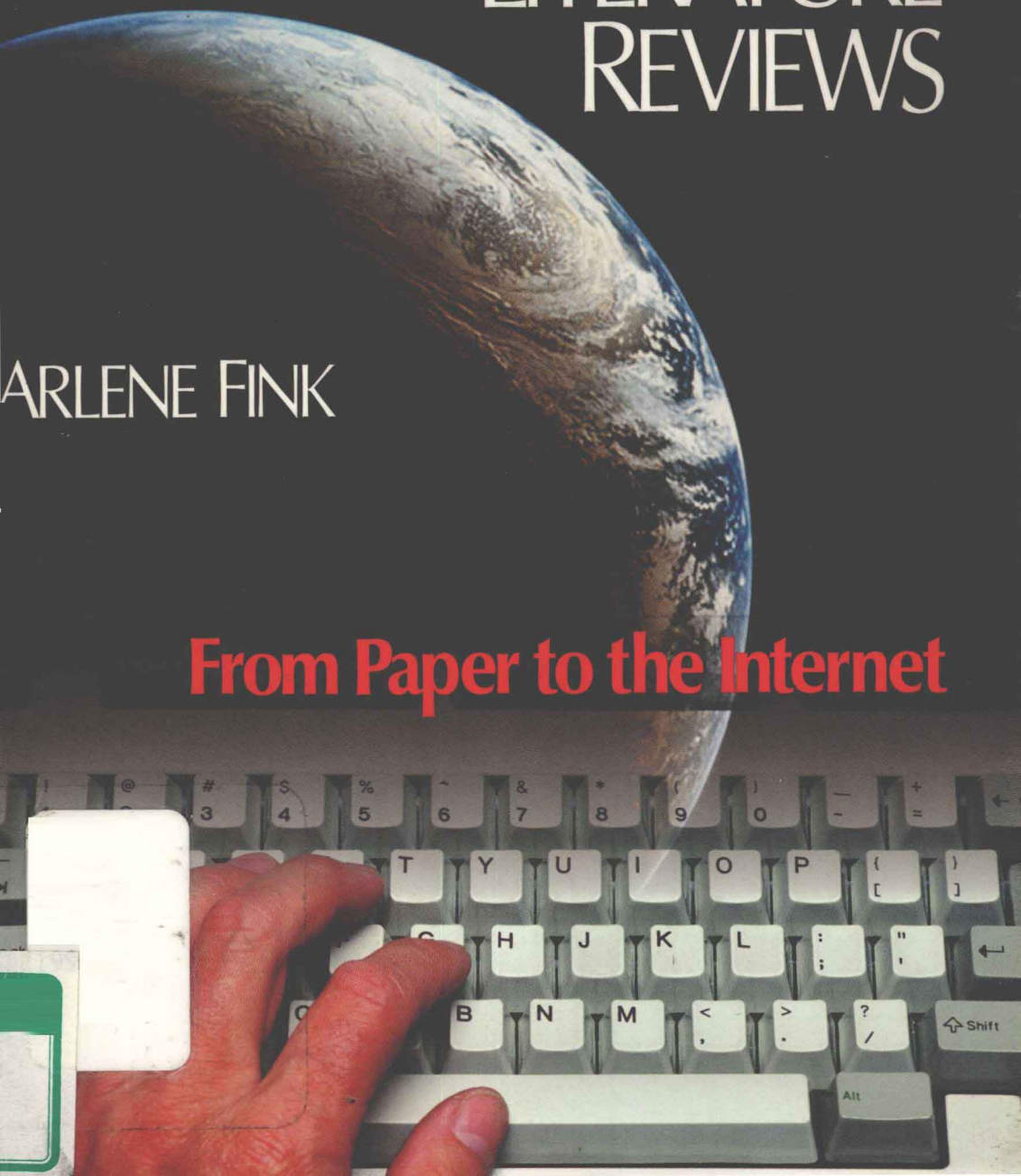
CONDUCTING RESEARCH LITERATURE REVIEWS

ARLENE FINK

From Paper to the Internet



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CONDUCTING RESEARCH LITERATURE REVIEWS

This book is dedicated to the ones I love:
John C. Beck, Ingrid, Anja, and Astrid

Preface

Each year the results of tens of thousands of studies are printed in books, journals, and magazines. Thousands of studies have been conducted, for example, to find out if television viewing increases violent behavior in children, if coaching improves SAT scores, and if depression should be treated with medicine, psychotherapy, or both.

