Chapter 1

Six Reasons to Know about Genre and Graduate-Level Research Writing

This chapter defines what graduate-level research writing means and explains why developing a sophisticated understanding of research writing is important for graduate students, early career academics, and, to a smaller extent, senior undergraduate students as well as writing teachers who work with these groups.

Graduate-Level Research Writing: Definitions and Importance

Graduate students, or postgraduate students as they are often called in countries and regions outside the United States, and novice academics form a distinct group of nascent scholars and learners of research writing. Although not yet well-established, well-published faculty, yet no longer novice undergraduates, these groups are being acculturated into their disciplines through the process of writing about their research. Consistent with this observation, graduate-level research writing is broadly defined in this book as scholarly writing that graduate students, junior researchers, and, in some cases, senior undergraduate students need to learn to engage in, or to prepare to participate in, peer-oriented written scholarly conversations about their research. These written conversations are often through genres such as journal articles or theses/

dissertations that meet, or aspire to meet, the expectations of these students or scholars' respective discourse communities. As a result, these writers must acquire "the expertise in the academic genre set that orchestrates" their chosen fields, such as course papers, thesis proposals, theses or dissertations, grant proposals, conference proceedings, journal articles, and academic support documents, to name a few examples (Swales & Lindemann, 2002, p. 105; see also Curry, 2016, for a list of the genres graduate students are expected to learn).

More specifically, compared with beginning undergraduate students, graduate students and junior academics are "all under pressure to communicate in increasingly sophisticated ways to increasingly sophisticated audiences" (Freeman, 2016, p. 223). To do so, they need to master a larger body of discipline-specific vocabulary and sentence patterns suitable for the valued genres. They need to show greater breadth and depth of mastery in disciplinary conventions as manifested in the patterns in their target research genres. More important, they must increase their rhetorical awareness of how the target research genres are situated within various disciplinary networks (Tardy, 2009). With such an awareness, they can then learn and practice the disciplinarily sanctioned ways of constructing new knowledge often embedded in these genres. For example, they often must learn to critique previous knowledge claims, highlight one or several gaps in the literature, and argue that their research addresses the gaps and contributes to the construction of new knowledge through the journal article genre (Swales, 1990, 2004). They also must use various valued research genres to address the needs of different audiences, including the graduate school admission committee members, classmates and professors in their subject-matter courses, readers of their qualifying exams/papers, dissertation committee members, conference panels, grant proposal reviewers, journal referees, and many others.

In some universities, especially those in the United Kingdom, senior undergraduate students are also often required to write an undergraduate dissertation that discusses the research literature thoughtfully, adopts the disciplinarily preferred

research methods correctly, and aspires to engage in scholarly conversations with professional peers through presenting and discussing one's findings coherently and confidently (see, for example, Naoum, 2013, and Parsons & Knight, 2015, for their guidebooks on writing undergraduate dissertations in construction and in geography as well as the project by Robinson, Stoller, Costanza-Robinson, and Jones, 2008, to teach research writing to undergraduate students in chemistry). Graduate-level research writing, as discussed in this book, applies to this and other similar student populations.

Although graduate students, early career academics, and, to a lesser extent, senior undergraduate students need to develop a sophisticated understanding of the important genres in their disciplines, is formal instruction necessary for these students? By extension, is it necessary for writing instructors to build and increase their knowledge related to the teaching and learning of graduate-level, discipline- and peer-oriented research writing? In the rest of this chapter, I highlight six reasons why I believe the answer to both questions is yes. I hope that these and other related reasons will help convince the readers of this book of the importance of increasing their knowledge about genre and about the learning and teaching of graduate-level research writing.

Six Reasons to Know about Genre and Graduate-Level Research Writing

Reason 1: The Pressure Felt by Scholars to Engage in Research Writing in English

An obvious reason for enhancing one's knowledge of the context, principle, and practice of graduate-level research writing instruction is related to the increasing number of L2 graduate students studying in English-speaking countries. These students must learn and produce graduate-level research writing in English in order to complete their degree

study and to advance their careers (Belcher, 2012). The United States has been as an illuminating example. According to the Institute of International Education (IIE), which is an independent, not-for-profit organization that promotes research and policy dialogues on global higher education, international students enrolling in U.S. universities reached a record high of 1,078,822 students in the 2016–2017 academic year (IIE 2017 *Open Doors* Data and Fast Facts at www.iie.org). Among these students, 391,124 were graduate students, with many of them in fields such as business, engineering, and computer science.

Outside of English-speaking countries such as the United States, the United Kingdom, Australia, New Zealand, and Canada, graduate students are also increasingly being required to study for their degrees in English (e.g., Kuteeva & Negretti, 2016). For example, graduate students in China are not only being asked to write their theses and dissertations in English, but are also required to publish research papers in English, sometimes in high-profile Science Citation Index (SCI) journals, before graduation (Curry, 2016; Flowerdew & Li, 2009; Li, 2017). In fact, some have noticed that much of the work reported in the internationally indexed papers by Chinese scientists has been conducted by doctoral students (Cargill, O'Connor, & Li, 2012). The requirement to publish English research articles in indexed journals before graduation has also been reported in Taiwan (Huang, 2010, 2014), Korea (Cho, 2009; Kim & Shin, 2014), and Indonesia (Cargill, O'Connor, Raffiudin, Sukarno, Juliandi, & Rusmana, 2017).

