English for specific academic purposes writing (Special edition of Writing and Pedagogy)

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Featured Essay

English for Specific Academic Purposes (ESAP) Writing: Making the case

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Abstract

This introductory review article for this special issue sets out a range of issues in play as far as English for Academic Purposes (EAP) writing is concerned, but with a special emphasis on English for Specific Academic Purposes (ESAP) (as opposed to English for General Academic Purposes (EGAP)). Following the introduction, the article begins by outlining the different types of EAP and presenting the pros and cons of ESAP and EGAP for writing. It then goes on to review work in a range of areas of relevance to ESAP writing. These areas are register and discourse analysis; genre analysis; corpus analysis; ethnography; contrastive rhetoric; classroom methodology; critical approaches; and assessment. The article concludes by arguing that whichever model of writing is chosen (EGAP or ESAP), or if a hybrid model is the choice, if at all possible, students need to be exposed to the understandings, language and communicative activities of their target disciplines, with students themselves also contributing to this enterprise.

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Introduction

English is now indisputably the international language of academic research and is increasingly becoming also the medium of instruction in places where English is not the first language. For these reasons, the provision of English for Academic Purposes, and particularly academic writing, is an ever-expanding need. Given this need, it is important that University administrators, English Departments, and EAP units choose the most appropriate model for their students. In this introductory review article to this special issue, I will set out a range of issues in play as far as EAP is concerned, but with a special focus on the branch of EAP that is sometimes referred to as ESAP, English for Specific Academic Purposes, which is the theme of the special issue.

Writing plays a highly prominent role in the academy, being one of the most important skills for a successful academic career, whether as student, teacher, researcher, or administrator. Writing, in fact, performs an important gate-keeping role, effective writing leading to success and ineffective writing to failure in the academy. Writing is the main way scholarship is transmitted and a range of genres are in play to do this; the research article is the preeminent genre, but also prominent are, for students, textbooks, course handouts, and assignments, among others, and, for academics, in addition to research articles, grant proposals, course syllabuses, various university governance documents, and routine memos; in addition to these genres, there are other social media and on-line learning platforms which carry various written genres and which are used by teachers, students, and administrators alike. Learning to perform these genres effectively is one of the major challenges of a successful university career, as student, teacher, or, indeed, administrator. And it is the job of the EAP teacher to facilitate this success.

While not neglectful of cognitive approaches, which emphasize careful thinking about the purpose of writing, the writing situation, and how the text will be taken up by the reader, nor of the process approach to the teaching and learning of writing, which is itself associated with cognitive approaches, EAP research and pedagogy tend to take a more social view of the writing process, construing writing as a form of social action in a specific situational context. Learning to write, according to this social view, is a process of becoming socialized into specific discourse communities, or communities of practice, communities whose purposes in writing are constrained by institutional, societal, and cultural factors (e.g. Gee, 2014; Halliday, 2014). Halliday proposes three metafunctions for language: ideational, interpersonal, and textual. The ideational function communicates the content or subject matter of the text; the interpersonal function

expresses the writer's attitude to the text and their relationship with the readership; and the textual function provides the writer with a system of choices which allow them to organize and structure the text. The choices afforded by Halliday's three metafunctions are again constrained by institutional, societal, and cultural factors. Because academic text needs to be precise, accurate and concise (that is not to say that it does not, at the same time, need to be persuasive), it is organized in such a way that it packs a lot of information into a few words. An important way it does this is by the use of nominalization, or what Halliday (2014) calls grammatical metaphor, the reduction of what might more congruently be presented as a clause into the form of a nominal group. Halliday argues that grammatical metaphor tends to mark off the expert from the layperson, the highly literate from the less literate, and represents a challenge for novices in the academy, who need to learn how to 'unpack' this complexity in their reading and to 'package' their text in this way in their writing.

Types of EAP

According to Alqahtani (2011), the term English for Academic Purposes (EAP) is thought to have been first used by the British Council in 1975, and in 1976 a training course in EAP was offered by the British Council Teaching Division Inspectorate for its English Language teaching (ELT) staff. According to Jordan (2002), by 1997, the term began to be used also in the United States. EAP is one of two main branches of English for Specific Purposes (ESP), the other being English for Occupational Purposes (EOP). The founding editors of the flagship journal of the field, *Journal of English for Academic Purposes* (JEAP), Hamp-Lyons and Hyland, define the scope of EAP as 'the linguistic, sociolinguistic and psycholinguistic description of English as it occurs in the contexts of academic study and scholarly exchange itself'. They go on to say that topics covered include the following: 'classroom language, teaching methodology, teacher education, assessment of language, needs analysis; materials development and evaluation, discourse analysis, acquisition studies in EAP contexts, research writing and speaking at all academic levels, and the sociopolitics of English in academic uses and language planning'. If ESP can be broken down into the two branches of EAP and EOP, EAP itself can in turn be broken down into English for General Academic Purposes (EGAP) and English for Specific Academic Purposes (ESAP), the latter being the theme of the current special issue. While EGAP is concerned with the provision of English for students in all fields of study, ESAP is focused on the needs of students from specific disciplines. This distinction between EGAP and ESAP was first recorded by Blue (1988).

In addition to the differing disciplinary foci of EGAP and ESAP, there is, in practice, often, although not always, a distinction between levels: EGAP is more often concerned with provision for undergraduate and taught postgraduate study, while ESAP is more concerned with provision for research postgraduates and, increasingly, practicing academics who have to conduct their research and publication through the medium of English. While there are various models of EAP in use, a common one is for students to first take a course in EGAP, before moving on to one in ESAP. However, students may begin immediately with ESAP, either before or in parallel with their disciplinary courses. Very often, though, there is no specific ESAP course, EGAP being the only course on offer. At the same time, however, EGAP courses may individualize their learning and offer elements of ESAP by incorporating discipline-specific texts or tasks into their teaching. Both EGAP and ESAP courses may be offered prior to disciplinary study or in parallel with it. Where an ESAP course is offered in parallel with a content course (sometimes referred to as a sheltered course), English teachers and content teachers may collaborate.

EGAP or ESAP writing?

The choice between an EGAP and an ESAP approach to writing is a controversial one. Here, I will review the arguments for and against each approach, but with an emphasis on the case for ESAP, given that this is the theme of this special issue. I should say, though, that although the focus in this special issue is on ESAP, neither side of the argument is without merit. My view is that, in practice, very often, the choice between one or the other side depends upon practical circumstances more than ideological positioning. Having said that, it is true that much, if not most, EAP research focuses more on discipline-specific issues, which may feed into ESAP more than EGAP.

Arguments for ESAP writing

The arguments in favor of an ESAP approach to writing can be presented as follows. First, particular linguistic features and communicative practices are associated with specific disciplines and students need to develop competency in these linguistic features and practices in order to study effectively in their disciplines (Dudley-Evans and St John, 1998; Flowerdew and Peacock, 2001). From the linguistic point of view, this belief goes back to Halliday, McIntosh and Strevens (1964), who developed the theory of register, which demonstrated how particular linguistic features are associated

with particular varieties, including disciplinary varieties, of language (see also Biber (1988) and Hyland (2000), for more recent corpus-based studies). From the point of view of communicative practices associated with particular disciplines, there is a range of both quantitative and qualitative research which has demonstrated variation across disciplines to be the case. For example, in a series of case studies of students enrolled in graduate seminars, Prior (1998) showed how, through their writing, the students in the study became enculturated into their different disciplinary practices. As another example, a recent survey by Nesi and Gardner (2012) highlighted variation in the range of written genres students are expected to be competent in performing across the disciplines. As far back as Horowitz (1986), indeed, studies have highlighted the varying writing requirements of students across the disciplines. This is reflected in a comment from a recent in-house research report from a Hong Kong university (Hafner *et al*., undated), as follows:

> In essence, different disciplines and sub-disciplines (i.e. Maths, Biology and Chemistry in this case) are perceived as demanding different literacy skills. Biology is generally seen as more demanding in terms of English language, while in the case of Chemistry and Maths, students must develop fluency with the conventional symbols used to express chemical calculations or mathematical proofs. One student noted that '[in Maths] we seldom need to write English'.