How can an individual identify and make sense of the voluminous amount of currently available information on nearly every important topic in education, health, social welfare, psychology, and business? What standards can be used to distinguish between good and poor studies?

This book is for anyone who wants answers to these questions. Its primary purpose is to teach readers to identify, interpret, and analyze the published and unpublished research literature. Specifically, readers are instructed in how to do the following:

- Select and state questions to maximize the efficiency of the review
- Identify subject headings and key words for electronic searches
- Identify the most appropriate computer databases
- Supplement computer and Internet-based searches
- Identify and deal with unpublished studies
- Set inclusion and exclusion criteria
- Justify a method for identifying and reviewing only the "highest quality" literature
- Prepare a structured literature abstraction form
- Ensure and measure the reliability and validity of the review
- Synthesize and report results
- Evaluate qualitative research studies
- Conduct and evaluate descriptive literature reviews
- Understand and evaluate meta-analytic resarch

This book is written for all who want to uncover the current status of knowledge about social, educational, business, and health problems. This includes students, researchers, marketers, planners, and policymakers who design and manage public and private agencies, conduct studies, and prepare strategic plans and grant proposals. Every single grant proposal, for instance, requires applicants to provide evidence that they know the literature and can justify the need for the grant on the basis of what is and is not known about a topic. Also, strategic and program planners are interested in finding out what is known about "best practices" in a field in order to define programmatic missions and plan activities as diverse as marketing goods and services, preventing child abuse, and

setting up school voucher systems. Any individual with admittance to a virtual or real library can use this book.

Of course, no book could exist without the major help I receive from the saints at Sage. For this book, I am thrilled to thank Ravi Balasuriya for the cover design. It's great, isn't it! What could I do without Diana Axelsen? Any errors that may remain are my fault and not hers. I also thank Lynn Miyata, the production assistant; Janelle LeMaster, the typesetter and patient interior designer; and Kate Peterson, the copy editor (who, like Diana, finds all those typos and misplaced endnotes). Virgil Diodato did a terrific index and saved me untold grief. Eileen Carr, as always, thanks!

I am truly indebted to C. Deborah Laughton, who is the best buddy and friend around. Not only is she the muse, but she is also the Godmother (to Ingrid, Astrid, and Anja). We have to keep writing so that we have her around. Thanks, C. Deb.

Acknowledgments

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Contents

Purpose of This Chapter

This chapter explains what a literature review is and why you do one. It distinguishes between an explicit and reproducible review and one that is arbitrary and not duplicable. A main objective of the chapter is to describe and explain how to do an electronic search of the literature using several major databases such as

MEDLINE (National Library of Medicine), PsycINFO (American Psychological Association), and EDUC (Educational Resources Information Center, or ERIC). These databases rely on searches of subject headings and key words and a special grammar. The principles involved in using these databases are applicable to thousands of others.

The chapter also discusses ways to supplement a computerized search. These include the use of experts to uncover unpublished studies, works in progress, and manual searches. The merits and pitfalls of computer searches alone are also discussed. The chapter concludes with a discussion of ways to search for literature on the Internet or World Wide Web.

What Is a Literature Review? Why Do One?

A **literature review** is a systematic, explicit, and reproducible method for identifying, evaluating, and interpreting the existing body of recorded work produced by researchers, scholars, and practitioners. The scholarship and research on which you base the review come from individuals' diverse professions including health, education, psychology, business, finance, law, and social services.

