

SIXTH EDITION

HEALTH SCIENCES LITERATURE REVIEW MADE EASY

The Matrix Method

JUDITH GARRARD, PhD

Professor Emerita

School of Public Health

University of Minnesota, Minneapolis, Minnesota



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World Headquarters
Jones & Bartlett Learning
5 Wall Street
Burlington, MA 01803
978-443-5000
info@jblearning.com
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Summary: "The Matrix Method is one of many ways to approach a literature review. It was created by Judith Garrard when she was preparing NIH grants and is intended to teach students how to read a paper, organize the review using the Matrix Method, analyze it, and create a narrative synthesis. This method is particularly useful in the health sciences. Review is usually the initial step for a proposal for independent scientific study, often a Master's project or doctoral dissertation, and traditionally done under the guidance of faculty or a mentor. Though Judy's background is not in nursing, the adoptions are primarily in graduate nursing programs. The text is not intended as a resource for developing academic writing skills. It provides a system for organizing and conducting a literature review and develops research literacy skills"-- Provided by publisher.

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This book is dedicated to my husband, Bill;
our adult children, Zandy and Libby; our
children-in-law, Heidi and Lee; our grandchildren,
Hayden, Liam, Henry, and Helen; and our energetic
canine companion, Sophie. All 10 of you mean
more to me than you will ever know.

Brief Contents

Preface	x
Acknowledgments	xiii
About the Author	xiv

PART I	Fundamentals of a Literature Review	1
CHAPTER 1	Introduction	3
CHAPTER 2	Basic Concepts	35

PART II	The Matrix Method	75
CHAPTER 3	Paper Trail Folder: How to Plan and Manage a Search of the Literature	77
CHAPTER 4	Documents Folder: How to Select and Use Documents for Review	109
CHAPTER 5	Review Matrix Folder: How to Abstract the Research Literature	119
CHAPTER 6	Synthesis Folder: How to Write a Synthesis	139

PART III	Applications Using the Matrix Method	155
CHAPTER 7	A Library of Master Folders	157
CHAPTER 8	The Matrix Indexing System	167
CHAPTER 9	Matrix Applications by Health Sciences Professionals.	177

Appendix A: Useful Resources for Literature Reviews	189
Appendix B: Structure of Computer Folders for the Matrix Method	195
Appendix C: Data Visualization: A Digital Exploration	203
Index	205

Contents

Prefacex
Acknowledgments xiii
About the Authorxiv

PART I Fundamentals of a Literature Review 1

CHAPTER 1 Introduction..... 3
What Is the Purpose of This Chapter? 3
What Is a Review of the Literature? 3
What Is the Field of Research Synthesis? 7
What Are the Guidelines and Standards in Research Synthesis? ... 13
Other Developments in Health Sciences Guidelines..... 21
What Is the Matrix Method? 24
What Is a Review Matrix?..... 25
Overview of Chapters 2-9 and Appendices..... 26
Caroline’s Quest: Understanding the Process..... 29
What You Should Know or Be Able to Do by the End
of This Chapter..... 29
References 30
CHAPTER 2 Basic Concepts35
What Is the Purpose of This Chapter? 35
What Are Source Materials? 35
The Anatomy of a Scientific Paper: Basic Structure of a
Research Article..... 42
The Methods Map: A Methodological Review of the
Literature 46
Caroline’s Quest: Learning the Concepts 68
What You Should Know or Be Able to Do by the End
of This Chapter 69
References 74

PART II The Matrix Method

75

CHAPTER 3 Paper Trail Folder: How to Plan and Manage a Search of the Literature..... 77

What Is the Purpose of This Chapter?	77
What Is a Paper Trail?	77
How to Organize a Paper Trail Folder.....	78
How to Create and Use a Paper Trail	80
How to Use Bibliographic Databases in the Health Sciences	83
Predatory Publications, Publishers, and Fake Conferences.....	95
Caroline's Quest: Creating and Managing the Search	102
What You Should Know or Be Able to Do by the End of This Chapter.....	106
References	107

CHAPTER 4 Documents Folder: How to Select and Use Documents for Review109

What Is the Purpose of This Chapter?	109
What Is a Source Document?	109
How to Create and Use a Source Documents Subfolder	110
How to Create and Use a PRISMA Flowchart Subfolder.....	114
Caroline's Quest: Assembling and Organizing a Documents Folder	116
What You Should Know or Be Able to Do by the End of This Chapter.....	118
References	118

CHAPTER 5 Review Matrix Folder: How to Abstract the Research Literature.....119

What Is the Purpose of This Chapter?	119
What Is a Review Matrix?.....	119
Organize a Review Matrix Folder: Three Subfolders	121
Generate Column Topics for a Review Matrix	122
Read and Abstract Source Documents in a Review Matrix.....	126
Caroline's Quest: Constructing and Using a Review Matrix.....	133
What You Should Know or Be Able to Do by the End of this Chapter	136
References	137