What this comment suggests is that, in addition to developing their purely linguistic skills, students need to be enculturated into the conventions of the discourse community (Swales, 1990), or community of practice (Lave and Wenger, 1991) of their discipline. According to Lave and Wenger's theory of communities of practice, apprentices can be inducted into such communities through a process of 'legitimate peripheral participation' (LPP). The ESAP class can be seen as a means of promoting such a process, as a form of LPP.

A second argument in favour of ESAP, indeed, is that given that content teachers may have neither the time nor the expertise to deal with many issues concerning language or 'disciplinarity' (Prior, 1998), it is a useful division of labour for the content teacher to focus on the subject matter of the discipline and the EAP teacher to focus on writing in the discipline. The content teachers are relieved of the problem of teaching students how to write texts such as laboratory reports.[1] Indeed, content teachers may well be unaware of the need to teach some of the basic language and textual mechanics of their discipline; they may also be unaware of the need to teach the underlying assumptions of their discipline, such assumptions having become naturalized as part of their disciplinary practice. ESAP

research can bring these assumptions to the surface and this research can feed into ESAP course design. Disciplinary texts differ not only in their language and subject matter, but, as Hyland (2002a: 391) has commented, also in their 'appeals to background knowledge, different means of establishing truth, and different ways of engaging with readers'. Research-informed ESAP teaching can develop knowledge in learners of such disciplinary features, which can feed into their writing.

Third, it can be argued that students are likely to be more motivated if they are working with disciplinary texts and tasks than with other more 'general' texts and tasks, which they may find trivial. Swales and Feak (2015: 311), in a recent chapter describing their revision of their best-selling textbook, 'Academic Writing for Graduate Students', point out that one of the pressures from users for the revised version was the incorporation of more discipline-specific texts.

Fourth, if EAP teachers are not dealing with disciplinary issues and are merely teaching the mechanics of the language – vocabulary, grammar, cohesion and coherence, for writing – they become no more than remedial teachers, 'fixing up' the linguistic features that students failed to acquire satisfactorily prior to their entry to the academy. Raimes (1991) has referred to this as the 'butler' role for the EAP teacher, with the teacher at the service of the (superior) content teacher. Such a role deskills (Apple, 1988), or deprofessionalizes, EAP teachers, leading to a cadre of teachers with poor employment conditions, heavy teaching loads and low self-esteem. This may mean a reliance on part-time teachers and a marginalization of the EAP department, resulting in an academic 'sweatshop' (Sharff and Lessinger, 1994) situation, which is indeed the case in many universities internationally (Hadley, 2015). On the other hand, if the focus is on ESAP, the EAP department develops its own subject knowledge and competencies; teachers need to investigate the specific epistemology, language, and practices of the target discipline and its community of practice, perhaps themselves contributing to the research literature. ESP centers where this approach is adopted are City University of Hong Kong, Cerlis in Italy, and Interlae in Spain. With regard to the specialist departments, this means taking on an advisory rather than a service role and acting as professional peer rather than subservient 'butler'. As a result of this, the EAP teacher is likely to be accorded greater respect within the academy, to have greater self-esteem, and be more motivated to do a professional job.

Arguments for EGAP writing (and their counter-arguments)

To match the set of arguments in favour of ESAP writing, there is a well-known set of arguments in favour of EGAP (although I will also present

their counter-arguments here). The first of these pro-EGAP writing arguments is that, while not denying that there is specialist language associated with specific disciplines, there is no need to teach such specialized language, as it will be acquired, either naturally or taught by the content teacher, in the content course. The EAP course, on the other hand, can focus on a 'common core' of language which is found across the disciplines, in whatever variety of English one cares to choose. Hutchinson and Waters (1987), in an influential book on ESP in its time, took this view, arguing that it is more important to focus on target activities than target language. Similarly, at about the same time, Spack (1988: 29) argued that EAP teachers should teach 'general principles of inquiry and rhetoric' rather than specific language. While it is true that there is a common core of language forms that are common to most varieties – articles, prepositions, tenses, etc. (Leech and Svartvik, 1994) – the distribution of these forms and the way they are used, their specific meanings, may vary according to the contexts in which they are found (Bloor and Bloor, 1986; Flowerdew and Peacock, 2001; Hyland, 2002b). To take just one obvious example, the passive voice is used much more frequently in academic research articles than it is in other more colloquial genres. Similarly, academic articles tend to use much more complex noun phrases than do the more colloquial registers. Furthermore, there is relatively little use of progressive tenses. With regard to meaning, to take just one example, the word *field* has a very different meaning in physics to its meaning in sociology, or to its meaning in geography. So this is a counter to this first argument in favour of EGAP.

A second argument in favour of EGAP over ESAP writing is that language teachers are not qualified to deal with content; they are better off dealing with more popular subjects and with general principles of inquiry and rhetoric than engaging with disciplines with which they are not familiar, as Spack (1988), again, argued. Of course, this may be the case and it is true that ESAP teaching requires more training and preparation. But then one needs to ask if teaching EAP is a profession, which requires professional development and training, or an occupation which anyone 'off the street' can do. This brings us back to the deskilling argument. Having said that, there can be, in ESAP contexts, cases of language teachers going too far in the direction of teaching the discipline and impinging on the legitimate area of the content teachers. There are cases where language teachers become so interested in the subject matter of the content course that they are supposed to be supporting, that they try to help to teach the content themselves, thereby getting into trouble with the content department.

A third argument in favour of EGAP writing is that EGAP may focus on a set of common skills which are needed across all disciplines – note-taking, paraphrasing, plagiarism-avoidance skills, citation, etc. – rather

than discipline-specific language and skills. But again, proponents of ESAP can argue that there is no reason that these skills cannot be dealt with within the context of an ESAP course. Furthermore, these skills are subject to disciplinary variation, familiarity with which can only be developed in the context of the discipline. What constitutes a lab report, for example, in one discipline may be quite different in another discipline. There may similarly be disciplinary variation in citation practices (Maroko, 2013). One caveat to this argument for disciplinarity is that students may be required to deal with more than one discipline, especially in the early years of university study, and that many fields are themselves interdisciplinary.

A fourth and related argument to this one in favour of EGAP writing, or rather against ESAP writing, is that ESAP is a form of training rather than education. This is an argument put forward by Widdowson (1983) and also Hutchinson and Waters (1987). Students need to develop broad educational competencies, this argument goes, which can only be developed out of broader educational aims than the narrow discipline-specific competencies as defined by ESAP. This point is related to a similar one put forward by Raimes (1991), who argued that academic writing at university should be part of a liberal arts curriculum rather than focusing on other disciplines. She claimed that this approach would raise the status of EAP as a field. (Note that this is the opposite of the argument presented above that ESAP is likely encourage more professionalism.) Be that as it may, Widdowson's argument that ESAP is a training approach makes unwarranted assumptions about the nature of the ESAP curriculum. Just because the course is in the context of the target discipline does not mean that the teaching approach and learning activities need to be unimaginative and undemanding of learners' creativity.

A fifth argument in favour of EGAP writing is that ESAP is too difficult for novice students; EGAP needs to come first and only then will students be prepared for ESAP. The counter-argument to that is that there is no reason why more common core features cannot be dealt with within the context of the more specific ESAP course. Furthermore, this argument rests upon the assumption that language can be developed in an incremental manner, with one structure being mastered after another in a lock-step manner. Second language acquisition theory tells us, however, that this is not how language is learned; some structures are learned much later than others and individuals develop differently. Learners acquire features of the language when they are ready, not necessarily when these features are introduced by the teacher or the course book. As Flowerdew and Peacock (2001: 17) argued: 'If after eight years of secondary school English a student has not mastered third person subject verb agreement or the article system – both common errors in language learners who are in other ways highly

proficient in the language – then curriculum planners are justified in moving on to more discipline-specific features.'