In addition, the "article-compilation" PhD thesis or dissertation in which a doctoral candidate is expected to have an article or two published in English-medium international journals before graduation is becoming increasingly popular in countries such as the Netherlands (Burrough-Boenisch, 2003), Japan (Gosden, 1995), China (Li, 2006), and the U.S. (Kittle Autry, Carter, & Wojcik, 2016), among others. Such a trend has, undoubtedly, added to the pressure for graduate students to write up and publish their research in English before or during the degree-earning process.

For L1 students, the pressure to learn research writing has also increased. With the number of graduating students far surpassing the number of jobs available each year in the United States, for example, L1 graduate students "clamor to produce publications while completing coursework, exams, and theses/ dissertations" because "having a scholarly identity [through publications] before entering the job market feels essential," and to produce publications "may be a great source of stress and anxiety" (Brooks-Gillies, Garcia, Kim, Manthey, and Smith, 2015; see also Curry, 2016, for a similar observation). Apart from the pressure generated by the job market, the changing landscape of graduate education has also led to the need for L1 graduate students to learn research writing expediently and effectively. In a journal article that targets mainly English composition scholars who work with L1 students, Tauber (2016) argues that many previously practice-based professions that graduate students aspire to enter have become increasingly "educationalized" (p. 640). Consequently, graduate students entering a profession- or occupation-oriented graduate degree program today are expected to engage in the academic activity system with its demands for scholarly production and research writing. Such an expectation has added to the pressure for these students, similar to their peers in more traditionally research-oriented graduate programs, to learn research writing well. These and other reasons have led L1 graduate students to seek the type of EAP support offered to L2 speakers of English, as noted by Feak (2016).

After graduate students earn their degrees, the pressure to produce research writing in English often intensifies because English is the dominant language of academic publication (Curry & Lillis, 2017a, 2017b; Hyland, 2015a). In many geographical locations, acceptable target journals have been identified as those included in high-status citation indexes, which are often published in English (Burgess, 2017; Cargill & Burgess, 2017; Curry & Lillis, 2017a, 2017b). Given the growing prominence of English as the vehicle for communicating research findings, ministries of higher education, universities, and research centers around the world have, unsurprisingly,

made policies that encourage researchers and scholars to publish in English-medium international journals, especially those with a high-impact factor (Burgess, 2017; Curry & Lillis, 2017a, 2017b; see also Englander, 2014). Selected countries around the world that have adopted this kind of policies include Spain, the United Kingdom, China, Brazil, Korea, Malaysia, Chile, and Sri Lanka, among others (Burgess, 2017; Kim & Shin, 2014). For example, as part of the effort to internationalize China's higher education system, the Chinese government has adopted Western criteria in measuring the credibility of scholarly publications and has encouraged academics to publish in high-status Western-based English-medium journals through incentives such as "cash prizes, housing benefits, or other perks" (Qiu, 2010, p. 142; Tian, Su, & Ru, 2016).

Reason 2: The Difficulties Encountered by Novice Research Writers

Due to the pressure to complete one's degree study through learning and producing various research genres in English and to advance one's career through publications, again, in English (see Reason 1), graduate students and junior scholars often feel the need to specifically learn research writing. Such a need becomes all the more salient if they encounter any difficulties with learning and using vocabulary, applying the correct grammar and sentence constructions, using reporting verbs, and other language problems that put these students and scholars at a disadvantage when writing their theses/ dissertations (Rogers, Zawacki, & Baker, 2016) or when preparing and submitting their papers to English-medium journals (J. Flowerdew, 2015). Their research papers have been reported as sometimes rejected and criticized by journal reviewers and editors due to the perceived language problems (Duszak & Lewkowicz, 2008).

Some writers also lack a clear understanding of the disciplinary expectations behind the textual features that they are expected to learn (Casanave & Li, 2008) or may not have a solid command of the scholarly registers that involve, for example,

a skillful mastery of discipline-specific citation language or metadiscourse that signals one's commitment to an argument (Kwan, 2010).

As a result of any of these difficulties, these students and scholars may lack confidence in their ability to write in English and are often anxious about the prospect of having to publish in English (Tian, Su, & Ru, 2016). Some senior researchers also feel that their research writing abilities may not be strong enough to meet the demands placed on them, which include not only submitting research papers themselves, but also guiding their graduate students to produce research writing that meets the requirements of the discourse community (Cargill, O'Connor, & Li, 2012).

Just as both L2 and L1 graduate students feel strong pressure to engage in research writing (see Reason 1), these difficulties apply to both L2 and L1 writers. As some have argued, research English is no one's first language, graduate-level research writing is far from a universal skill, and both research English and graduate-level research writing must be acquired through prolonged education for L2 and L1 writers alike (Hyland, 2015a; 2016). Indeed, the "increased communicative demands placed on [graduate students] by the generic academic ladder" could be as overwhelming to L1 as they are to L2 writers, as noted by Swales and Luebs (2002, p. 150) who describe an episode in which they offered a workshop on literature searches and reviews at the University of Michigan. More than 200 people showed up, "a clear majority being apparently native speakers of English." Many of these L1 doctoral students, as noted by Swales and Luebs (2002), were "close to being traumatized by the unknown exigencies" of the literature review part-genre (pp. 150–151).

Although this episode happened many years ago, the problem persists, as described in more recent accounts of curricular efforts to help L1 graduate-level writers (e.g., Fairbanks & Dias, 2016; Ritter, 2017) and in blogs that target L1 graduate-level research writers (see the blog *Patter* by Pat Thomson at https://patthomson.net/, for example). In fact, L1 graduate students' struggles with writing are not just "traumatizing" in general,

but could also cause them to fail graduate school, as pointed out by the authors of *57 Ways to Screw Up in Grad School: Perverse Professional Lessons for Graduate Students* that targets a primarily L1 audience (Haggerty & Doyle, 2015).