**CHAPTER 6 Synthesis Folder: How to Write
a Synthesis..... 139**

What Is the Purpose of This Chapter?	139
What Is a Synthesis?	139
Organize a Synthesis Folder: Three Subfolders.....	140
Analyze Across Source Documents	142
Integrate Across Source Documents	143
How to Write: My Own and Others' Experiences	147
Caroline's Quest: Writing a Synthesis	150
What You Should Know or Be Able to Do by the End of This Chapter	152
References	153

**PART III Applications Using
the Matrix Method 155****CHAPTER 7 A Library of Master Folders 157**

What Is the Purpose of This Chapter?	157
What Is a Library of Master Folders?	157
Organize a Library of Master Folders.....	158
Use a Library of Master Folders	159
Maximize Use of the Matrix Method: FAQs	160
Caroline's Quest: Building Her Own Library of Master Folders . . .	165
Reference	166

CHAPTER 8 The Matrix Indexing System 167

What Is the Purpose of This Chapter?	167
What Is a Matrix Indexing System?	167
Create a Matrix Indexing System	168
Expand the Source Documents Subfolder	173
How to Update a Synthesis Efficiently	174
Caroline's Quest: Using the Matrix Indexing System	174
References	175

**CHAPTER 9 Matrix Applications by Health
Sciences Professionals 177**

What Is the Purpose of This Chapter?	177
What Are Matrix Applications?	177

Matrix Applications in a Grant Proposal.	179
Matrix Applications in a Meta-Analysis	180
Matrix Applications in Practice Guidelines	181
Matrix Applications in Evidence-Based Medicine	182
Caroline's Quest: Matrix Applications in Nonscientific Settings . . .	184
References	186
Appendix A: Useful Resources for Literature Reviews	189
Appendix B: Structure of Computer Folders for the Matrix Method	195
Appendix C: Data Visualization: A Digital Exploration.	203
Index	205

Preface

The purpose, scope, and emphasis of *Health Sciences Literature Review Made Easy* have not changed from the initial publication of this book and now for this *Sixth Edition*. They are as follows:

- **Purpose.** The purpose of this book is to describe a practical and useful method for reviewing the literature, especially the scientific literature in the health sciences. The audience continues to be graduate or professional students who need a practical, step-by-step set of instructions for how to conduct a review of the literature. That is its fundamental goal.
- **Scope.** The scope of this text spans from beginning students to health professionals in the workplace. The methods for conducting a review of the literature apply to all major health professions, including public health, nursing, dentistry, medicine, pharmacy, veterinary medicine, and the allied health sciences. Other professions have also found this book useful, including education, educational psychology, psychology, digital health, sociology, health tourism, and environmental engineering science as it applies to the health of humans or animals.
- **Emphasis.** The emphasis in this text is on practical applications. My goal was and continues to be establishing a method for actually conducting a review of the literature and preparing a narrative synthesis.

Health Sciences Literature Review Made Easy: The Matrix Method, Sixth Edition includes chapter-by-chapter revisions and new and reorganized content throughout. Here are the specifics:

- **Best Organized, User-Friendly Edition.** The *Sixth Edition* is unique in being the best-organized, most user-friendly edition to date. Whether you are a student learning the Matrix Method for the first time, an experienced professor teaching it, or a researcher publishing your own papers, this emphasis on organization and user friendliness will benefit you specifically.

My doctorate in Educational Psychology and my teaching experience over the past 50 years have convinced me that if readers could anticipate what the organization and content would be before actually reading the chapter, then the process of learning would be easier and their ability to use the material would be enhanced. That became my goal for creating the *Sixth Edition*, and here is how I accomplished it:

- **Panel of Experienced Teachers.** I began this revision by reading reviews from a panel of educators who responded to a standardized questionnaire about the previous edition and their advice for the future. This anonymous (to me) panel was assembled by my editor at Jones & Bartlett Learning, Tina Chen, and we discussed the responses in detail. I followed

up by interviewing a subset of the panel (with their permission) about the details of what they recommended, and with other teachers and students. Later I also interviewed reference librarians and directors of community college libraries about the resources their students could access at their institutions. I especially wanted to know whether their libraries provided major bibliographic databases (they did), reference management software (yes!), and free classes in their facilities (definitely).

- **Literature Review of Papers Citing the Fifth Edition.** Using the Web of Science bibliographic database at the University of Minnesota Bio-Medical Library, I accessed and read all of the scientific papers in the health sciences peer-reviewed literature that cited the *Fifth Edition*. My goal was to determine if the authors were using the Matrix Method as described in the most recent version of the book. It was thrilling to see the range of disciplines, their geographic spread, and the scientifically appropriate ways in which they were using the Review Matrix and the PRISMA Flowchart in their papers.
- **Outline of Each Chapter.** About half way through this 11-month process, I sat down and outlined each chapter for the new edition. This was a new approach, and the results were enlightening in showing me how to bring about better and more consistent organization across chapters, what coverage was missing, and especially what needed to be revised. These outlines will be a valuable resource for instructors and students, and are available for download from the Navigate Companion website accompanying this edition.

