Register in English for Academic Purposes and English for Specific Purposes

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Susan Conrad, Professor of Applied Linguistics at Portland State University (USA), contributes this article on the applications of register research to English for Academic Purposes (EAP) and English for Specific Purposes (ESP). Her research focuses on topics including academic register variation, discipline-specific language, student and workplace writing, and grammar and writing pedagogy. Since the 1990s, her work has advocated for and exemplified the ways in which register-based descriptions can facilitate language teaching, including building awareness of register variation in learners and novice writers themselves. This focus is illustrated in her book *Real Grammar: A Corpus-Based Approach to English* (Conrad & Biber 2009, Pearson Longman), which takes many of the major register-based patterns of variation in English grammar (described in the *Longman Grammar of Spoken and Written English,* Biber et al. 1999) and translates them into practical grammar lessons for language learners, making explicit how grammar use is mediated by register. Her applied focus is also evident in her work as Principal Investigator for the Civil Engineering Writing Project <http://www.cewriting.org/>. The project, funded by the National Science Foundation, addresses the writing needs of Civil Engineering students through corpus-based register comparisons (of university student writing, practitioner workplace writing, and published academic writing), applying the results to the development and evaluation of pedagogical materials that improve students' preparation for writing in the workplace.

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1. How is register conceptualized in the field of EAP/ESP?

Within English for Academic Purposes (EAP) and English for Specific Purposes (ESP), register is often a confusing concept. It has three main conceptualizations,

all of which describe register as the linguistic features in a category of text, but the conceptualizations differ greatly in how they relate the linguistic features to their functions and the social context of the text. Adding to the confusion, other terms, especially 'genre,' are used by some scholars to include analyses that other scholars would consider register. And to make matters worse still, terms are sometimes used inconsistently, even within a single publication or by the same author. It is no wonder if ESP professionals find the concept of register bewildering!

In this section, I attempt to show the order that is behind the seemingly chaotic discussion of register in ESP. I provide an overview of each of the three main conceptualizations, highlight their similarities and differences, and exemplify some of the less common mentions of register. Throughout this and subsequent sections, I use the term ESP as a more general term that can include EAP as a branch, and I refer to EAP only when referring specifically to academic purposes.

The first conceptualization of register is associated with the development of ESP as a field; in fact, historical reviews usually identify the first stage of ESP, in the 1960s and 70s, as register analysis (e.g., Hirvela 2013; Tardy 2011; Woodrow 2017). Register is characterized as a sentence-based, surface structure phenomenon that is not tied to functions and that is of little value for understanding texts in their social contexts. Indeed, a typical study of the time, Barber's (1962) description of passages from three science textbooks covers frequencies and percentages of various clause types, grammatical structures, and word forms, but says nothing about the function of any of these features. The approach was criticized for the lack of connection to function and context, but also because it did not uncover any entirely new linguistic features in specialized varieties of English. As a well-known critique by Hutchinson and Waters (1987) put it:

> register analysis revealed that there was very little that was distinctive in the sentence grammar of Scientific English beyond a tendency to favour particular forms such as the present simple tense, the passive voice and nominal compounds. It did not, for example, reveal any forms that were not found in General English.
>
> (Hutchinson & Waters 1987: 9–10)

In the 1980s, linguistic analyses in ESP studies began to be linked to rhetorical functions. However, the connection between text types, the discourse communities that use them, and the purposes they serve was usually considered part of genre analysis, not register analysis (Tardy 2011). Genre was an emerging construct in the field of rhetoric and composition and was developing a more theoretical basis than register. For example, as the approach of Rhetorical Genre Studies developed, genre was defined as a form of social action (Miller 1984), with emphasis on the social and ideological context of the text type over its linguistic forms.

