

**Academic Writing for International Students of Science by Jane Bottomley, . Routledge, New York, NY (2022). 220 pp GBP 120.00**

Barbara Wing Yee SIU<sup>a,1</sup>, Muhammad Afzaal<sup>a,b,2</sup>

<sup>a</sup> Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Kowloon, Hong Kong

<sup>b</sup> Institute of Corpus Studies and Applications, Shanghai International Studies University, China

E-mail addresses: [barbara.siu@polyu.edu.hk](mailto:barbara.siu@polyu.edu.hk) (B. Wing Yee SIU), [afzaal@shisu.edu.cn](mailto:afzaal@shisu.edu.cn) (M. Afzaal).

A genre in its own right, academic writing encompasses a wide range of products such as assignments, case studies, technical reports, laboratory reports, test questions, journal articles and thesis reports. Generally speaking, the writing errors and stylistic missteps made by most L2 learners tend to be a source of frustration for their academic audiences. Against this backdrop, the poor writing skills of engineering students have compelled examiners and teachers to critique the students' lack of proficiency. Content, organization, and language are three key components of academic writing which pose particular challenges for engineering students and graduates alike. The process of developing academic skills includes various steps such as "exploring, refining, practising, experimenting, reviewing, recycling, and responding to feedback" (p. 2). In each module, the written assignments are linked directly to the learning outcomes, and these are assessed in compliance with assessment guidelines and assessment criteria which are linked to the learning outcomes. In order to ensure that there is clarity and transparency in how students' performance and progress are measured, Jane Bottomley provides complete assessment criteria in the second edition of her book *Academic Writing for International Students of Science*. She explains that one of the most crucial responsibilities of an academic is to comprehensively assess and provide feedback to students on the work that they have completed. Bottomley discusses two types of feedback, namely "formative (which includes advice on how to improve their work in future tasks) and summative (which includes feedback on an assessed piece of work to explain why a particular mark has been awarded)" (p.7). The author's first book was inspired by her work as a professor at the University of Manchester in the United Kingdom, where she taught and mentored students from across the world, including many international and science majors. Jane Bottomley has rewritten and updated the volume to "help science, engineering and technology students develop the knowledge, skills, and strategies necessary to write clearly and coherently in their college assignments and projects" (p.7). In addition, this second volume is also beneficial for the academic professionals for assessing their students' academic writing skills. The new version focuses on scientific and engineering English to a greater extent with a view to improving academic writing. Updated content and new tasks are included in the new edition as are new chapters on 'writing in the sciences' and writing in higher education along with reflective tasks. The book is an invaluable resource for science, engineering and technology students who want to improve their writing and academic potential. It is clear, engaging, and simple to use. As a book for science, engineering and technology university students, *Academic Writing for International Students of Science* amply fulfils its objective of developing "the knowledge, skillset, tools, and strategies necessary for producing precise and coherent academic discourse" (p.8). Bottomley highlights the nature of scientific writing by using authentic texts, while also covering essential topics like academic style in for science and engineering, effective sentence and paragraph structure, and coherence in texts and arguments. Throughout the book, Bottomley integrates a variety of tasks that allow readers to put what they have learned into action. The book is a significant contribution to guides for making improvements in students' academic

writing as it integrates tasks such as exploratory practice and review, thus enabling the writers to see how language works in a real scientific context and encouraging them to draw on that knowledge and experience as they continue to write at university. This volume is distinct from similar books (e.g., [Bailey, 2015](#); [Karpenko-Seccombe, 2020](#)) in that its emphasis is on both “macro-level, i.e., the writing process itself, as well as general themes such as readability and consistency in writing, as well as the micro-level, i.e., the technicalities of writing like syntax and punctuation” (p. 2). The book comprises nine chapters and an appendix. The first chapter examines university writing as well as writing for commercial endeavors and popular science. Bottomley looks at scientific writing from a broad perspective. ‘Science writing’ is distinguished from ‘scientific writing,’ and examples from each category are examined. The author notes that science writing refers to “less technical words, and is produced for communication with the general audience” (p.13). According to Bottomley, this is distinguishable from ‘scientific writing’ which entails students writing in a highly technical style for a readership comprised of other scientists. She terms this “academic writing for sciences’ which is produced by science students and takes the form of academic dissertations, assignments or term papers” (p. 13). In the second chapter, Bottomley introduces what it means to write at university and improve one’s writing skills as a writer. The author leads the writers through the writing process and teaches them how to ultimately connect with it so that they can complete their projects to the best of their ability. This process looks at the many steps, such as analyzing the task and conducting research on the issue. Bottomley discusses the significance of drafting and editing and formatting and proofreading concerns and explains different types of writing such as lab reports, essays, dissertations, and research articles. She provides tasks with activities for the students to complete in order to improve their understanding of writing. She further emphasizes that a writer’s goal is generally educational when the audience knows less than the writer (as in a textbook). For a writer, the goal is usually to “demonstrate familiarity, competence, and intelligence if the audience knows more than the writer does” (p. 25). In Chapter three, Bottomley outlines the characteristics of scientific style. She emphasizes the importance of “clarity and readability” and offers advice on writing in a concise and precise manner. This chapter also delves into the topic of register in scientific writing. The author emphasizes that scientific writing is most effective when it is clear and easy to read, concise and precise, neutral, or formal in style. Bottomley further suggests that concise writing should help the readers to “focus on the message, rather than distracting or hindering them with unnecessary traffic” (p. 37). In addition, she focuses on the length of the sentences and the organization of information, which is particularly important when someone writes scientific documents for the university. Finally, she highlights that it is essential for the “content of the texts” to be as clear and understandable as possible, even though the subject may be “complicated and intellectually challenging” (p.43). She includes some activities evidence-based to enable students to learn how to contribute to clarity in texts. In Chapter four, Bottomley gives an overview of the English sentence structure. The author provides various exercises which assist writers in writing more straightforward sentences by improving their understanding of how sentence ‘building blocks’ fit together. This chapter also shows how different types of sentences can serve different purposes in your writing. Examining common structures in scientific writing such as infinitives of purpose and relative clauses, the chapter also provides task-based exercises and guidelines. In Chapter five, the author delves deeper into different ways of combining ideas and thus increasing text complexity. The chapter also concentrates on punctuation, an aspect of language that is often overlooked but can significantly improve the clarity and style of one’s writing. Chapter six examines some of the characteristics of English paragraph structure. It provides the L2 writers with strategies for clearly developing their paragraphs and achieving ‘flow’ in their writing. Bottomley explains that when writing a paragraph, the writers should ensure the ideas flow logically and that the reader can readily follow the links between the words, sentences, and concepts. The concept of ‘flow’ in writing is crucial, and there are a variety of tactics and integrated