Moving beyond degree study to look at scholarly publication, Hyland notices that many well-educated L1 speakers "lack the necessary know-how and experience to produce publishable papers." As a result, the enculturation into the norms of academic rhetorical practice could be "painful and protracted" for both L1 and L2 users of English, as argued by Hyland (2015a, p. 62; 2016).

Possibly due to such a realization, Swales and Feak (2011) claim that, when it comes to academic writing, the more valid and valuable distinctions nowadays are between senior researchers and junior researchers, regardless of their L1 backgrounds (see Swales, 2004, for a more detailed presentation of this argument). In fact, Curry calls the dichotomy between "native" speakers and "nonnative" speakers of English in terms of graduate-level research writing "reductionist" and "unhelpful" (2016, p. 79).

At a more technical level, researchers have noticed that some of the problems experienced by L1 writers, such as difficulties with citation, academic conventions, genre expectations, argumentation, word choice, cohesion, sentence structure, and writer identity, are not very different from those encountered by L2 writers (e.g., Aitchison, Catterall, Ross, & Burgin, 2012; Paltridge, 2016). Rogers, Zawacki, and Baker (2016), after surveying 428 doctoral students (362 L1 writers and 66 L2 writers), found "a high degree of similarity" in some of the items pointed out by both L1 and L2 writers as highly challenging (p. 57). These include "translating ideas into written form," "organizing and structuring chapters and sections," "planning and prewriting," and "choosing the most appropriate words," among others (p. 57). Similarly, Fairbanks and Dias (2016) noticed that the U.S.-educated students who came to the writing center at Claremont Graduate University in the United States were very excited when they were introduced to the model for research paper introductions, possibly because

of their lack of the knowledge of the effective framework for writing such a part-genre.

For these reasons, some graduate-level communication programs have started to target L2 and L1 students "equally and without distinctions" as "a matter of general policy for graduate communication" programs (Tierney, 2016, p. 275). Such a policy has also been borne out by actual pedagogical practices. Sundstrom (2016), for example, describes how the courses developed in the Graduate Writing Program at the University of Kansas (U.S.) initially served only international students. After these courses were offered several times, the enrollees turned out to be "70 percent native speakers and 30 percent nonnative speakers" (p. 193). Similarly, Phillips (2016) expected that L2 speakers would comprise most of the clientele at the graduate writing and research center directed by her at Ohio University (U.S.) and was quite surprised to find that 50 percent of the consultation sessions at her center have typically been with monolingual domestic L1 speakers of English.

Reason 3: The Problems with Mere Immersion- or Apprenticeship-Based Learning of Research Writing

The previous two sections have described the pressure and challenges for novice writers to engage in graduate-level research writing during and beyond their degree study. The pressure and challenges described have attracted the attention of researchers in writing studies and in English for Academic Purposes (EAP) who have examined how graduate-level research writers navigate the sociocultural networks surrounding their writing activities and how such writers participate in, or aspire to participate in, their respective discourse communities through their writing (e.g., Belcher, 1994, 1997; Casanave, 2002, 2014). Using the theoretical framework of "community of practice" and the related concepts of legitimate peripheral participation and situated learning (Lave & Wenger, 1991; Wenger, 1998), these scholars have highlighted the situated nature of graduate-level research writing and the importance of having

access to experts in real time and in contexts outside of formal instructional settings. Instead of focusing on, or merely looking at, the cognitive processes these writers engage in or the ways they acquire and produce rhetorical organizational patterns or lexico-grammatical features in valued genres, scholars adopting the framework of legitimate peripheral participation are more interested in these writers' participation in academic communities and the social relationships through which these writers define themselves. By extension, scholars adopting such a theoretical lens often consider academic and research genres to be a form of situated cognition embedded in and, consequently, best learned through participating in disciplinary activities (Berkenkotter & Huckin, 1995). In other words, in the views of these scholars, those new to research writing can best improve their ability to control genres and writing through participating in the writing and writing-related activities of different communities of writers and through the formation of various trajectories of disciplinary enculturation (Belcher, 1994; Casanave, 2002; Paltridge, Starfield, & Tardy, 2016).

Studies on graduate-level research writers have also been informed by the theoretical frame of academic literacies. This theoretical frame views research writing as a sociocultural practice occurring within a complex social system that incorporates issues of epistemology, power, and identity as student writers strive to create meanings and construct knowledge as burgeoning or active participants in the academy (Lea, 2004). Such a theoretical frame often invokes the concepts of voice and identity to interpret the different perspectives of those who play the "game" of graduate-level research writing (e.g., Aitchison et al., 2012; Casanave, 2002). It has given rise to a multitude of studies that examined the struggles and achievements of graduate-level research writers (see a critical review of many of these studies in Chapter 5 and Chapter 7 in Paltridge, Starfield, & Tardy, 2016).