As conducted in ESP, genre analyses covered more global aspects of texts, such as the sequencing of rhetorical moves (Swales 1990), but they also included analysis of linguistic features. Swales (1990), for example, includes information about the distribution of verb tenses and forms of citations in his book called *Genre Analysis*, and Bhatia's (1993) procedure for conducting a genre analysis includes a step for analyzing lexico-grammatical features. By the end of the 20th century, genre analysis was described as superior to the earlier register analysis:

> It [genre analysis] is a development from, and improvement on, register analysis because it deals with discourse and not just text: that is to say, it seeks not simply to reveal what linguistic forms are manifested but how they realize, make real, the conceptual and rhetorical structures, modes of thought and action, which are established as conventional for certain discourse communities.
>
> (Widdowson 1998:9)

In some work in ESP, this characterization is still applied, so any analysis of linguistic features that is tied to context or function is considered part of genre analysis, not register analysis. However, the other conceptualizations of register would consider these linguistic analyses to be part of register, not genre, because they make different distinctions between genre and register.

The second way that register is currently conceptualized grew out of work in sociolinguistics, where specialist varieties of language were occasionally studied. For example, Ferguson (1983) analyzed Sports Announcer Talk, discussing syntactic structures and formulaic routines typical of it and tying them to their communicative functions in the specific setting (e.g., the purpose, speaker and audience roles, production circumstances, etc.). Ferguson argues for the importance of studying register variation specifically because it is important to understand how language variation is tied to the context of use. For current work in ESP, the sociolinguistics-based approach has become associated with studies that use corpus linguistics techniques, and especially with work following a tradition started by Biber (1986, 1988).

This conceptualization of register is most explicitly outlined in Biber and Conrad (2009; in press). There, register analysis is described as a perspective that identifies pervasive linguistic characteristics of a category of texts – i.e., features that occur throughout texts. Register analysis is described as having three components: the situation of use, including all aspects of the context of production or reception; the linguistic features; and the functional associations between the situational characteristics and the linguistic features. With occasional exceptions, registers are not expected to have register markers (forms distinctive to that register, such as "one and one's the count" being distinctive of a baseball broadcast, Ferguson 1983:166). Therefore, relative measures are necessary,

so register analyses are quantitative and comparative. To take a simple example, numerous studies have found academic prose to have a higher frequency of nouns and dense noun phrase structures with attributive adjectives, nouns as premodifiers, and prepositional phrases, as compared to a face-to-face, interactive register such as conversation, which has a higher frequency of pronouns and clausal structures (e.g., Biber, Johansson, Leech, Conrad & Finegan 1999; Biber, Gray, & Poonpon 2011). This is not to say that academic prose has no pronouns and conversation has no noun phrases; all the features occur in both registers. However, the more common noun phrase features of academic prose facilitate the expression of information that is highly specific, and their dense structure is possible because written prose allows time for planning and revising. In conversation, on the other hand, pronouns are common as speakers refer to themselves and others, and the unplanned nature of spontaneous talk corresponds to an 'add-on' clausal structure (Biber et al. 1999:1068). Overall, then, this approach differs greatly from the historical ESP conceptualization of register in two ways: it connects linguistic features to functions and contexts, and it is not disappointed by a lack of entirely distinct grammars in ESP varieties but instead emphasizes relative frequencies.

Biber and Conrad (2009, in press) explicitly distinguish register analysis from genre analysis. They describe genre analysis as focusing on conventional structures used to construct a complete text, such as rhetorical move sequences in research article introductions (Swales 1990) or once-occurring features such as the conventional openings and closings of letters with *Dear* and *Sincerely*. However, as they note, earlier studies were not consistent in how they used the terms 'genre' and 'register'. Biber (1988), for instance, used the term 'genre' in describing pervasive linguistic features, while Biber (1995), following the same techniques as in 1988, used the term 'register'. Biber and Conrad's (2009) discussion was a direct attempt to make these terms more explicit for the field of register analysis, and it has had some impact in ESP, with some studies referencing it to introduce their analyses (e.g., Staples 2016) or glossaries having definitions of 'register' similar to it (Charles & Pecorari 2016). However, for some researchers, any text analysis that is tied to functions and social context remains a genre study; Tardy (2011:146) describes "corpus-based genre research" that reveals "fascinating textual and epistemological patterns" – analyses that others are likely to call register analyses.

