

Cambridge University Press

978-1-107-69193-3 - Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences: Fourth Edition

Janice R. Matthews and Robert W. Matthews

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Successful Scientific Writing

A Step-by-Step Guide for the Biological and Medical Sciences

Fourth edition

Thoroughly revised and updated, the new edition of this acclaimed and best-selling guide offers a rich blend of practical advice and real-life examples. The authors draw on 50 years of experience, providing detailed step-by-step guidance designed to help students and researchers write and present scientific manuscripts more successfully through knowledge, practice, and an efficient approach.

Retaining the user-friendly style of the previous editions, this fourth edition has been broadened to include detailed information relevant to today's digital world. It covers all aspects of the writing process, from first drafts, literature retrieval, and authorship to final drafts and electronic publication. A new section provides extensive coverage of ethical issues, from plagiarism and dual publication to honesty in reporting statistics. Both the text and 30 hands-on exercises include abundant examples applicable to a variety of writing contexts, making this a powerful tool for researchers and students across a range of disciplines.

Janice R. Matthews is a writer and educator with a broad background in the biological sciences. Her professional focus is on facilitating clearer communication of scientific material. She has edited books, technical manuals, and hundreds of scientific research papers in the veterinary and biological sciences, both in university settings and for private industry.

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FOURTH EDITION

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Frontmatter

[More information](#)

Contents

Preface to the fourth edition	<i>page ix</i>
1 Start with a plan	1
Ask fundamental questions first	1
Communication format: the message determines the medium	3
So, where <i>should</i> this paper be published?	8
2 Conduct a comprehensive literature search	14
Adapt to new ways	15
Search many information channels	20
Keep track of your resources	25
3 Prepare for the challenge	28
Take charge of the task	28
Manage your message	31
Work with (and around) your natural inclinations	34
Build momentum and keep it	37
4 Begin well	41
Assess whether your research is ready for publication	41
Deal early with authorship	42
Master the practical mechanics of writing	46
5 Compose the IMRAD core of a strong first draft	55
Tackle the Introduction	55
Write your recipe: Materials, Methods, and variants	60
Marshal your results	62
Develop the Discussion and Conclusions	65
6 Assemble the rest of the first draft	68
Compile a careful and complete reference list	68
Generate a title and other front matter	71
Develop a suitable Abstract or Summary	75

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Janice R. Matthews and Robert W. Matthews

Frontmatter

[More information](#)

vi Contents

Identify effectual keywords	76
Acknowledge the help of others	78
Be transparent about potential conflicts	79
7 Compile tables to develop, clarify, and support your story	81
Use tables appropriately	81
Revise tables thoughtfully	83
Watch the details	88
Mesh your graphics with your text	89
8 Include figures for evidence, efficiency, or emphasis	92
Match figure to function	93
Prepare simple, honest figures	94
Illustrate relationships with graphs	96
Document with photographs and other illustrations	100
Develop explanatory artwork when needed	102
Employ symbols and notations with care	103
Highlight your story with effective figure legends	104
9 Report numbers clearly and responsibly	106
Determine how to express numbers in the text	106
Handle percentages properly	113
Report statistics correctly	114
Present probabilities clearly and fairly	119
10 Revise for coherence	123
Start with organization and logic	123
Rework for clarity of style	125
Improve readability	128
Condense for brevity	131
Recognize when short might be too short	136
11 Improve style and syntax	141
Use verb tense rules to show the status of work	143
Know when to use active and passive voice	145
Check for subject–verb agreement	147

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978-1-107-69193-3 - Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences: Fourth Edition

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Frontmatter

[More information](#)

	Contents	vii
	Attend to the mischief of multiples	148
	Watch for strange linkages	152
12.	Improve word choice	155
	Recognize and minimize jargon	155
	Use bias-free, inclusive language	159
	Choose the right word	162
	Energize the verbs	167
13	Attend to punctuation, capitalization, and other mechanics	170
	Punctuate for clarity	170
	Capitalize consistently	177
	Treat scientific names properly	180
	Be careful with other non-English words and phrases	184
14	Address your ethical and legal responsibilities	187
	Value ethical concerns	187
	Ensure against plagiarism	189
	Adhere to guidelines for human and animal research	192
	Protect yourself from potential libel and slander charges	193
	Handle trade names responsibly	193
	Understand copyright and patents	196
	Know when and how to request permissions	199
	Verify that you have addressed all potential concerns	203
15	Oral presentations: adapt the text and visuals	204
	Choose your design tools	204
	Investigate electronic alternatives	206
	Present text effectively	208
	Adapt and simplify the supporting graphics	212
	Employ an effective slide presentation style	215
16	Share your story in public: presenting talks and posters	221
	The human factor	221
	Murphy was an optimist	225