Most of the studies in these categories focus more on graduate-level research writers *outside,* rather than *inside,* the writing classroom, although the distinctions between the two may

not be as clear-cut as often assumed (see Tardy, 2009). Even though studies on learners outside classroom settings have offered valuable insights into the struggles of graduate-level research writers, they have, indirectly and quite ironically, foregrounded the importance of formal instruction on research writing and, by extension, of enhancing teachers' knowledge of the classroom-based learning of research writing. As noted by Belcher (2006), most EAP theorists and practitioners would agree that immersion and legitimate peripheral participation are helpful and even essential for developing graduate students' target discourse expertise. They would agree that onsite learning can enable, for many students, the expertise in graduate-level research genres. At the same time, EAP proponents would probably contend that immersion is not enough, especially for students and junior scholars facing the academic and linguistic hurdles previously described. Specifically, colleagues or faculty advisors/supervisors may be eager to teach novice writers in naturally occurring sociocultural contexts of research writing but may be ill-equipped to provide the scaffolded apprenticeship that these writers need (Cargill, O'Connor, & Li, 2012; Tauber, 2016). Basturkmen, East, and Bitchener (2014), for instance, describe how the supervisors of student theses they studied often found it difficult to offer constructive feedback on the drafts of the Results sections in their supervisees' theses. Although these supervisors or faculty members were likely to have implicit knowledge of how to write this section, they may not necessarily have the explicit knowledge of the rhetorical patterns or the linguistic features in research writing to guide their students' writing (see also J. Flowerdew, 2016) or may simply have difficulty articulating, or lack the training to articulate, their tacit expert rhetorical knowledge to their students (see also Blakeslee, 1997; Starfield, 2016).

In addition, even where senior scholars have well-developed skills themselves for writing and publishing in English and are eager to impart wisdom about research writing to younger colleagues and students, their efforts are often hampered by their overwhelming workloads, including a large number of research students they supervise, their own research activities, and the absence of effective teaching materials, among other factors (Cargill et al., 2017; Starfield & Mort, 2016).

Possibly because of these and other reasons, EAP specialists argue that, for those at linguistic or other disadvantages, much more explicit, guided "immersion" is called for than normally available *in situ*, and classroom instruction could serve as a form of such explicit guidance. Such a view, indeed, has been supported by reports of faculty and graduate students who had expressed quite strongly the need for explicit writing instruction on research writing at the graduate level. For example, the overwhelming majority of the faculty members surveyed at a major research university in Korea felt that the only available research writing course for graduate students offered should be a required course for all graduate students (Kim & Shin, 2014).

In fact, scholars and practitioners in EAP and writing studies have argued that not only should students be taught explicitly the graduate-level discoursal and research writing practices, their advisors could benefit from training on how to mentor their students explicitly in the meaning-making processes of their fields (Paltridge, Starfield, & Tardy, 2016). Such an observation is, again, not limited to those who work with L2 students. Brooks-Gillies et al. (2015) and Ritter (2017) both argue that graduate students need instruction and support, both formally and informally, especially since they notice that the academic communities that graduate students aspire to enter have rarely integrated into the curriculum any systematic instruction on research writing to initiate these newcomers consciously into the written conventions of their respective discourse community. This point was reflected in a comment by James Potter (2001), a scholar in communication studies who, when addressing an L1 audience, said that "in graduate school the focus of our education is almost exclusively on research . . . ." and "we almost never receive instruction in writing" (see a similar, more recent observation in Ritter, 2017). Potter (2001) also talked about how many graduate students and novice academics learn the writing part of publishing

in "the School of Hard Knocks" when their manuscripts are rejected and insisted that there must be a better way than "learning through rejection" (p. 13).

Reason 4: The Prominence of Genre Analysis as an Approach to Analyzing and Teaching Research Genres

Partly because of the belief in the value of teaching and learning graduate-level research writing explicitly in classroom settings, scholars have analyzed many research genres and the recurrent organizational patterns and textual features in them, often with pedagogical applications in mind. Scholars adopting the ESP approach to genre analysis have contributed tremendously to this line of research. In the ESP tradition, genre is often defined as "a class of communicative events" with "communicative purposes" recognized by "the expert members of the . . . discourse community" (Swales, 1990, p. 58; 2004). The most familiar ESP genre analytic framework is the one established by Swales (1990, 2004); his original framework is characterized by the analysis of *moves*, or the "defined and bounded communicative act that is designed to achieve one main communicative objective" (Swales & Feak, 2000, p. 35). To use the relatively familiar graduate school admittance letter as an example, *On behalf of the Dean of the Graduate School, I congratulate you on being accepted to the program in Aerospace Engineering to begin study at the master level* is one move, the purpose of which is to deliver the good news of the student having been admitted into the program. Following this move is another possible move such as this: *This letter is your official authorization to register for Fall 20XX. As a reflection of the importance the Graduate School places on the ability of its students to communicate effectively, the Graduate School requires all new students whose native language is not English to have their English evaluated.* The purpose of this move is to explain the necessary administrative matters that the letter receiver should be aware of or should comply with (Swales & Feak, 2012a, p. 9). To use a more academic example, *We interviewed 52 postpartum mothers at the Bronx Lebanon*

Hospital Center within 5 days of delivery and determined the presence of psychiatric symptoms using the 29-item Psychiatric Symptom Index constitutes a move in the research article abstract. The purpose of this move is to describe the methods and materials adopted in the study (Swales & Feak, 2009, p. 9).

The framework is later enriched by socially informed theories of language and has generated numerous descriptions of the "regularities of purpose, form, and situated social action" (Hyland, 2003, p. 22) of various discipline-specific genres and the genre-specific features in them. For example, ESP researchers have studied such highly valued research genres as research articles (e.g., Kanoksilapatham, 2015; Swales, 1990), graduate theses and dissertations (e.g., Paltridge, 2002; Soler-Monreal, 2015), grant proposals (e.g., Feng & Shi, 2004), book reviews (e.g., Motta-Roth, 1998), calls for papers (e.g., Yang, 2015), conference presentations (e.g., Rowley-Jolivet & Carter-Thomas, 2005), and academic support genres (e.g., Wang & Flowerdew, 2016), among others.