Why do a literature review? You can do one for personal or intellectual reasons or because you need to understand what is currently known about a topic and cannot or do not want to do a study of your own. Suppose, for example, you want to know the best treatment for whiplash but do not plan to do a formal research study to find out. If you do a review of the literature, you will find more than 10,000 articles on the topic, some of which may contain the information you need.

Practical reasons also exist for doing reviews. Reviews are required, for example, in proposals for grants to do program planning, development, and evaluation. Consider these examples.

Write Proposals for Funding

Example. The Fund for Consumer Education is interested in health promotion and disease prevention. One of its current funding priorities is preventing drug and alcohol abuse. The Community Health Plan decides to apply for a grant from the fund to develop educational materials for elderly persons. The fund has specified that all grant proposals must demonstrate knowledge of the literature.

The Community Health Plan grant writers comprehensively review the literature. They first search for evidence to support their hypothesis that the risks of alcohol use are different in older and younger people. Numerous research studies provide them with the compelling confirmatory evidence they need. The grant writers also find that currently available educational programs do not adequately make this distinction. Using this information, the Community Health Plan establishes a basis for its proposal to develop, implement, and evaluate an alcohol-use consumer education program specifically for people who are 65 years of age and older. The program will use educational methods that the literature suggests are particularly effective in this population.

The fund reviewers agree that the plan grant writers have done a good job of reviewing the literature, but ask for more information about the specific educational methods that are being proposed. The plan grant writers expand their literature review to identify methods of learning and instruction that are particularly appropriate for older persons.

When writing proposals for funding, you are almost always asked to use the literature to justify the need for your study. You must either prove that nothing or very little can be found in the literature that effectively addresses your study's topic or that the studies that can be identified do not address the topic as well as you will in your proposed research. In the above example, the proposal writers use the literature to justify their consumer education program by demonstrating that existing materials do not adequately distinguish between the risks of alcohol use in older and younger people. They also use the literature to support their hypothesis that the risks are different and to identify methods of learning and instruction that are specifically pertinent to older people.

Literature reviews are also used in proposals for academic degrees.

Write Proposals for Academic Degrees

Example. A student in a doctoral program in education plans to write a proposal to prepare a high school curriculum aiming to modify AIDS-related knowledge, beliefs, and self-efficacy related to AIDS preventive actions and involvement in AIDS risk behaviors. The student is told that the proposal will be accepted only if a literature review is conducted that answers these questions:

1. What curricula are currently available? Are they meeting the current needs of high school students for AIDS education? Have they been formally evaluated, and if so, are they effective? With whom?

2. What measures of knowledge, beliefs, self-efficacy, and behaviors related to AIDS are available? Are they reliable? Valid?

The student performs the review and concludes that currently available curricula do not focus on prevention, although some have brief prevention units. The student also finds that valid measures of knowledge, beliefs, and behaviors related to AIDS are available in the literature. Good measures of self-efficacy, however, are not. The student concludes that developing a detailed AIDS prevention curriculum is worthwhile. He plans to use available measures of knowledge, beliefs, and behaviors and will validate a measure of self-efficacy in relation to AIDS preventive actions.

The student's adviser remains unconvinced by the review. How effective are current curricula in meeting the needs of today's students? Are behaviors more or less risky than a previous generation's? What does the literature say about the prevalence of AIDS among adolescents? The student expands his review of the literature to answer these questions.

Literature reviews are also used to defend current professional practices, as is illustrated in the next example.

Describe and Explain Current Knowledge to Guide Professional Practice

Example. A group of physicians reviews the literature to provide a basis for a set of guidelines or recommended practices for treating depressed patients. First, they use the literature to help define depression and the different forms it takes (e.g., major depressive disorder and dysthymic disorder). Next, the physicians rely on the literature for data on effective treatments. They find that the literature supports distinguishing among treatments for different populations of depressed patients (such as children and elderly persons), types of depression, gender, and methods of treatment (including medication and psychotherapy).