The third way that register has been conceptualized in ESP is within Systemic Functional Linguistics (SFL). This approach is described fully elsewhere in this volume (Matthiessen 2019), so here and throughout this article I provide only short overviews. Register is situated within the extensive theoretical framework of SFL that describes language as a social semiotic (Halliday & Matthiessen 2014; Dreyfus, Humphrey, Mahboob, & Martin 2016). The theory describes

three Metafunctions of language – Ideational, Interpersonal, and Textual. Situating language choices within their cultural contexts, it defines genres as social processes in which participants within a culture use language in predictable sequential structures to fulfill particular communicative purposes. The genres are realized by their typical lexico-grammatical choices, and these choices are the register. The choices are analyzed as resulting from contextual variables called Field, Tenor and Mode, which correspond roughly to the topic and ideational meaning, the participants and their relationships (interpersonal meaning), and the textual organization (Gardner 2012).

Although the terminology is very different, the SFL and corpus-based conceptualizations of register share many characteristics, including analyzing register as the relative frequency of linguistic features and tying them to social context. Hunston (2013: 619) characterizes the approaches as parallel but compatible, with the corpus-based conceptualization having a "more commonsense notion of the 'situation'" and moving more from observation to theory, while the SFL perspective theorizes the situational context and moves from theory to observation. Some differences in typical methodologies are outlined in the next section.

Although the three conceptualizations are apparent in work today, it seems likely that most ESP professionals have only a vague concept of register, if any. Numerous publications use the term 'register' inconsistently, mix it with other terms without explanation, or do not use the term at all. Almost 20 years ago, Lee (2001) highlighted problems of what he called the terminological 'jungle' that included the term 'register', but inconsistencies have continued. For example, Friginal and Mustafa (2017) discuss register in the introduction to a corpus-based, cross-linguistic study of research articles, but they go on to discuss their work as a genre comparison and do not refer to register in the results or discussion. Elsewhere, the term 'register' is used for everything from "a playful, teasing register" (Baffy 2017) to inappropriate word choices (Fouché, van Dyk, & Butler 2017) and the registers of "everyday digital literacy, specialized digital literacy, and reflexive digital literacy" (Knuttson, Blåsjö, Hållsten, & Karlström 2012). A recent quantitative linguistic profile of maritime communication (John, Brooks, & Schriever 2017) – which is clearly a study of pervasive linguistic features tied to a specific situational setting – does not refer to itself as a register analysis. Similarly, the index of a recent handbook of language for specific purposes (Gollin-Kies, Hall, & Moore 2015) does not include the term 'register' at all.

In the rest of this article, I use the concept of register in a way consistent with Biber and Conrad (2009). I include as register analysis any studies, or parts of studies, that analyze linguistic features and tie them to their functions in their situational contexts, regardless of the term the researchers themselves used. I do not

include the more global organizational features included in genre analysis, such as rhetorical moves, except as they are connected to studies of linguistic features.

2.   How does register relate to the research goals within EAP/ESP?

The field of ESP seeks to understand language varieties, their uses, and their users in academic and workplace contexts. Although there are research foci which cannot be addressed through text analysis – including, for example, individuals' experiences, the design of needs analyses, and the implementation of effective curricula – varieties of English are a central concern. The largest section of *The Handbook of English for Specific Purposes (*Paltridge & Starfield 2013), for example, is dominated by varieties of English such as English for Academic Purposes, English for Science and Technology, Business English, English for Nursing, and Legal English. Register analysis, then, has a central role to play in the field of ESP by investigating the situational characteristics that correspond to linguistic variation and the differences in the linguistic features of the varieties.