The smaller parts within a research genre, or part-genres, such as abstracts (e.g., Samraj, 2005), introductions (e.g., Swales, 1981, 1990), literature reviews (e.g., Kwan, 2006), methods (e.g., Peacock, 2011), results or findings (e.g., Basturkmen, 2009), discussions (e.g., Cotos, Link, & Huffman, 2016), conclusion (e.g., Bunton, 2005), and acknowledgments (e.g., Hyland & Tse, 2004a) in journal articles or dissertations have also been the subjects of studies.

Within a genre, recurrent textual, or lexico-grammatical, features have also been closely examined; these features have included, among others, imperatives (e.g., Neiderhiser, Kelley, Kennedy, Swales, & Vergaro, 2016), hedging and boosting (e.g., Hyland, 1998), metadiscourse (e.g., Hyland & Tse, 2004b), stance markers (e.g., McGrath & Kuteeva, 2012), citation practices and reporting verbs (e.g., Harwood, 2009), signaling nouns (e.g., Flowerdew & Forest, 2015), pronouns (e.g., Harwood, 2007), and lexical bundles (e.g., Cortes, 2013).

ESP genre-based researchers and teachers have also turned some of the descriptions of discipline-based genre exemplars

into pedagogical materials (e.g., Cheng, 2007a). Most prominent among these are a series of genre-driven textbooks by Swales and Feak (e.g., 2012a) that are described in detail in this book. In these books, Swales and Feak adopt an analysis-focused and rhetorical approach by asking users to "apply their analytical skills to the discourses of their chosen disciplines and to explore how effective academic writing is achieved" (2012a, p. ix). They emphasize "rhetorical consciousness raising," which can be achieved through the cycle of "Analysis→ Awareness→Acquisition→Achievement" (p. ix). Other notable genre-based books for teaching and learning graduate-level research writing include Paltridge and Starfield's (2007) resource book for academic advisors supervising L2 research students and Bitchener's textbook that teaches students in applied linguistics to write a thesis or dissertation (2010) (see Chapter 3).

These and other efforts have turned genre pedagogy into "one of the most highly theorized curricular orientations" in "addressing the very specialized discoursal needs of novice [English as an additional language] graduate writers" and other graduate students (Belcher, 2012, p. 136). The prominence of genre analysis as an approach to analyzing and teaching graduate-level research writing means that those working with, or interested in working with, graduate-level research writers should become familiar with the basic principle and practice in this approach, regardless of whether they plan to adopt it.

Reason 5: Increasing Accounts of Pedagogical Practices

The recognition of the importance of formal instruction on research writing (see Reason 3) and the efforts to describe graduate-level research genres and to translate some of the results of genre analysis into pedagogical materials (see Reason 4) have led to various graduate-level research writing pedagogical practices as reported in the literature. A few examples are described briefly, and these and other examples will be analyzed in detail in the subsequent chapters. The English Language Institute of the University of Michigan (hereafter Michigan) offered a longitudinal EAP curriculum designed to

help international students meet the communicative demands of graduate education. The curriculum included courses such as Research Paper Writing and Dissertation and Prospectus Writing. Swales and Lindemann (2002) described an exercise for the Dissertation and Prospectus Writing course that they developed to teach the literature review part-genre to 11 graduate students and two visiting scholars. They showed how graduate-level research writing courses can help learners become "more observant readers of the discoursal conventions of their fields and . . . can deepen their rhetorical perspectives on their own disciplines" (p. 118).

In another research writing course at Michigan, Swales, Barks, Ostermann, & Simpson (2001) developed several assignments to target the needs of a group of L2 Master of Architecture students. These assignments helped highlight a range of issues related to the teaching and learning of graduate-level research literacy, including the role of the discourse analytical approach in graduate-level research writing courses, the value of a critical approach in teaching research-oriented speaking and writing, and the constraints facing teachers of graduate-level research-related literacy skills.

Outside of the United States, Charles (2012) reports on a course in the Oxford University Language Center where students from multiple disciplines and language backgrounds used two corpora and a language analysis software to study how thesis writers often defend against potential criticisms of their research. Charles incorporated discourse-based tasks to help her students recognize the rhetorical move thesis writers often make to defend their research. She also developed corpus tasks for her students to carry out controlled, context-sensitive corpus searches that focused on lexical and sentence-level, or lexico-grammatical, issues related to the rhetorical functions of defending one's research against possible criticisms. She argues that the combination of the top-down discourse analysis that focuses on rhetorical functions and the bottom-up corpus searches that zoom in to the lexico-grammatical features performing such functions provides the enriched input necessary for her students to connect the rhetorical purposes,

the rhetorical moves, and the lexico-grammatical choices in their learning of the thesis genre.

In another course on thesis writing, Paltridge (2003) describes how he familiarized Master of Education students (both L1 and L2) with the conventions and expectations of the master's dissertation (or master's thesis in the United States) genre and helped the students develop their strategies for writing their own dissertations. To achieve these goals, Paltridge (2003) included topics such as the context of dissertation writing, attitudes to knowledge and different levels of study, differences between master's and doctoral degrees, the roles and responsibilities in dissertation writing, online genre analysis of sample dissertations, and planning and writing individual chapters. Paltridge reports that the student feedback on the course was overwhelmingly positive.

In Sweden, Kuteeva (2013) reports on a course entitled English for Academic Research aimed primarily at master's students at the faculty of humanities in a Swedish university. The course prepared its participants to write a research proposal and a master's thesis. It focused on the analysis of different genre-specific features in the model texts in the course participants' fields of research. The course ran over a period of six weeks, with a three-hour seminar every week. Kuteeva introduced additional online genre analysis tasks to complement in-class genre analysis activities. Each student reported the results of his or her genre analysis in a short forum post.