A final argument for EGAP writing is that, in addition to learner needs, curriculum developers must also consider their *lacks* and *wants* (Hutchinson and Waters, 1987). Hutchinson and Waters (1987: 54) refer to *necessities* (rather than *needs*), lacks and wants. *Necessities* refers to needs as determined by the target situation. *Lacks* refers to aspects of the language and linguistic practices which students are deficient in, based on a comparison of what they currently know and what their needs are. *Wants* refers to what learners think they need in order to function in the target situation. Hutchinson and Waters (1987) proposed lacks and wants as part of needs analysis in their model of EGAP,[2] but it could be argued that a needs analysis incorporating lacks and wants can equally be applied to an ESAP situation as an EGAP one.

Hybrid approaches

In the above sections, I have presented the choice between EGAP and ESAP writing as a clear-cut dichotomy and implied that a choice can be made between either one or the other. This is a somewhat artificial distinction, however, and hybrid approaches, of course, are possible. In the real world, very often, low enrolment numbers mean that classes are made up of students from various disciplines; there is not enough critical mass for discipline-specific classes. With such heterogeneous classes, the challenge is to find enough common ground to include all students, which suggests an EGAP approach. At the same time, however, teachers can, on the one hand, individualize learning to include discipline-specific texts and activities, and on the other hand, encourage learners in such heterogeneous classes to share and contrast their disciplinary experiences (Swales, 1990; Swales and Feak, 2000), which is an ESAP approach, and which can provide students with the necessary skills for observing and adapting to these differences. Additional merits of this approach are that, on the one hand, it encourages learners to provide disciplinary input, which may assist the teacher, who may not have this knowledge, and that, on the other hand, it encourages learners to make an important contribution to the learning experience, which can be highly motivating.

Research on EAP written texts

A main focus of EAP writing research has been on the texts that learners need to engage in. Such research feeds into needs analysis, one of the

defining features of EAP/ESP (L. Flowerdew, 2013), materials development, and assessment procedures. At a higher level, though, it also helps to explain the role writing plays in the university and in people's lives beyond it and how writing varies according to situational context, including power relations, and social purpose.

Register and discourse analysis

The most work by far in EAP writing research has been done with regard to language description. This work tends to be discipline-specific or contrastive across disciplines. Researchers are not concerned about language in general, but particular varieties of language and how these varieties contrast with one another (including at the level of culture). As I have already mentioned, this type of research naturally feeds into ESAP rather the EGAP. This is because textual description can be employed as a form of needs analysis for ESAP writing.

The best known early publication in the field, Barber's (1962) article on the description of scientific text, identified a range of features that have since become received knowledge (Grabe and Kaplan, 1996: 159) (and incorporated into ESAP writing syllabuses). Such distinctive features include long sentences; complex noun and adjective phrases; many non-finite phrases and subordinate clauses; many infinitive clauses; many instances of the verb BE; a relatively greater number of relative clauses; greater use of the passive; greater use of the simple present tense; a smaller number of progressive tenses; few questions; and few contractions. These features of scientific text identified by Barber are grist to the mill of the ESAP teacher in the field of English for Science.

A criticism often levelled at register analysis such as that of Barber, just described, is that it focuses only on form, at the expense of function, or meaning in use. An often-cited article which took a more meaning-focused (although narrower) approach is Tarone *et al.*'s (1981) 'On the use of the passive in two Astrophysics journal papers'. This paper can be described as an example of discourse analysis rather than register analysis. In this paper, Tarone and her colleagues set out to show that, compared with corpora made up of mixed genres of scientific English (Barber's corpus was made up of a mixture of journal articles and textbook material), different results could be obtained when a corpus was made up of just two articles from the same field. Their findings showed that *we* plus an active verb occurred at least as frequently as the passive in both articles. With the help of an informant in astrophysics, Tarone *et al.* also focused on the functional meanings of the use of the two forms, showing four rhetorical functions of the passive as opposed to *we* plus an active verb: (1) *we* indicates the author's unique

procedural choice, while the passive indicates an established or standard procedure; (2) *we* is used to describe the author's own work and the passive to describe the work of others, unless that work is not mentioned in contrast to the author's, in which case the active is used; (3) the passive is used to describe the author's proposed studies; and (4) the use of the active or the passive is determined by focus due to the length of an element or the need for emphasis.

This shift from form to function was reflected in ESP textbooks at the time. Early publications, such as Herbert's (1965) *The structure of technical English* and Ewer and Latorre's (1969) *A course in basic scientific English* were based on register analysis, while later publications, such as Allen and Widdowson's *English in Focus* series and Bates and Dudley Evans's *Nucleus* series were based on meaning, the former on communicative functions (with parallels the linguistic work of Lackstrom *et al.* (e.g. 1973; later summarized in Trimble, 1985) and the latter on scientific concepts (the notions in Wilkins's (1976) *Notional syllabuses*). All of this work was also influenced by the communicative revolution in language teaching that was going on in the early 1970s (Dudley-Evans and St John, 1998: 22), Widdowson being one of the leading figures in this movement.

Genre analysis

The developments just reported were followed in 1990 by the publication of Swales's *Genre analysis: English in academic and research settings.* This volume marked the start of a whole new stage in EAP research and pedagogy, that of genre analysis and genre-based pedagogy (Flowerdew, 2015). Swales's book was influential in EAP in many ways, but two may be mentioned here. First, his development of the CARS (Create a research space) model of rhetorical moves for research article introductions was highly influential. Since the publication of *Genre analysis*, there have been innumerable studies of various academic genres and part genres using Swales's approach. These types of studies provide important data for course design. The other important insight to be mentioned here was Swales's notion of *consciousness-raising,* an approach to textual analysis which encourages students to develop a sensitivity to the interaction between the communicative purposes and the linguistic features of texts (a sensitivity which can then be applied to their own writing). This is the approach employed in two genre-based graduate-level EAP textbooks by Swales and Feak (2000, 2012). A number of studies by Cheng (2015) have shown how a consciousness raising approach can be effective in genre-based pedagogy.

Another influential writer on genre-based pedagogy is A. M. Johns. In her *Text, role, and context* (A. M. Johns, 1997), she describes how

undergraduate students can conduct ethnographic research in order to inform their knowledge of the sociorhetorical features of the genres they need to write. This work applies to both native- and non-native-speakers of English. The Swalesian approach to genre pedagogy is not the only one. In an influential article, Hyon (1996) distinguishes three major approaches: (a) English for specific purposes (ESP); (b) North American New Rhetoric studies; and (c) Australian systemic functional linguistics (also referred to as the Sydney School). In a review of Hyon's article, more recently, Swales (2012) suggests two further possible candidates: the Brazilian approach to genre and the Academic Literacies movement. The first of these is a hybrid, bringing together rhetorical, linguistic, and sociological approaches (Bawarshi and Reiff, 2010), while the second is more ethnographic in orientation, taking the view that the ESP approach is too textual, leading to pedagogical recommendations which are again too textual (Lillis and Scott, 2007). The Academic Literacies approach also takes a more critical stand to the academy, questioning how students are 'identified', the concept of academic disciplines, and the power and authority of instructors. However, while it is undoubtedly a distinctive approach to EAP, the Academic Literacies approach does not foreground the notion of genre, so, in my view cannot be grouped with the three major approaches identified by Hyon.