In addition, the application of research to teaching and learning is an important part of the ESP field. The journal *English for Specific Purposes,* for example, describes itself as publishing "topics relevant to the **teaching** and **learning** of discourse for specific communities: academic, occupational, or otherwise specialized" (bold in original, "English for Specific Purposes," 2018). Traditionally, instruction focused only on students for whom English was not a native language, but increasingly, authors have argued the usefulness of providing explicit language instruction to all students as they learn to participate in academia, a new discipline, or a new profession (Northcott 2013; Wingate 2015).

Overall, register analyses in ESP have shown that variation exists at all levels, both situationally and linguistically. In the following discussion, I exemplify the most commonly studied situational characteristics, highlighting some of the linguistic features studied within them; however, an overview of this length cannot begin to do justice to the diversity of studies that exist. For all the situational characteristics, linguistic features are studied at all levels – individual features (lexical, lexico-grammatical, or grammatical); groups of features that realize a discourse function or system; and the co-occurrence patterns of numerous linguistic features (see Conrad 2015). Furthermore, for illustrative purposes, I have chosen to highlight only a small part of many studies when, in fact, most include multiple comparisons. For example, studies covered as investigating differences within disciplines usually also investigate differences between disciplines (e.g., Gray 2015; McGrath 2016) and studies of differences between learners and professionals often address differences between disciplines, too (e.g., Cortes 2004).

In ESP, studies often examine how the linguistic features in a broadly defined category, such as academic prose or business meetings, differ from those in other general, more widely used registers, such as conversation. This work shows that – although there is internal variability – it is possible to identify patterns of variation on this general level. Studies of words often target EAP learner needs. Coxhead's (2000) study that produced the Academic Word List (AWL) has had a large impact on vocabulary materials for EAP. Gardner and Davies (2014) present another list with the same goals, using a larger, more diverse corpus. Many grammatical features of academic prose are described in Biber et al.'s (1999) *Longman Grammar of Spoken and Written English*, which includes over 300 studies of different grammar features, most of them comparing academic prose with conversation, fiction, and newspapers. They include simple frequency counts, such as lexical word classes, and more complex grammatical and lexico-grammatical features, such as the variables that condition choices between the passive and active voice. Groups of grammatical features have also been studied. Biber et al. (2011) and Biber and Gray (2010) presented some of the most provocative of these studies for EAP practitioners. The studies investigated academic writing and speech with respect to their use of elaboration with dependent clauses (e.g., relative clauses, complement clauses) versus compressed modification with phrases (e.g., prepositional phrases, appositive noun phrases). They find that academic prose uses significantly more phrasal modifiers while speech has significantly more clausal elaboration. This finding leads to the important question of whether clausal elaboration, the usual measure of increased writing proficiency in EAP, is the most accurate measure to use.

Outside of academia, general situational categories have also been employed in register analyses. For example, Staples (2016) characterizes medical interactions versus conversations with respect to features of involvement, narration, and stance. Handford (2010) compares the language of business meetings to general spoken discourse.

Compared to the most general registers, an even larger number of studies have examined slightly more specific registers. Giving a relatively rare perspective on numerous university registers simultaneously, Biber (2006) compares 10 spoken and written registers in universities (e.g., classroom teaching, study groups, textbooks, institutional writing, service encounters) with respect to many lexico-grammatical characteristics. More common than such extensive variation in mode, purpose, and participants, however, is to analyze disciplines. Numerous lexical studies analyze vocabulary for specific disciplines, for example, engineering (Mudraya 2006), business (Nelson 2006), and theology lectures (Lessard-Clouston 2010). Multiple-word sequences have been studied across disciplines as well. For example, Cortes (2004) compares lexical bundles in biology and history