Other than semester-long courses, instructors of research writing have also offered short workshops (e.g., Fairbanks & Dias, 2016). For example, Cargill and O'Connor (2012; see also Cargill, O'Connor, & Li, 2012; Cargill et al., 2017) gave a series of workshops that they called Collaborative Interdisciplinary Publication Skills Education to train novice academics in multiple cities in China to publish their scholarly work. Their workshops incorporated the contributions of experienced scientists who were journal editors, journal referees, authors of scientific articles in English as well as those who were research communication teachers/applied linguists. Their workshops

aimed to develop participants' skills in three components: genre analysis of published sample journal articles, awareness of the journal publication process, and the abilities to package information in an audience-sensitive manner.

Lynne Flowerdew has also described various workshops she offered to science and engineering research students at a university in Hong Kong (2015, 2016). For example, she developed a two-part voluntary workshop. In Part 1 of the workshop, she guided her students to analyze printed extracts of the Discussion sections from theses and to identify prototypical organizational patterns. She then asked her students to complement these top-down, genre-focused pen-and-paper activities with bottom-up corpus-enabled tasks designed to familiarize her students with search strategies for identifying useful lexico-grammatical patterns for particular rhetorical functions. In Part 2 of the workshop, she guided her workshop participants to attend to the variations in the rhetorical organization in the Discussion sections of theses and dissertations. She also introduced concordancing tasks that focused on problematic areas identified in students' drafts of the Discussion sections of their own theses.

Swales and Feak (2012a) notice that, when the first edition of their textbook *Academic Writing for Graduate Students* was first published in 1994, the number and range of courses in academic writing for graduate students were both rather small and largely restricted to entering international students. When the third edition was published in 2012, both the number and the range of these courses, they point out, have increased as graduate students move around the world in growing numbers, bringing with them their recognition of the importance of learning and teaching graduate-level research writing (e.g., Yakhontova, 2001). Swales and Feak (2012a) also point out that the number of these courses has increased due to the growing realization that L1 speakers of English would welcome, for various reasons, some assistance with their research writing, a point that some composition scholars and writing studies scholars have also agreed upon (e.g., Brooks-Gillies et al., 2015; Ritter, 2017).

Such an observation is supported by a plethora of examples of pedagogical practices, some of which will be analyzed in more detail in the subsequent chapters (e.g., Frederickson & Mangelsdorf, 2014; Gustafsson, Eriksson, & Karlsson, 2016; among many others). Apart from these published accounts of graduate-level research writing courses or workshops, unpublished syllabi, such as those available on the resource section of the Consortium on Graduate Communication (https://www.gradconsortium.org/), a professional community serving instructors of graduate-level academic writing, have also showcased the variety of available courses on graduate-level research writing. The accumulating literature on pedagogical practices means that those interested in working with graduate-level research writers need to become familiar with these practices, including understanding the theoretical underpinnings, the actual practices, and any implications of these practices for their own pedagogical settings. Where at one point they may have been unaware of models that align with their course needs, it's now clear that many models and contexts exist and are available as resources and roadmaps.

Reason 6: The Documented Challenges Facing Novice Instructors

The prominence of genre analysis as an approach to analyzing and teaching research writing (see Reason 4) and the growing literature on pedagogical practices (see Reason 5) have pointed to the existence of a body of knowledge related to graduate-level research writing instruction, knowledge that those interested in working with graduate-level research writers need to build or to continue to update.

Such a need becomes all the more salient when teaching graduate-level research writing continues to be perceived as challenging by many. For example, Norris and Tardy (2006) describe a course offered at Purdue University in which the teacher, "Christine," grappled with a variety of issues typically encountered by instructors of graduate-level research writing.

Christine describes her uncertainty about her abilities to teach the graduate-level writing class this way:

> Perhaps ironically, one of the most difficult parts of teaching 002 [the writing class for graduate students] for me was my uncertainty about my own qualifications for teaching the course. First, as a doctoral student in an English department, I was teaching a course to my fellow graduate students in other university departments. Second, I was a student in the humanities teaching students who were, for the most part, from the sciences and working on projects that were completely foreign to me. (Norris & Tardy, 2006, p. 271)

Christine's feelings turn out to be quite common for many other novice or even experienced instructors teaching discipline-related research writing classes to graduate students or to junior academics (e.g., Cortes, 2011; Min, 2016; Prior & Min, 2008; Sundstrom, 2016). For example, drawing on the data she collected from an ESL writing program at a large university in the midwestern region of the United States, Min (2016) describes a situation in which first-year students in a Master's in Teaching English as a Second Language (MATESL) program became instructors of two L2 graduate writing courses in which many doctoral students from other disciplines were enrolled. The first-year MATESL students, both L1 and L2 speakers, lacked teaching experience and disciplinary expertise in their students' fields, so it was unsurprising that many of these MATESL students felt unprepared to teach graduate students and reverted to what they were familiar with—treating the graduate writing course the same way they would the undergraduate writing courses. They also made problematic assumptions about the transfer of writing skills across disciplines and genres. Min (2016) describes these novice instructors' experience as a "schizophrenic" experience (p. 169): the experience was too disorienting to help these novice instructors develop any lens to correlate theory, practice, and reflection.

Indeed, even though various factors may be contributing to the challenges experienced by novice instructors, the multi-disciplinary mix of students in graduate-level research writing classes often stands out as a particular challenge for instructors, as seen in Christine's comment (Norris & Tardy, 2006) and in Min's observation (2016). Graduate-level research writing classes or workshops are often populated by students from a wide range of disciplines across the campus. These classes have been reported as including students from multiple different disciplines in one section, and these disciplines "may or may not share methodologies" and may "differ considerably" in writing style, format, and even the genres students need to learn (Starfield, 2016, p. 187; see also Starfield & Mort, 2016).