Corpus analysis

Following the work of Swales (see also Bhatia, 1993 on professional genres), the next paradigm shift in EAP research was that of corpora. A corpus is an electronically stored collection of texts which can be searched to discover features which are not immediately obvious to the naked eye. Corpora can provide data in terms of frequency counts of individual lexical items (and ranked frequency lists), lexical bundles (multi-word units, also referred to as ngrams), and grammatical structures. If the corpus is annotated (parsed), it may also identify parts of speech and other information added to the corpus, either automatically or by hand. Corpora used for studying academic discourse may be large (e.g. the academic sub-corpus of the American Corpus of Contemporary English (COCA)) or small e.g. Flowerdew's (2004) corpus of PhD literature review chapters). Important medium-sized academic corpora are the Michigan Corpus of Upper-level Student Papers (MICUSP) (University of Michigan, USA http://www.mic-usp.org/home) and its British counterpart, the British Academic Written English (BAWE) corpus (see Gardner and Nesi, 2013). The argument for using corpora for writing instruction is presented in L. Flowerdew (2010).

A huge amount of interesting findings about academic discourse have been revealed through corpus analysis, much of it with the potential to inform ESAP writing pedagogy. At the most basic level, efforts have gone into the creation of academic word lists, i.e. lists of the most frequent words used in academic discourse. The first such list was that of Coxhead (2000) and a more recent one is that of Gardner and Davies (2013). While Coxhead's list has been very influential and useful in course design, in the classroom, and for direct use by learners, Gardner and Davies (2013) claim their list to be an improvement on that of Coxhead (2000) on a number of grounds. First, their list is based on a much larger corpus (120 million words compared to 3.5 million words). Second, it is based on much newer data, some texts as recent as 2012, while that of the AWL goes back to the 1990s. Third, it provides better coverage, i.e. the items are more evenly spread across the corpus. Fourth, it is more focused on just academic words, whereas the AWL also includes some more general words. Fifth, it provides more information on word families. Sixth, the word list is integrally tied into an interface called WordAndPhrase (http://www.wordandphrase.info/academic/) that allows learners to interact with the data to access information about the meaning of the words, their definitions, their frequency in the disciplinary sub-corpora (Medicine, Science and Business), their collocates, and concordance lines that can be resorted. Another online interactive resource useful for discipline-specific vocabulary work is Cobb's Compleat (sic) Lexical Tutor, (http://www.lextutor.ca/), which has many functions, including one which allows students to input their own text to contrast their own writing with a discipline-specific source text. As well as work on word frequency lists, lists have now started to be created for lexical bundles, two well-known ones being those of Hyland (2008) and Simpson-Vlach and Ellis (2010). Cortes (2006) is an interesting account of teaching lexical bundles in the context of an ESAP history writing class.

Although vocabulary is, of course, very important for ESAP writing, work on other linguistic levels is also important. To cite just a few representative areas, a lot of work has been done on stance (Biber, 2006; Hyland and Sancho Guinda, 2013); on metadiscourse (Ädel, 2006; Hyland, 2005); on lexical bundles (Biber, Conrad, and Cortes, 2004; Hyland, 2008; Simpson-Vlach and Ellis, 2010); and on signalling nouns (Flowerdew and Forest, 2015).

Other corpus-based research particularly worthy of note are Hyland's two monographs where he combines corpus analysis with a social dimension through the use of specialist informants who comment on what they have written. In the first of these two volumes, Hyland emphasizes disciplinary differences (Hyland, 2004), while in the second he puts more emphasis on individual identity (Hyland, 2012), all in the context of the

discourse of the academy. Also of note is Nesi and Gardner's (2012) study of the genres that British undergraduate students are required to write, based on the BAWE corpus.

A rather different approach to corpus work is represented by studies of learner corpora, corpora of writing produced by learners of English. The best-known work in this area is the University of Louvain *International Corpus of Learner English* (https://www.uclouvain.be/en-cecl-icle.html), made up of argumentative essays written by higher intermediate to advanced learners of English from several mother tongue backgrounds. It might be argued that the essay topics in the corpus are not particularly 'academic', including as they do essays on smoking and part-time jobs, among other topics. Nevertheless the essay is still one of the most frequently required genres in British universities, according to Nesi and Gardner's (2012) data, although the topics in the Louvain corpus might be more typical of high school essays than what is required at university level. What learner corpora can do is to allow the researcher or teacher to identify discrepancies between native- and non-native usage, referred to by Granger as contrastive interlanguage analysis. It might be argued that this casts the learner in a deficit position *vis á vis* the native-speaker. However, Granger (2015) has argued that the variety against which the non-native variety is compared need not necessarily be a traditional 'inner circle' variety, but may also be one of the 'outer circle' varieties or corpora made up of competent L2 user data, as suggested by proponents of English as a Lingua Franca. Much work is going on now around the globe, with learner corpora researchers investigating the particular interlanguage features of various L1s.

A much more direct approach to corpus-based work than the work I have reviewed so far, which mainly provides input for syllabus and materials design, is 'data-driven learning', an approach to teaching and learning first advocated by T. Johns (2002). In this approach, learners interact directly with corpus data, either in print form or working directly with the computer. The idea is that students themselves investigate the corpus data, identifying recurrent patterns and making their own generalizations (guided perhaps by the teacher). This approach is ideal for ESAP, because students can work with corpora of data from their particular disciplines. Gavioli's (2006), *Exploring corpora for ESP learning* is an early monograph describing how this approach can work in practice. Gavioli argues that corpus work can provide ESAP students with insights regarding features of the ESAP target language, on the one hand, and that the 'search and discovery' procedure facilitates language learning and promotes autonomy in developing ESAP language, on the other hand. More recent reports of data-driven learning are those of L. Flowerdew (2015) and Flowerdew and Wang (forthcoming). Another approach is for students to make their

own corpora out of materials that they work with in their disciplines. This approach has been mostly applied in the context of the teaching of research writing. Accounts are to be found in Lee and Swales (2006), Burgess and Cargill (2013) and Charles (2014). A teaching manual employing this approach, combined with genre-based teaching is by Cargill and O'Connor (2013).

Ethnography

I have already referred to the work of A. M. Johns and how she views learners as ethnographers. In parallel with text analytic work, although perhaps less prominent, has been a body of research using more qualitative, or ethnographic, methods, involving field observation and interviews, supported by surveys and textual analysis. An article by Lillis (2008) sets out principles for an ethnographic approach to EAP. Such qualitative research is able to focus on the practices, processes, social and power relations involved in academic writing across the disciplines. An article by Starfield (2002) is a good example of such work, showing how a novice undergraduate writer in South Africa negotiated power relations to create an authoritative textual and discoursal identity for himself, while another such writer failed to create such an identity because he relied on the words of recognized authors in the discipline and thereby had thrust upon him the identity of a 'plagiarizer'. Ivaniç's (1998) ethnographic study of adult students in the UK shows how such students have difficulties in reconciling the identities they bring with them with those that they are required to take on in the academy.

Ethnographic work has also been conducted in business and professional contexts. Working at the Bank of Canada, over a period of many years, Smart (2006) conducted interviews, analysed documents, and acted as a participant observer to produce a fascinating account of how writing takes place in the world of work (such work is useful to ESAP teaching in the Business and Economics field). On a more modest level, Flowerdew and Wan (2010) conducted ethnographic work (combined with Swalesian genre analysis) focusing on a team of auditors in Hong Kong, showing the complex work that goes into the production of the audit report document.

A considerable amount of ethnographic work has been conducted on the publishing practices of the rapidly growing number of non-native writers who are required to publish in Anglophone international journals, a sub-field of EAP which has been labelled English for Research Publication Purposes (ERPP) (Flowerdew, 2013). Examples of such work are Flowerdew (2000), Li (2006, 2007), and Lillis and Curry (2010), but there is quite extensive further literature in this area. A feature of much of this work is the

use of discourse-based interviews (O'Dell *et al.*, 1983), i.e. interviews with writers asking them about how and why they wrote their texts.

