or scientific terminology, as shown in Charlotte Dawn Fullerton's research paper that examined the problems associated with continued exposure to the ultraviolet (UV) rays given off by indoor tanning beds. Her paper needed a careful, detailed explanation of the threat to human skin as well as definitive analysis of long-term exposure risks such as melanoma, solar keratosis, and immune system suppression. By her inquiry, she exposed the dangers and called for more stringent action to regulate an adolescent's access to tanning beds. Her research paper appears in section 17e.

PROPOSAL A proposal says to the reader, "We should do something." It often has practical applications, as shown by these examples:

- While it allows for the easy extraction of fossil fuels that are locked in bedrock by pumping a concoction of water, sand, and chemicals into the ground, "fracking" operations must be stopped, for those chemicals could reach, and poison, the groundwater.
- A chipping mill should not be allowed in our town because its insatiable demand for timber will strip our local forests and ruin the environment.

A proposal calls for action—a change in policy, a change in the law, and, sometimes, an alteration of accepted procedures. Again, the writer must advance the thesis and support it with reasons and evidence.

In addition, a proposal demands special considerations. First, writers should convince readers that a problem exists and is serious enough to merit action. In the previous example about chipping mills, the writer will need to establish that, indeed, chipping mills have been proposed and perhaps even approved for the area. Then the writer will need to argue that they endanger the environment: They grind vast amounts of timber of any size and shave it into chips that are reprocessed in various ways. As a result, lumberjacks cut even the immature trees, stripping forests into barren wastelands. The writer presumes that clear-cutting damages the land.

Second, the writer must explain the consequences to convince the reader that the proposal has validity. The paper must defend the principle that clear-cutting damages the land, and it should show, if possible, how chipping mills in other parts of the country have damaged the environment.

Third, the writer will need to address any opposing positions, competing proposals, and alternative solutions. For example, chipping mills produce chip board for decking the floors of houses, thus saving trees that might be required for making expensive plywood boards. Without chipping mills, we might run short on paper and homebuilding products. The writer will need to note opposing views and consider them in the paper.

Causal Argument

Unlike proposals, which predict consequences, causal arguments show that a condition exists because of specific circumstances—that is, something has caused or created this situation, and we need to know why. For example, a student's investigation uncovered reasons why schools in one state benefitted from a lottery, yet institutions in another state did not.

Let us consider another student who asked the question, "Why do numerous students, like me, who otherwise score well on the ACT test, score poorly in the math section of the test and, consequently, enroll in developmental courses that offer no college credit?" This question merited his investigation, so he gathered evidence from his personal experience as well as data drawn from interviews, surveys, critical reading, and accumulated test results. Ultimately, he explored and wrote on a combination of related issues—students' poor study skills, bias in the testing program, and inadequate instruction in grade school and high school. He discovered something about himself and many details about the testing program.

Comparison, Including Analogy

An argument often compares and likens a subject to something else. You might be asked to compare a pair of poems or to compare stock markets—NASDAQ with the New York Stock Exchange. Comparison is seldom the focus of an entire paper, but it can be useful in a paragraph about the banking policy of Andrew Jackson and that of his congressional opponents.

An analogy is a figurative comparison that allows the writer to draw several parallels of similarity. For example, the human circulatory system is like a transportation system with a hub, a highway system, and a fleet of trucks to carry the cargo.

PRECEDENCE *Precedence* refers to conventions or customs, usually well established. In judicial decisions, it is a standard set by previous cases, a *legal precedent.* Therefore, a thesis statement built on precedence requires a past event that establishes a rule of law or a point of procedure. As an example, let's return to the argument against the chipping mill. If the researcher can prove that another mill in another part of the country ruined the environment, then the researcher has a precedent for how damaging such an operation can be.

IMPLICATIONS If you conduct any kind of test or observation, you will probably make field notes in a research journal and tabulate your results at regular intervals. At some point, however, you will be expected to explain your findings, arrive at conclusions, and discuss the implications of your scientific inquiry—what did you discover, and what does it mean?

For example, one student explored the world of drug testing before companies place the products on the market. His discussions had chilling implications