journal articles, finding some major differences in structures and functions; for instance, biology has greater variety in its structural categories and it uses more stance bundles that express a lack of certainty, corresponding to the need to hedge claims in science. Employing an SFL perspective within one discipline, Halliday's (1993) description of science writing is well-known for its analysis that showed that meaning in science tends to be expressed in dense nominal structures rather than clauses. Comparing across disciplines, Hyland's (2005) study of metadiscourse stands as an influential example in register analysis. Using 240 research articles from eight disciplines, he investigated how the articles express stance and interact with readers. He also conducted interviews with experts in the disciplines to understand the disciplines as cultures shaped by their epistemic and social beliefs. The quantitative findings are interpreted relative to disciplinary practices; for example, the higher frequency of interactional markers in the humanities and social sciences over hard sciences is tied to their more interpretative nature, less control over variables, and arguments that "recast knowledge as sympathetic understanding" (Hyland 2005:187). From the SFL perspective, Gardner (2012) compares students' experimental reports from three disciplines, highlighting differences in Field, Tenor, and Mode, as discussed more fully in the next section.

Attention has also been turning to intra-disciplinary variation. Using several different studies of lexico-grammatical characteristics, Gray's (2015) book demonstrates that, as its title says, discipline "tells only part of the story" of linguistic variation in research articles. She shows that cross-cutting factors such as theoretical versus empirical orientation or qualitative versus quantitative methods can be more important than the disciplinary category for understanding some patterns of variation. McGrath (2016) finds intra-disciplinary variation in authors' self-mentions in history and anthropology, both for the frequency of self-mentions and in the roles that authors adopted through their self-mentions. Within the interdisciplinary field of environmental science, Thompson, Hunston, Murakami, and Vajn (2017:178) describe constellations of language use that correspond to theory use, qualitative and quantitative analysis, and different foci and 'attitudes.'

Most workplace register analyses emphasize aspects of the workplace setting, not comparisons between different fields. For example, Koester (2006: Chapter 5) shows that the purpose of the talk (e.g., decision-making versus procedural) corresponds to variation in the use of modals, vague language, hedges, intensifiers, and idioms. She notes that purpose is "a significant factor influencing linguistic choices […], in addition to other factors, such as social distance and power, which have generally been given more prominence in studies of institutional discourse" (Koester 2006:160). Workplace studies have included intonation as a variable in intra-register variation, too. For instance, Cheng, Greaves, and Warren (2008) found a greater use of rising versus falling-rising

intonation by speakers in a dominant role in registers where asymmetrical relationships exist, such as supervisors in office talk.

Another branch of register studies in ESP explicitly brings together register and genre approaches. These studies investigate the linguistic variation in rhetorical moves (as defined in Swales 1990) or vocabulary-based discourse units (Biber, Connor, & Upton 2007). For example, Kanoksilapatham (2007) examined moves in biochemistry research articles, showing that different move types are associated with different grammatical features, reflecting their different communicative functions. In literature reviews, for instance, the move that identifies the "gap" in the research typically has a relatively high frequency of long words, nouns and attributive adjectives. On the other hand, the move describing materials in methods sections is characterized by shorter words, numerals and technical vocabulary. Similarly, Cortes (2013) found that certain lexical bundles in research articles are used exclusively within (or to trigger) one move or step, while others occur in several.

Consistent with the applied nature of the field, another major area of work has been concerned with language production by students or novices. Some work, such as Nesi and Gardner's (2012) description of student writing at British universities, documents the types of assignments students write and linguistic features within them. Many studies, however, are focused on comparing learners' texts to more proficient speakers' or writers' texts in order to identify student weaknesses and their needs for instruction. Some work has used word lists; Csomay and Prades (2018), for example, compare the use of Academic Vocabulary List words in two levels of student writing. Others have focused on lexical bundles. Chen and Baker (2010) find little overlap in lexical bundle use by native speaker expert writing, native speaker student writing and non-native speaker student writing. Learners' grammar has been investigated as well, with studies covering a variety of structures. Particularly noteworthy for the way it extends a previous descriptive study is Parkinson and Musgraves's (2014) analysis of noun modification in the writing of two levels of EAP students. The purpose of the analysis is to empirically investigate a developmental sequence for noun modification hypothesized by Biber et al. (2011) in their comparison of academic writing and conversation. Parkinson and Musgrave (2014) find that, as hypothesized, phrasal complexity is greater for the more advanced students, and the frequencies of their noun modifiers are closer to frequencies for published academic prose than the lower level students are.