Contrastive rhetoric

Another approach to EAP writing research, going back to Kaplan's (1966) controversial study of differences in the writing patterns of different ethnic groups, is contrastive rhetoric, the study of how writing in one language influences how one writes in another language. This approach is less popular than the others reviewed here, partly, no doubt, because for a long time it was out of favour, due to claims that it was guilty of cultural essentialism. Notable studies in this field are Connor's study of variation in the rhetorical moves in grant proposals across humanists and scientists (Connor, 1999) and her study of accommodation in international business communication (Connor, 2000). The work of Connor, indeed, has done much to re-establish the approach, notably in her relabelling of *contrastive* rhetoric as *intercultural* rhetoric (Connor, 2011), adding to the traditional approach of textual analysis an emphasis on a more dynamic, negotiable definition of culture and the introduction of small cultures (disciplinary, generational, gender), in addition to national or ethnic cultures. Intercultural rhetoric is now defined by Connor (2011: 2) as 'an umbrella term that includes cross-cultural studies (comparisons of the same concept in culture one and culture two) as well as studies of interactions in which writers from a variety of linguistic, cultural, and social backgrounds negotiate through speaking and writing.' In addition to the work of Connor, there is interest in contrastive rhetoric in academic contexts in Spain. Moreno (2004), for example has done interesting work contrasting Spanish and English research articles, while Martín-Martín (2003) has compared research paper abstracts across Spanish and English, and Suárez and Moreno (2008) have compared the rhetorical structure of academic book reviews across Spanish and English. Other contrastive rhetoric work has focused on grant proposals (Chinese and English) (Feng, 2008) and research articles (German, British, and American) (Sanderson, 2008). The value of contrastive work for ESAP is that it can highlight particular differences in cultural writing styles, which can feed into pedagogy.

Classroom methodology

The cultural and social context of each EAP class is specific, as are the learning goals, materials, and teaching methodology. Tardy (2012) notes that 'LSP (Languages for Specific Purposes) writing instruction draws on the same principles that guide LSP pedagogy in general; that is, it is

needs-driven and learner-centered, engaging students in task-based uses and analysis of authentic target language.' ESAP writing instruction often favours a genre-based pedagogy, involving a consciousness-raising approach (Swales, 1990), as mentioned above. As Kuteeva (2013: 95) notes:

> … 'examine-and-report-back' genre-analysis tasks involving comparisons between different genres … contribute to increasing students' genre awareness in specific disciplinary contexts. This way, the challenges faced by the teachers working with 'multidisciplinary' groups can be turned into learning opportunities in genre-based instruction.

Some genre-based approaches adopt the Sydney School of genre pedagogy, which involves a teaching/learning cycle consisting of three main stages: 'deconstruction' (where a successful text or texts is/are analysed by the teacher interacting with the learners); 'joint construction' (where the teacher and learners collaboratively put together a text, based on the model from the deconstruction stage); and 'independent construction' (where the learners individually create a text modelled on those developed in the previous stages) (Martin and Rose, 2012). At all stages, a key concern is 'setting context' (putting texts into their socio-cultural contexts), as is 'building field' (content knowledge). This approach can work well, therefore, in an ESAP context.

Based on different conceptions of genre, while some teachers employ a more formulaic approach to genre pedagogy, focusing on text types and templates, others prefer to concentrate more on variability in genre and how individual instances of genres vary one from another according to context. A. M. Johns (2011) has referred to this dichotomy as genre *acquisition*, on the one hand, and genre *awareness,* on the other (see also Flowerdew, 1993 on genre awareness activities). This is an on-going debate, depending very much on the view taken on genre, as exemplified in the three approaches identified by Hyon (1996) referred to above. As Kuteeva (2013: 85) notes again, from an ESAP perspective, '[f]urther research is needed on how … students with *different* disciplinary and linguistic backgrounds approach genre-analysis tasks, including educational settings outside the English-speaking world.'

Critical approaches

Some writers have criticized EAP and, by implication, ESAP for being too accommodating to the status quo. This critique was begun by Pennycook (1997), who argued that ESP, in being pragmatic in responding to the needs of the institutions within which it operates, at the same time reinforces unequal power relations which often emphasize the dominance of English

and of the native speaker of English. This critique was developed further by Benesch (2009) with her notion of learner 'rights analysis' as an extension of needs analysis. Rights analysis encourages learners and teachers to question some of the fundamental policies with regard to English in their institutions. One important area in ESAP writing concerns the question of English as a Lingua Franca (ELF). Should ESAP students be required to write in Standard American or British English or should they be allowed to adopt ELF or a local variety as their model (Flowerdew, 2013; Kuteeva and Mauranen, 2014) Another issue concerns the role of the mother tongue in teaching and learning. In certain universities in Hong Kong, for example, there is a policy of 'English-only'; all classes should be conducted only in English. Is it not the case that the mother tongue and/or code switching might play a role in the teaching and learning process, however? After all, outside the classroom, in real-world Hong Kong, both Chinese and English are used together; they are not segregated (see Flowerdew and Wan's (2010) study of how auditors operate in Hong Kong, for example). Further critical questions have been raised by the Academic Literacies group in London (e.g. Lillis and Scott, 2007).

Taking a classroom-based approach, a recent book by Chun (2015) demonstrates how a critical literacy approach can be taken in the EAP classroom. In an extensive case study of one teacher, Chun (2015) shows how this EAP teacher learns to encourage her students to engage with issues of neoliberal globalization, racial and cultural identities, and consumerism. Chun (2015) outlines seven shared practices for teachers when working with EAP students from a critical literacies perspective, as follows:

1. Drawing upon the lived experiences of teachers and students in dialogically responding to the learning materials.
2. Using a meta-language approach in which lexical and grammatical choices are highlighted with students and are explored in the ways they can construct one meaning over another.
3. Addressing issues of power and how it is instantiated in language, texts, genres, and discourses.
4. Debating what constitutes certain common-sense beliefs of who we are, our functions and roles in society, and why and how certain norms and rules are made and by whom.
5. Examining in a critical self-reflexive way the practice of one's own various positions in society, be they economic, racialized, gendered, and so on, and how these positions may confer privilege in certain contexts and not others.

6. Seeking to renew and restore a sense of community that has been devalued in the past thirty or so years in the neoliberal assault in the name of the individual above all else.

7. Enabling agentive acts of both teachers and students in naming and speaking back to forms of power and attempting to redistribute these various forms of power in their ESP classrooms, universities, and society for greater social, economic, and political justice for people everywhere.

In an interesting more recent article, Chun (forthcoming) shows how these principles can be applied in the teaching of a business memo in an email to a class of Hong Kong business students.

Some writers have argued for a 'third way' between the pragmatic and critical approaches, a 'critical pragmatic' approach. Such an approach attempts to 'synthesise the preoccupation with difference inherent in critical pedagogy and the preoccupation with access inherent in pragmatic pedagogy' (Harwood and Hadley, 2004: 366; see also Flowerdew, 2007).

Assessment

With English for General Purposes (EGP) assessment becoming more focused on an analysis of learner needs and target language use – which are themselves defining features of ESP testing – ESP/EAP testing has become more difficult to distinguish from its EGP counterpart. Nevertheless, as Douglas (2013: 378–379) notes, ESP (and by extension ESAP) assessment is a clearly definable sub-field 'with its focus on assessing ability to use language precisely to perform relevant tasks in authentic contexts while integrating appropriate aspects of field-specific background knowledge'. Douglas notes, however, that there is an ongoing debate about the construct of specific-language learning ability (p. 239). He further adds that practitioners have come to realize that language knowledge and background knowledge are difficult to distinguish and that 'although specific purpose testers are not in the business of assessing professional, vocational, or academic competence in specific purpose fields … such competence is inextricably linked to language performance in those fields'. This is a case, then, for ESAP rather than EGAP testing, because testees' performance will be affected by their background knowledge of their specific disciplines.