What were the outcomes of these three efforts in the *Sixth Edition*? My revisions include the following:

- **Purpose of the Chapter and a Topical Outline.** Each chapter and appendix begins with a purpose statement, followed by an explanation of the major topics in the text.
- **Definition of the Basic Concept and the Advantage of This Material.** A reader should always be able to turn to the beginning of each chapter to find the definition(s) of the basic concept(s) in that chapter and the advantages of that folder or content.
- **Remainder of the Topics in the Text.** Immediately following the description of the purpose of the chapter is a brief topical outline of the text in that chapter. This feature is present in Chapters 1 through 9.
- **Caroline's Quest.** Caroline's Quest is located at the end of each chapter for Chapters 1 through 9. It provides practical experience in learning the Matrix Method. Some readers consider the conversation between Caroline and Professor Dickerson about the Matrix Method to be somewhat basic, but the underlying questions were all raised by graduate students in my classes over time. Reading Caroline's Quest is worth your time because new information has been provided.
- **What You Should Know or Be Able to Do by the End of This Chapter.** This feature is present in Chapters 1 through 6.

What Else is New in the Sixth Edition?

- **New Content Added.** As with the earlier editions, there is an emphasis on new developments. The *Fifth Edition* was a watershed edition in this respect. In the *Sixth Edition*, there are two entirely new sections, one on the predatory publishing industry (Chapter 3) and the other on how to write the first draft of a synthesis (Chapter 6). All of the new content topics from the previous editions have been included in their original or revised form in this *Sixth Edition*.
- **Updated Digital Addresses.** All web-based addresses and URLs have been brought up to date at the time the *Sixth Edition* was printed, as was the case in earlier editions. The index has been revised and includes new topics.
- **Previous Materials Included.** All of the content in the previous editions is included, unless the material cannot be accessed, has been removed in the field, or has been revised.

Please send me an email (jgarrard@umn.edu) telling me what your experience was with this *Sixth Edition*. I'd love to hear from you!

Acknowledgments

With each new edition of this text, I have had the pleasure of working with colleagues from my past and new experts, all of whom have been exciting to work with. For the *Sixth Edition*, I have again depended on my steady friend, Del Reed, PhD, who is a reference librarian in the University of Minnesota's Health Sciences Library on the Minneapolis campus. Del has always been a dependable source of information, cheerfully answering my questions and helping me decide where to find what I needed for this edition.

Individuals who were very helpful in my writing of different parts of this edition include the following:

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- Scott Dewey, PhD, MA, JD, MLIS, Faculty Research Librarian, University of Minnesota Law Library, Minneapolis, Minnesota

I also want to acknowledge the editing, proofreading, and composition team at Jones & Bartlett Learning, Burlington, Massachusetts, who were especially delightful to work with on the *Sixth Edition*:

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- Benajmin Roy, Rights Specialist

I also want to acknowledge the continued support and encouragement of my husband, Bill Garrard, in this endeavor, as well as that of our children, their spouses, our grandchildren, and our canine companions over the years.

About the Author

Judith Garrard, PhD, retired from the University of Minnesota in January 2015, and is now a professor emerita. During her 44 years as a faculty member in the health sciences and a professor in the School of Public Health at the University of Minnesota, she was a research psychologist with postgraduate training in epidemiology.

Dr. Garrard conducted her teaching and research activities on a multidisciplinary basis throughout her career. For more than 35 years, she taught graduate courses in research and program evaluation methods to students in public health, nursing, medicine, dentistry, veterinary medicine, and pharmacy, as well as those in education, psychology, and social work.

Dr. Garrard's research specialty was pharmacoepidemiology and patient outcomes, with a focus on prescription drug use by elderly people in the community, nursing homes, and assisted living facilities. She has authored or coauthored over 100 papers and reports, including peer-reviewed research papers on psychotropic drug use by elderly people. She was one of four co-investigators funded by a 10-year grant from the National Institute of Neurological Disorders and Stroke (NINDS) research center, based in the School of Pharmacy at the University of Minnesota. Her specialty was epidemiological research on the use of antiepileptic drug use by nursing home residents, in collaboration with colleagues in pharmacy, neurology, and biostatistics. She has also been principal investigator or collaborator on numerous multidisciplinary research projects supported by National Institutes of Health (NIH) grants from the National Institute on Aging, National Institute for Neurological Diseases and Stroke, National Institute on Nursing, Agency for Health Care Policy Research, as well as the Health Care Financing Administration, Veterans Administration, and other granting agencies.

In 1990, Dr. Garrard received the Leonard M. Schuman Excellence in Teaching Award, from the School of Public Health, University of Minnesota, and in 1991 a Career Research Award in social and behavioral geriatrics from the National Institute on Aging, NIH. In 1999, her book, *Health Sciences Literature Review Made Easy: The Matrix Method*, was published by Aspen Publications, Inc. The *Second*, *Third*, *Fourth*, and *Fifth Editions* were published by Jones & Bartlett Learning in 2007, 2010, 2013, 2016–2017, respectively. This is the *Sixth Edition*. She can be reached by email at the following address: jgarrard@umn.edu.