Take myself as an example. When I was pursuing my doctoral degree, I was a graduate teaching assistant with independent instructional duties. Even though I quite eagerly requested to teach the two sections of the one and only graduate-level writing course offered by the university's applied linguistics program due to my research interest, this course seemed intimidating to me at times, in part due to the fact that the students were not only doctoral and master's students but were also from all over the campus in terms of disciplines.

For example, in one of the sections in which I collected data on student learning that led to my dissertation, 11 course participants were engineering majors of various kinds, and the other students were from accounting, finance, physics, agriculture, information systems, and other fields. When I asked them to collect journal articles from their fields for in-class discussions and out-of-class analysis (see Chapter 3 and Chapter 4 for more details about asking students to collect journal articles for analysis), the articles they submitted to me came from journals as diverse as the *Journal of Structural Engineering, Atmospheric Environment, Journal of the Acoustical Society of America, Journal of Microelectromechanical Systems, European Journal of Operational Research, Journal of Experimental Botany, MIT Sloan Management Review*, and *Journal of the Philosophy of Sport*. The sections of the same course preceding and following my data-collection sections

After I earned my PhD degree, I collected new data about students' genre-focused learning in another graduate-level research writing course in another university, and the diversity of field representation was the same: The 16 students came from 12 fields, including engineering, animal science, biology, marketing, education, sociology, and even one student from TESOL. Past and future sections of the same course at this university also had the same type of multidisciplinary mix. Additionally, when I offered summer workshops on research writing to both L1 and L2 graduate students at a neighboring university, I noticed that the workshop participants represented multiple disciplines and sometimes there were more than 15 disciplines in each workshop series.

Others have reported on a similarly diverse disciplinary mix of students in their classes. A dissertation writing class offered by Belcher (1994) included students from Chinese literature, applied mathematics, and human nutrition studies. A graduate-level writing class by Douglas (2015) consisted of students from chemistry, geology, geography, forestry, wood science, physics, psychology, chemical engineering, electrical engineering, human and community development, biology, political science, and public health. Badenhorst, Moloney, Rosales, Dyer, and Ru (2015) noticed that the students in their graduate writing course were from poetry, the esoteric, music anthropology, and philosophy from the humanities group and electrical, computer, civil, ocean and naval architecture, and mechanical in the engineering group. Kuteeva (2013) points out that "a very wide spectrum of epistemological traditions is represented, ranging … from lab-based osteoarchaeology to logic-driven philosophy to source-based history or musicology to emerging inter-disciplinary fields such as fashion studies or performing arts" in the graduate-level writing class she offered (p. 86; see reports of similar situations in Charles, 2014; Cortes, 2011; Fredericksen & Mangelsdorf, 2014; Gustafsson, Eriksson, & Karlsson, 2016; Hirvela, 1997; Lee & Swales, 2006; Norris & Tardy, 2006; Paltridge & Woodrow, 2012; Starfield, 2016; Starfield & Mort, 2016; Swales & Lindemann, 2002).

The climate of economic austerity and the general lack of institutional resources (Starfield, 2016) tradition (Norris &

Tardy, 2006), or the institutional division of labor (Tauber, 2016) may be some of the factors leading to many, if not most, graduate-level research writing classes reported in the literature containing a multidisciplinary mix of students in them.

In fact, a single-subject writing course may look discipline-specific on paper but variations within the discipline may be so great that the class may need to be taught the same way that a multidisciplinary one would. When I taught a writing for publication class to the graduate students in my own department, I assumed that it would resemble a single-subject writing class; in reality, the students represented graduate students in the fields of TESOL, composition and rhetoric, professional writing, English education, and communication studies. In the Introduction to Graduate Studies course that I teach regularly to the students in the TESOL/Linguistics program and professional writing program at my university, some of the principles and strategies described in the rest of the book are used; the papers collected by students for study and analysis (see the details of this assignment in Chapter 3) are very different due to their research interests (phonology as opposed to ESP) or their research methods (corpus analysis vs. narrative inquiry). The discipline-specific writing tasks they are required to do (see Chapter 5) are, consequently, very different even though these students are from the same program. Swales and Luebs (2002) also noticed that the students' target genres in a writing class turned out to have very different genre-specific features even though the students were all from psychology. One can also imagine the disciplinary or sub-disciplinary differences within a School of Engineering or a School of Geology.

Therefore, the multidisciplinary mix of students in the graduate-level research classroom will be a reality for most institutions (e.g., Fairbanks & Dias, 2016). Such a pedagogical reality may pose special challenges when it comes to learning to set learning objectives, select or develop materials, design learning tasks, and evaluate student writing, especially when novice instructors may themselves be graduate students or contingency instructors in English or applied linguistics (see examples in Starfield, 2016; Norris & Tardy, 2006, and Min, 2016).

Researchers and practitioners have also noticed that instructors unfamiliar with effective approaches to teaching graduate-level writing may have already influenced students' learning negatively. For example, in a book chapter on the resources and strategies that an international L2 graduate student adopted to become a successful writer, Phillips (2014) reports that the student seemed to have benefitted minimally from a cross-disciplinary graduate-level writing course designed for international multilingual writers. For example, the student received little positive feedback from his teacher, a faculty in TESOL; the feedback he received seemed overly critical and general. Phillips (2014) observed that the instructor identified problems like "lang. [language] is non-idiomatic" and "sentence structure" is problematic but rarely offered the student alternative language or any particularly constructive comments towards revision or future writing projects (p. 78).