Conclusion

In the limited space of this article I have not been able to cover many issues of interest and relevance to ESAP writing research and pedagogy,

but I hope to have covered what I consider to be the main issues for anyone interested in, involved in, or considering entering the field of ESAP. Two important areas where ESAP writing is going on are in the writing of English for Research Publication Purposes (ERPP), which I have only briefly mentioned, and the writing of the academic thesis/dissertation, which I have not mentioned at all (but see Thompson, 2013 for review).[3] Another area I have omitted, except from my references to Halliday and to the Sydney School approach to genre pedagogy, is the systemic functional linguistics approach to academic discourse; I have not covered this, because that work is more focused on school genres, as opposed to academic discourse (although there are exceptions, e.g. Hood, 2010). As I said, I cannot cover everything in the space of a journal article. Nevertheless, I hope to have at least prepared the ground for the more specialized research reports, reflections on practice, and report from the e-sphere, which are to follow in this special issue.

Where student populations and disciplinary groupings are diverse, where teachers have not enough time to prepare discipline-specific materials, or where access to content teachers may be restricted for whatever reason, then a case can be made for EGAP. What we know about disciplinary differences in terms of ideology, language, and communicative practices, however, tells us that, where possible, efforts should be made in the direction of ESAP. Whichever model is chosen, however, or if a hybrid model is the choice, students need to be exposed to the understandings, language and communicative activities of their target disciplines if at all possible, with students themselves also contributing to this enterprise. In this way, learners will be able to focus on new types of literacy which will prepare them to participate in their academic fields.

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Notes

1   See Parkinson (forthcoming) for an excellent account of how to teach the laboratory report.
2   Hutchinson and Waters (1987) were writing about ESP in general and so the appropriate acronym for the wide-angle approach they argued for would be EGSP (English for General Specific Purposes), but I have used the EGAP acronym here, as EAP is the focus of this article.

3   A current trend, in fact, is for more and more disciplines to move to the thesis/dissertation as a collection of research articles, as opposed to a single monograph (although not so much in the humanities), so the two fields are beginning to coincide.

References

Ädel, A. (2006). *Metadiscourse in L1 and L2 English.* Amsterdam: John Benjamins. http://dx.doi.org/10.1075/scl.24

Alqahtani, M. (2011). *An investigation into the language needs of Saudi students studying in British postgraduate programmes and the cultural difference impacting on them.* Unpublished PhD thesis: University of Southampton. Retrieved from http://eprints.soton.ac.uk/198175/6.hasCoversheetVersion/Binder1.pdf

Apple, M.W. (1988). *Teachers and texts: A political economy of class and gender relations in education.* New York: Routledge. http://dx.doi.org/10.1080/00131728809335493

Barber, C. (1962). Some measurable characteristics of modern scientific prose. In F. Behre (Ed.), *Contributions to English syntax and philology: Gothenburg studies in English* (Vol. 14), 21–43. Gothenburg: University of Gothenburg.

Bawarshi, A. S., and Reiff, M. J. (Eds) (2010). *Genre: An introduction to history, theory, research, and pedagogy.* West Lafayette, IN: Parlor.

Benesch, S. (2009). Theorizing and practicing critical English for academic purposes. *Journal of English for Academic Purposes*, 8 (2), 81–85. http://dx.doi.org/10.1016/j.jeap.2008.09.002

Bhatia, V. K. (1993). *Analysing genre: Language use in professional settings.* London: Longman. http://dx.doi.org/10.1017/S0272263100013668

Biber, D. (1988). *Variation across speech and writing.* Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511621024

Biber, D. (2006). Stance in spoken and written university registers. *Journal of English for Academic Purposes*, 5, 97–116. http://dx.doi.org/10.1016/j.jeap.2006.05.00

Biber, D., Conrad, S., and Cortes, V. (2004). 'Take a look at …': Lexical bundles in university teaching and textbooks. *Applied Linguistics*, 25, 401–435. http://dx.doi:10.1093/applin/25.3.371

Bloor, M., and Bloor, T. (1986). Language for specific purposes: Practice and theory. *Centre for Language and Communication Studies Occasional Papers*, 19. Dublin: Trinity College, Centre for Language and Communication Studies. Retrieved from http://files.eric.ed.gov/fulltext/ED280285.pdf

Blue, G. M. (1988). Individualising academic writing tuition. In P. Robinson (Ed.), *Academic writing: Process and produc*t. Oxford: Modern English Publications.

Burgess, S., and Cargill, M. (2013). Using genre analysis and corpus linguistics to teach research article writing. In V. Matarese (Ed.), *Supporting research writing: Roles and challenges in multilingual settings*, 55–71. Cambridge: Woodhead Publishing.

Cargill, M., and O'Connor, P. (2013). *Writing scientific research articles: Strategy and steps* (2nd ed.). Chichester West Sussex; Hoboken, NJ: Wiley-Blackwell. Retrieved from http://www.idemployee.id.tue.nl/g.w.m.rauterberg/lecturenotes/2009-Writing_Scientific_Research_Articles.pdf

Charles, M. (2014). Getting the corpus habit: EAP students' long-term use of personal corpora. *English for Specific Purposes*, 35, 30–40. http://dx.doi.org/10.1016/j.esp.2013.11.004

Cheng, A. (2015). Genre analysis as a pre-instructional, instructional, and teacher development framework. *Journal of English for Academic Purposes*, 19, 125–136. http://dx.doi.org/10.1016/j.jeap.2015.04.004

Chun, C. (2015). *Power and meaning making in an EAP classroom*. Bristol: Multilingual Matters. http://dx.doi.org/10.1016/j.jeap.2015.08.008

Chun, C. (forthcoming). Critical literacy writing in ESP: Perspectives and approaches. In J. Flowerdew and T. Costley (Eds), *Discipline-specific writing: Theory into practice*. London: Routledge.

Connor, U. (1999). How like you our fish? Accommodation in international business communication. In M. Hewings and C. Nickerson (Eds), *Business English: Research into Practice*, 115–128. Harlow: Longman.

Connor, U. (2000). Variation in rhetorical moves in grant proposals of US humanists and scientists. *Text*, 20 (1), 1–28. http://dx.doi.org/10.1515/text.1.2000.20.1.1

Connor, U. (2011). *Intercultural rhetoric in the writing classroom*. Ann Arbor, MI: The University of Michigan Press.

Cortes, V. (2006). Teaching lexical bundles in the disciplines: An example from a writing intensive history class. *Linguistics and Education*, 17, 391–406. http://dx.doi.org/10.1016/j.linged.2007.02.001

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34 (2), 213–238. http://dx.doi.org/10.2307/3587951

Douglas, D. (2013). ESP and assessment. In B. Paltridge and S. Starfield (Eds), *The handbook of English for specific purposes*, 367–383. Oxford: Wiley-Blackwell. http://dx.doi.org/10.1002/9781118339855

Dudley-Evans, T., and St John, M. J. (1998). *Developments in English for specific purposes*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1016/S0889-4906(99)00026-5

Ewer, J. R., and Latorre, G. (1969). *A course in basic scientific English*. London: Longman.

Feng, H. (2008). A genre-based study of research grant proposals in China. In U. Connor, E. Nagelhout and W. V. Rozycki (Eds), *Contrastive rhetoric: Reaching to intercultural rhetoric*, 63–86. Amsterdam: John Benjamins.

Flowerdew, J. (1993). An educational, or process approach to the teaching of professional genres. *ELT Journal*, 47 (4), 305–316. http://dx.doi.org/10.1093/elt/47.4.305

Flowerdew, J. (2000). Discourse community, legitimate peripheral participation, and the non-native English-speaking scholar. *TESOL Quarterly*, 34 (1), 127–150. http://dx.doi.org/10.2307/3588099

Flowerdew, J. (2004). *Corpus of PhD literature reviews*. Hong Kong: City University of Hong Kong.