devices that can assist in achieving flow in work. Chapter seven of the book offers examples of how to cite scholarly sources effectively. Due to the suitable presentation of these sources, academic writers are better equipped to construct their arguments in future assignments. More specifically, the writers are familiarized with how to use effective summaries, paraphrases, and direct quotations to encourage critical engagement with materials and avoid plagiarism. Also, a few pointers have been given on how to go about synthesizing data from various sources. In addition, the most significant section of this chapter comprises the description of “stance, argument and strong voice” (p.120). With reference to writing an assignment, Bottomley emphasizes the need for student writers to adopt a clear position, robust argument and strong voice and to integrate illustrative examples as a form of supporting evidence. This is viewed as an excellent approach to show readers how critical involvement with important reading is made easier with a clear stance. Finally, this chapter offers ideas for repurposing the language that the writers learn while reading by using it to communicate their critical engagement with the work. In Chapter eight, the author discusses the importance of producing coherent texts and developing arguments so that the readers can easily follow along. This chapter presents various types of scientific literature to demonstrate how the authors organize, sustain, and support their ideas in their works. The author further explains why many scientific papers published in journals follow a specific structure or something very similar. Some may include slightly different headings such as ‘Background,’ ‘Related work,’ or ‘Conclusion,’ while others combine ‘Results’ and ‘Discussion’ sections. The papers will also include an ‘Abstract’ that summarizes the paper. Bottomley provides two main reasons why the writers should become acquainted with the IMRAD structure (Introduction, Method, Results, and Discussion) (p.132). Being familiar with the IMRAD structure can help writers read scientific papers more efficiently and effectively. The headings can help the learners to navigate papers and find the sections they want to focus on. In terms of writing, the IMRAD structure may serve as the foundation for writing assignments based on their research. At the end of their degree, most undergraduate and master’s students, for example, write a lengthy research dissertation. A closer examination of these texts reveals that specific language and discourse features are associated with each component of the IMRAD framework. (p.125). A discussion of academic and scientific traditions is presented in the final chapter of the book. Several commonly used conventions in academia and science are introduced. Adopting these norms can help the science and engineering students fit in with their academic peers and generate easy-to-understand and accessible work to a wide range of readers. The assessment criteria provided in the first chapter provide standards for academic writing teachers while evaluating L2 writing of engineering and science learners. Furthermore, the author sheds light on the examination of various referencing conventions. It is critical to acknowledge the source of information and ideas clearly, which can allow the reader to find a source easily and avoid plagiarism (p. 142). In this way, the author observes that science and engineering students will be able to demonstrate that they worked with care and attention. One of the most critical aspects of this work is the examination of scientific language and discourse characteristics through the use of actual examples of scientific writing. The texts under consideration were chosen because they are written and display essential characteristics while also being accessible to students from various scientific backgrounds. In addition, this volume provides substantial activities for the assessment of written tasks, assignments, and scholarly term articles by undergraduate and graduate learners of science and engineering. The author has provided relevant activities and reflective tasks to assess the writing skills. This book is of academic writers and teachers to assess the writing skills and improve the prior knowledge and experiences of writers. In conclusion, it can be said that the volume is innovative because the author has adapted, extended, and provided novel approaches to second language learners with the goal of helping them to improve their academic writing. As a great addition to the canon of writing standards for scientists, engineers, and technologists, this book is highly recommended to science and engineering scholars and academic professionals. As [Swales \(1990\)](#) states, clear and coherent writing

is a sign of good writing. Thus, science and engineering scholars should focus on coherent writing which helps the reader to understand what they are trying to say. They can decipher the author's argument and put it all together. The assignments/ tasks in this volume allow the writers to examine samples of scientific writing from books and journals and student writing to investigate key linguistic and discourse aspects that can assist writers in constructing cogent texts and arguments.

## References

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