Given these findings, it is unsurprising that some directors of programs that target the communication needs of graduate students have noticed that "the single biggest requirement for success [of programs and courses that aim to meet the needs of graduate-level research writing and communication] is to find and keep good teachers who are able to teach advanced graduate students well" (Freeman, 2016, p. 237). Others have argued that the ad hoc preparation systems for training instructors of graduate-level research writing that mainly rely on pre- and in-service training and professional development workshops "should develop into more systematic programmatic (degree-bearing) training for graduate writing specialists" (Sundstrom, 2016, p. 202). Such arguments, together with the stories of uncertainties and challenges, add an additional reason for teachers and other related parties to build and update their knowledge of graduate-level research writing instruction.

This chapter has argued why learning about genre and about research writing instructional practices are important for novice teachers and for all others working with graduate-level research writers. Helping teachers and others increase their knowledge of the research and practice related to learning and teaching graduate-level research writing can begin with a set of concrete questions. In fact, when reflecting on the prob-

lems and feelings of uncertainties experienced by Christine, the instructor of one section of the graduate-level academic writing course at Purdue University, Norris and Tardy (2006) raised a series of questions that they believe novice instructors of graduate-level research writing may be grappling with:

1. Should the class follow a traditional full-class discussion model?
2. How can one teach the multidisciplinary mix of students in the same class?
3. Would a discipline-specific writing class better address students' needs?
4. How should the instructor of a graduate-level writing class balance the requirements in the writing class and his or her rather heavy workload as a graduate student?
5. How should an instructor guide his or her students to read and write discipline-specific texts in a graduate-level research writing class when the instructor may only have training in applied linguistics or writing studies, if any?

I would also add these to the list:

1. What should be the goals in graduate-level research writing classes?
2. How can instructors choose what pedagogical materials to use, and how can instructors develop their own pedagogical materials?
3. How should instructors provide feedback on students' research texts, an issue brought up by Phillips (2014) in her discussion of the problematic case?
4. How can instructors continue to develop or to update their knowledge related to graduate student writers and research genres so as to continue to grow as a practitioner and as a researcher of graduate-level writing instruction?

Given the prominence of genre-focused theory and pedagogy, those working with graduate-level research writing may also need the answers to questions such as:

1. Genre has been considered as a conceptual and curricular building block "of the right size" (Swales & Luebs, 2002, p. 136; see also Reason 4). What does genre mean in this sense?
2. How should researchers and practitioners analyze research genres?
3. What are moves and lexico-grammatical features?
4. What are the goals of genre-focused teaching?
5. How should genre-focused teaching typically play out in research writing courses, especially those with students from multiple disciplinary backgrounds?

The rest of this book will address these and many other related questions.

Questions for Reflection and Discussion

1. This chapter lists six reasons for instructors to build and to continue to update their knowledge related to the teaching and learning of graduate-level research writing. Can you think of any additional reasons for instructors to build and to increase their knowledge in this area?
2. The chapter points out that research writing is difficult for L1 speakers of English as well. In fact, some have argued that the traditional distinctions between L1 and L2 users of research English are collapsing (see Swales, 2004). When it comes to today's educational settings, a more valuable distinction may be that between senior researchers (who are more experienced in research writing in English) and junior researchers (who may still be relatively new to the game of research writing, regardless of their L1 backgrounds). What do you think of such an argument? Have you, for example, noticed any challenges that are unique to L1 graduate-level research writers

that may not be so significant to L2 writers? Have you noticed any challenges that are unique to L2 graduate-level research writers that may not be so significant to L1 writers?

3. Reflect on your own experience of learning research writing as well as the experience of students you have worked with. What do you think of the argument that, when it comes to learning graduate-level research writing, formal instruction is necessary, as argued in this chapter? Do you know of any writers who succeed in research writing without any formal instruction? What may be the reasons for their success? Do you know of any writers who have benefited tremendously from attending classes or workshops in research writing? How have these classes or workshops helped them?

4. When elaborating on Reason 6, I point out that a typical graduate-level research writing class often has a mix of students across the disciplines in it. What may be the advantages for instructors of having a multidisciplinary mix of students in a research writing class? What may be the benefits for students of having peers from other disciplines in the same research writing class? What may be some of the challenges that instructors and students have to overcome in a graduate-level research writing class with a multidisciplinary mix?

5. This chapter ends with a series of questions that novice instructors of graduate-level research writing may need to grapple with in order to succeed in the classroom. Can you think of any other questions that you feel should be added to the list? Why? Do you notice any questions from the list that may not be so significant to you? Why?

Chapter 2

Rhetorical Consciousness-Raising, Genre Awareness, and Awareness of Genres

This chapter first examines rhetorical consciousness-raising, which was proposed by Swales (1990) and has since been adopted by other researchers and practitioners as the preferred instructional goal for the graduate-level research writing classroom. Since rhetorical consciousness raising is often discussed together with the concept of genre, three approaches to genre analysis will be introduced. Because many students need to learn discipline-related genre-specific features, the notion of rhetorical consciousness-raising is used with regard to two interrelated instructional objectives: (1) to develop students' awareness of genre analysis as a conceptual framework (genre awareness) for guiding their further examination of genre samples in the graduate-level writing classroom and beyond and (2) to increase students' awareness of discipline-specific features in research genres (awareness of genres, the plural form, or discipline- and genre-specific features) through guiding them to become increasingly proficient in applying the genre analysis framework to their analysis of genre samples valued in their respective disciplines.