Cambridge University Press

978-1-107-69193-3 - Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences: Fourth Edition

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Frontmatter

[More information](#)

viii	Contents	
	Deliver a successful speech or presentation	225
	Present a poster, the happy hybrid	230
	Handle questions with respect and assurance	234
17	Publication: the rest of the story	236
	Get it all together – then send it off!	236
	Understand the process of editorial review	241
	Tips for international publication	246
	Thirty exercises to improve anyone’s scientific writing skills	251
	Selected resources	283
	Index	291

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[More information](#)

Preface to the fourth edition

Why do scientists write? Ask a dozen, and you'll hear a lot of grumpy answers. "Because I have to!" "Haven't you heard about publish or perish?" "If I don't, I'll never get my degree/get promoted/get a grant/reach full professor!" Seldom do you hear, "Because, actually, I sort of enjoy it!" Such an admission seems to run up against a cultural taboo among academics. Researchers accept, even delight in, an associate's exhilaration about his or her discoveries, and pat each other on the back when a paper is accepted for publication or a grant proposal is funded. Seldom do they share similar enthusiasm over the actual writing process that was central to those successes. Yet in their free time, and sensing no contradiction, these same individuals may use similar skills to do crossword or sudoku puzzles for relaxation or use their electronic gadgets to puzzle over word games with friends.

There is joy to be found in any creative act, and generally the more skillful one becomes at it, the greater that joy. Why should scientific writing be any different? Could it be that science's demand that one must write has dampened or killed that joy, in the same way that being forced to do Japanese math puzzles might remove the incentive to do so for pleasure?

Scientific writing makes demands on its practitioner, like any other task done really well. Every facet demands precision and complete accuracy. Rewriting and editing generally require more time than the initial drafting of the content. Yet, does a skilled woodworker complain that sanding takes time? Or a dedicated weaver resent the accuracy required to properly dress a loom?

Scientific writing, too, is a craft, with rules, conventions, and even passing fads. The more completely one understands the basics, the easier mastery becomes. However, this is not enough. We are in a time when the basics of scientific writing and publication are changing extremely quickly, not just in mechanics and rules, but in very outlook. Practices that were once taboo, such as blatant self-promotion and dual publication, have become increasingly acceptable and commonplace. Online journals are springing up like mushrooms, and like fungi, they require careful appraisal to discern the valuable from the potentially toxic. English-language publications are no longer solely paper copy consigned to languish on dusty library shelves, but electronic missives that reach large and diverse audiences around the world.

In response, this fourth edition of *Successful Scientific Writing* has changed more than any of its previous iterations. We've doubled the number of chapters, allowing more explicit advice on ethical issues and on the planning

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Frontmatter

[More information](#)**x Preface to the fourth edition**

and presentation of research. For relative newcomers to the world of scientific writing, we've added much more guidance on writing and organizing each part of a manuscript's initial draft. Strategies for more effective written and oral presentations have been presented in greater detail. We've collated and expanded the exercises that allow practice in applying concepts to actual examples.

For those who have been writing in the biological and medical fields a bit longer, the new world of electronic publication has received more emphasis in this edition. Other new material ranges from techniques for conducting a more effective and comprehensive literature review to ways to hone and present one's scientific message so that it receives the attention it deserves. We have expanded tips for writers coming from, or addressing their work to, the growing international community of scientists for whom English is an acquired language.

What hasn't changed is our pragmatic, practical outlook that views scientific writing as an interesting craft to be learned. We also remain focused on better ways to work in a systematic and organized fashion. Writing well does take time, but the task doesn't need to be never-ending.

As in earlier editions, we've attempted to approach all these subjects with the light touch and bit of humor (including over two dozen cartoons in this edition) that befit an interesting and potentially pleasurable task. We're aware that to many of you, "enjoyable writing" is an oxymoron. Ours is a minority view, we know, but we'd like to invite you to have an open mind. Perhaps we'll be able to convince you, and perhaps not. Either way, this book will provide the tools, skill set, and insider tips you need to become more skilled in the writing your profession calls upon you to do. If, along with personal success you also come to find some joy and humor in the writing task, we'll feel that we too were successful.

J.R.M.
R.W.M.
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