Flowerdew, J. (2007). The non-Anglophone scholar on the periphery of scholarly publication. *AILA Review*, 20 (1), 14–27. http://dx.doi.org/10.1075/aila.20.04flo

Flowerdew, J. (2013). English for research publication purposes. In B. Paltridge, and S. Starfield (Eds), *The handbook of English for specific purposes*, 301–321. Oxford: Wiley-Blackwell. http://dx.doi.org/10.1002/9781118339855.ch16

Flowerdew, J. (2015). John Swales's ideas on pedagogy in *Genre Analysis*: A view from 25 years on. *Journal of English for Academic Purposes*, 19, 102–112. http://dx.doi.org/1010.1016/j.jeap.2015.02.003

Flowerdew, J., and Forest R. W. (2015). *Signalling nouns in English: A corpus-based discourse approach*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1007/CBO9781139135405

Flowerdew, J., and Peacock, M. (2001). The EAP curriculum: Issues, methods, and challenges. In J. Flowerdew and M. Peacock (Eds), *Research perspectives on English for academic purposes*, 176–194. Cambridge and New York: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139524766.015

Flowerdew, J., and Wan, A. (2010). The linguistic and the contextual in applied genre analysis: The case of the company audit report. *English for Specific Purposes*, 29 (2), 78–93. http://dx.doi.org/10.1016/j.esp.2009.07.001

Flowerdew, J., and Wang, S. H. (forthcoming). Teaching English for research publication purposes with a focus on genre, register, textual mentors and language re-use: A case study. In J. Flowerdew and T. Costley (Eds), *Discipline-specific writing: Theory into practice*. London: Routledge.

Flowerdew, L. (2010). Using corpora for writing instruction. In A. O'Keeffe and M. McCarthy (Eds), *The Routledge handbook of corpus linguistics*, 444–457. London and New York: Routledge. http://dx.doi.org/10.4324/9780203856949.ch32

Flowerdew, L. (2013). Needs analysis and curriculum development in ESP. In B. Paltridge and S. Starfield (Eds), *The handbook of English for specific purposes*, 325–346. Chichester: Wiley Blackwell. http://dx.doi.org/10.1002/9781118339855.ch17

Flowerdew, L. (2015). Using corpus-based research and online academic corpora to inform writing of the discussion section of a thesis. *Journal of English for Academic Purposes*, 20, 58–68. http://dx.doi.org/10.1016/j.jeap.2015.06.001

Gardner, D., and Davies, M. (2013). A new academic vocabulary list. *Applied Linguistics*, 35, 1–24. http://dx.doi.org/10.1093/applin/amt015

Gardner, S., and Nesi, H. (2013). A classification of genre families in university student writing. *Applied Linguistics*, 34 (1), 1–29. http://dx.doi.org/10.1093/applin/ams024

Gavioli, L. (2006). *Exploring corpora for ESP learning*. Amsterdam: John Benjamins. http://dx.doi.org/10.1075/scl.21

Gee, J. (2014). *An introduction to discourse analysis: Theory and method* (4th ed.). London: Routledge. http://dx.doi.org/10.1111/j.1540-4781.2007.00593_6.x

Grabe, W., and Kaplan, R. (1996). *Theory and practice of writing*. Harlow: Longman.

Granger, S. (2015). Contrastive interlanguage analysis: A reappraisal. *International Journal of Learner Corpus Research*, 1 (1), 7–24. http://dx.doi.org/10.1075/ijlcr.1.1.01gra

Hadley, G. (2015). *English for academic purposes in neoliberal universities: A critical grounded theory*. New York: Springer. http://dx.doi.org/10.1075/ijlcr.1.1.01gra

Hafner, C., Miller, L., and Ng, C. (undated). Academic literacy practices of university science students: A needs analysis. Final report on academic literacy practices of university science students. Department of English. City University of Hong Kong. http://www1.english.cityu.edu.hk/acadlit/sites/default/files/Academic%20literacies%20in%20university%20science%20students.pdf

Halliday, M. A. K. (2014) *An introduction to functional grammar* (4th ed.). Revised by C. M. I. M. Matthiessen. London: Routledge.

Halliday, M., McIntosh, A., and Strevens, P. (1964). *The linguistic sciences and language teaching*. London: Longman. http://dx.doi.org/10.2307/3724120

Harwood, N., and Hadley, G. (2004). Demystifying institutional practices: Critical pragmatism and the teaching of academic writing. *Journal of English for Specific Purposes*, 23, 355–377. http://eric.ed.gov/?redir=http%3a%2f%2fdx.doi.org%2f10.1016%2fj.esp.2003.08.001

Herbert, A. J. (1965). *The structure of technical English*. London: Longman Group Ltd.

Hood, S. (2010). *Appraising research: Evaluation in academic writing*. London: Palgrave Macmillan. http://dx.doi.org/10.1057/9780230274662

Horowitz, D. (1986). What professors actually require of students: Academic tasks for the ESL classroom. *TESOL Quarterly*, 20, 445–462. http://dx.doi.org/10.2307/3586294

Hutchinson, T., and Waters, A. (1987). *English for specific purposes: A learning-centered approach*. Cambridge: Cambridge University Press. http://dx.doi.org/10.2307/327576

Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. London: Longman. http://dx.doi.org/10.2307/3587657

Hyland, K. (2002a). *Teaching and researching writing*. London: Longman/Pearson. http://dx.doi.org/10.1093/elt/57.1.85

Hyland, K. (2002b). Specificity revisited: How far should we go? *English for Specific Purposes*, 21 (4), 385–395. http://dx.doi.org/10.1016%2FS0889-4906%2801%2900028-X

Hyland, K. (2004). *Genre and second language writing*. Ann Arbor, MI: University of Michigan Press. http://dx.doi.org/10.1017/S0261444814000068

Hyland, K. (2005). *Metadiscourse*. London: Continuum.

Hyland, K. (2008). Academic clusters: Text patterning in published and postgraduate writing. *International Journal of Applied Linguistics*, 18 (1), 41–62. http://dx.doi.org/10.1111%2Fj.1473-4192.2008.00178.x

Hyland, K. (2012). *Disciplinary identities: Individuality and community in academic writing.* Cambridge: Cambridge Applied Linguistics. http://dx.doi.org/10.1093/applin/ams070

Hyland, K., and Sancho Guinda, C. (Eds). (2013). *Stance and voice in written academic genres*. London: Palgrave Macmillan. http://dx.doi.org/10.1057/9781137030825

Hyon, S. (1996). Genre in three traditions: Implications for ESL. *TESOL Quarterly*, 30, 693–722. http://dx.doi.org/10.2307/3587930

Ivaniç, R. (1998). *Writing and identity: The discoursal construction of identity in academic writing.* Amsterdam: John Benjamins. http://dx.doi.org/10.1075/swll.5

Johns, A. M. (1997). *Text, role and context: Developing academic literacies.* Cambridge: Cambridge University Press. http://dx.doi.org/10.2307/3587966

Johns, A. M. (2011). The future of genre in L2 writing: Fundamental, but contested, instructional decisions. *Journal of Second Language Writing*, 20, 56–68. http://dx.doi.org/10.1016/j.jslw.2010.12.003

Johns, T. (2002). Data-driven learning: The perpetual challenge. In B. Kettemann and G. Marko (Eds), *Teaching and learning by doing corpus analysis.* 107–117, Amsterdam: Rodopi. http://dx.doi.org/10.4304/tpls.2.7.1526-1531

Jordan, B. (2002). The growth of EAP in Britain. *Journal of English for Academic Purposes*, 1 (1), 69–78. http://dx.doi.org/10.1016/S1475-1585(02)00004-8

Kaplan, R. B. (1966). Cultural thought patterns in intercultural education. *Language Learning*, 16 (1), 1–20. http://dx.doi.org/10.1111/j.1467-1770.1966.tb00804.x

Kuteeva, M. (2013). Graduate learners' approaches to genre-analysis tasks: Variations across and within four disciplines. *English for Specific Purposes*, 32 (2), 84–96. http://dx.doi.org/10.1016/j.esp.2012.11.004

Kuteeva, M. and Mauranen, A. (Eds). (2014). Writing for publication in multilingual contexts*. Special issue of Journal of English for Academic Purposes*, 13 (1). http://dx.doi.org/10.1016/j.jeap.2013.11.002

Lee, D., and Swales, J. (2006). *A corpus-based EAP course for NNS doctoral students: Moving from available specialized corpora to self-compiled corpora.* Amsterdam: John Benjamins. http://dx.doi.org/10.1016/j.esp.2005.02.010

Li, Y. (2006). A doctoral student of physics writing for publication: A sociopolitically-oriented case study. *English for Specific Purposes*, 24 (4), 456–478. http://dx.doi.org/10.1016%2Fj.esp.2005.12.002

Li, Y. (2007). Apprentice scholarly writing in a community of practice: An 'intraview' of an NNES graduate student writing a research article. *TESOL Quarterly*, 41 (1), 55–79. http://dx.doi.org/10.1002/j.1545-7249.2007.tb00040.x

Lillis, T. (2008). Ethnography as method, methodology, and 'deep theorizing'. *Written Communication*, 25, 353–388. http://dx.doi.org/10.1177/0741088308319229

Lillis, T., and Curry, M. J. (2010). *Academic writing in a global context: The politics and practices of publishing in English.* London: Routledge.

Lillis, T., and Scott, M. (2007). Defining academic literacies research: Issues of epistemology, ideology and strategy. *Journal of Applied Linguistics*, 4 (1), 5–32. http://dx.doi.org/10.1558/japl.v4i1.5

Lackstrom, J. E., Selinker, L., and Trimble, L. P. (1973). Technical rhetorical principles and grammatical choice. *TESOL Quarterly*, 7 (2), 127–136. http://dx.doi.org/10.2307/3585556

Lave, J., and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1002/acp.2350070111

Leech, G., and Svartvik, J. (1994). *A communicative grammar of English* (2nd ed.). London: Longman. http://dx.doi.org/10.2307/329369

Maroko, G. M. (2013). Citation practices in selected science and humanities dissertations: Implications for teaching. *American Journal of Educational Research*, 1 (4), 126–136.

Martin, J. R., and Rose, D. (2012). *Learning to write, reading to learn: Genre, knowledge and Pedagogy in the Sydney School*. London: Equinox. http://dx.doi.org/10.1093/applin/amt044

Martín-Martín, P. (2003). A genre analysis of English and Spanish research paper abstracts in experimental social sciences. *English for Specific Purposes*, 22, 25–43. http://dx.doi.org/10.1016/S0889-4906(01)00033-3

Moreno, A. I. (2004). Retrospective labelling in premise-conclusion metatext: An English-Spanish contrastive study of research articles on business and economics. *Journal of English for Academic Purposes*, 3, 321–339. http://dx.doi.org/10.1016/j.jeap.2004.07.005

Nesi, H., and Gardner, S. (2012). *Genres across the disciplines: Student writing in higher education*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1002/tesq.200

O'Dell, L., Goswami, D., and Herrington, A. (1983). The discourse-based interview: A procedure for exploring the tacit knowledge of writers in non-academic settings. In P. Mosenthal, L. Tamor and S. A. Walmsley (Eds), *Research on writing: Principles and methods*, 220–236. New York: Longman.

Parkinson, J. (forthcoming). Teaching writing for science and technology. In J. Flowerdew and T. Costley (Eds), *Discipline-specific writing: Theory into practice*. London: Routledge.

Pennycook, A. (1997). Vulgar pragmatism, critical pragmatism, and EAP. *English for Specific Purposes*, 16, 253–269. http://dx.doi.org/10.1016/S0889-4906(97)00019-7

Prior, P. (1998). *Writing/Disciplinarity: A sociohistoric account of literate activity in the academy*. Mahwah, NJ: Erlbaum.

Raimes, A. (1991). Out of the woods: Emerging traditions in the teaching of writing. *TESOL Quarterly*, 25 (3), 407–430. http://dx.doi.org/10.2307/3586978

Sanderson, T. (2008). Interaction, identity and culture in academic writing: The case of German, British and American academics in the humanities. In A. Ädel and R. Reppen (Eds), *Corpora and discourse: The challenges of different settings*, 57–92. Amsterdam: John Benjamins. http://dx.doi.org/scl.31.05san

Sharff, J., and Lessinger, J. (1994). The academic sweatshop: Changes in the capitalist infrastructure and the part-time academic. *Anthropology Today*, 10 (5), 12–15. http://dx.doi.org/10.1525/awr.1994.15.1.2

Simpson-Vlach, R., and Nick C. E. (2010). An academic formulas list: New methods in phraseology research. *Applied Linguistics*, 31 (4), 463–512. http://dx.doi.org/10.1093/applin/amp058

Smart, G. (2006). *Writing the economy: Activity, genre and technology in the world of banking*. London: Equinox Publishing. http://dx.doi.org/10.1177/0021943608328081

Spack, R. (1988). Initiating ESL students into the academic discourse community: How far should we go? *TESOL Quarterly*, 22 (1), 29–52. http://dx.doi.org/10.2307/3587060

Starfield, S. (2002). 'I`m a second-language English speaker': Negotiating writer identity and authority in sociology one. *Journal of Language Identity and Education*, 1 (2), 121–140. http://dx.doi.org/10.1207/S15327701JLIE0102_02

Suárez, L., and Moreno, A. I. (2008). The rhetorical structure of academic book reviews of literature: An English-Spanish cross-linguistic approach. In U. Connor, E. Nagelhout and W. Rozycki (Eds), *Contrastive rhetoric: Reaching to intercultural rhetoric*, 147–168. Amsterdam: John Benjamins. http://dx.doi.org/10.1075/pbns.169.10sua

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1016/0378-2166(92)90010-9

Swales, J. M. (2012). A text and its commentaries: Toward a reception history of 'genre in three traditions' (Hyon 1996). *Ibérica*, 24, 103–115. Retrieved from http://www.aelfe.org/documents/09_24_Swales.pdf

Swales, J. M., and Feak, C. B. (2000). *English in today's research world: A writing guide*. Ann Arbor, MI: University of Michigan Press. http://dx.doi.org/10.1016/S0889-4906(02)00025-X

Swales, J. M., and Feak, C. B. (2012). *Academic writing for graduate students: Essential tasks and skills* (3rd ed.). Ann Arbor, MI: University of Michigan Press.

Swales, J. M., and Feak, C. B. (2015). Tensions between the old and the new in EAP textbook revision: A tale of two projects. In N. Harwood (Ed.), *English language teaching textbooks: Content, consumption, production,* 299–319. London: Palgrave Macmillan. http://dx.doi.org/10.1007/978-1-137-27628-5_10

Tardy, C. M. (2012). Writing and language for specific purposes. In *The encyclopedia of applied linguistics.* Chichester: Wiley. http://dx.doi.org/10.1002/9781405198431

Tarone, E., Dwyer, S., Gillette, S., and Icke, V. (1981). On the use of the passive in two astrophysics journal papers. *The ESP Journal*, 1 (2), 123–140. http://dx.doi.org/10.1016/0272-2380(81)90004-4

Thompson, P. (2013). Thesis and dissertation writing. In B. Paltridge and S. Starfield (Eds), *Blackwell Handbook of English for Specific Purposes*, 283–300. Oxford: Wiley-Blackwell. http://dx.doi.org/10.1002/9781118339855.ch15

Trimble, L. P. (1985). *English for science and technology: A discourse approach*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1016/0889-4906(86)90011-6

Widdowson, H. G. (1983). *Learning purpose and language use*. Oxford: Oxford University Press.

Wilkins, D. A. (1976). *Notional syllabuses*. Oxford: Oxford University Press.