In recent years, ESP register studies have also become more concerned with cross-linguistic comparisons and with descriptions of multilingual writers' language use, tying linguistic variation to cultural contexts as well as more specific situational characteristics. For example, Lee and Casal (2014) compare the use of

metadiscourse in engineering theses in English and Spanish, discussing the linguistic differences and similarities in light of disciplinary practices and cultural preferences. Mauranen (2011) describes various metadiscourse features and phraseology in English as a Lingua Franca in academic contexts. Other studies combine register analysis with other techniques to understand texts and individuals' experiences. Lillis and Curry (2006) examine changes in multilingual writers' drafts of articles that they hope to publish as they get feedback from others (disciplinary colleagues, English language specialists, editors). Combined with interviews of the writers, the study provides insight into lexico-grammatical revisions related to functions such as hedging and stating claims and also into the cultural contexts and individual experiences of multilingual professionals.

Another branch of ESP register analysis has investigated the historical development of registers. Atkinson (1992, 1996), for example, describes changes in linguistic features and rhetorical considerations over centuries in medical and scientific prose, placing register features in their sociohistorical context, while Banks (2008) uses the SFL framework to describe the development of scientific writing from Chaucer to 1980, focusing on passives, first person pronouns, nominalizations, and thematic structure. Biber and Finegan (1989, 2001) reveal how specialized expository written registers have evolved oppositely from popular registers, with the written expository registers changing to extremely dense use of elaborated nominal structures and passive constructions over the centuries. Such studies tend to draw more attention from descriptive linguists than from ESP professionals, likely because their pedagogical applications are less obvious.

Each register study within ESP provides some useful information about linguistic variation and its corresponding characteristics in a specialized context. Taken together, however, the studies' holistic contribution is far greater than an understanding of individual varieties. The studies demonstrate an overarching characteristic of human use of language: the pervasiveness of linguistic variation based on communicative purpose and situations of use. This perspective was widely neglected in traditional linguistic studies (Biber & Conrad 2009: Section 9.4), but its importance is obvious in the many levels of situational and linguistic variables within ESP register studies. Understanding human language requires understanding how we use and master register variation.

3.   What are the major methodological approaches that are used to analyze or account for register in EAP/ESP?

Two major approaches dominate register analysis in ESP today, corresponding to the corpus linguistics and SFL conceptualizations of register covered in Section 1.

In addition, a few studies incorporate register analyses with other techniques to address broader research goals.

Corpus-based analyses have become increasingly common and valued in recent years for all areas within ESP. Discussing English for business communication, for example, Bhatia and Bremner (2012: 427) note:

> The analysis of large quantities of authentic textual data, both written and spoken, has become one of the most powerful tools for investigating aspects of business communication. It is a method that has been successfully used to study different forms of typical lexico-grammatical as well as rhetorical features of business genres, including the specific discourse strategies often exploited by business specialists to achieve their general business goals and objectives.

Corpus-based methods are used in the majority of the studies mentioned in Section 2, with the exception of those identified as SFL studies. In addition, some small studies, especially with learner texts – e.g., Parkinson and Musgrave (2014) – use quantitative techniques similar to corpus-based studies but count features by hand.

Generally, corpus-based and other quantitative studies seek to understand the distribution and use of one or a set of features in two or more registers, which may vary along any situational characteristic – purpose, audience, mode, participants, etc. They typically start with a quantitative analysis of the features being investigated, followed by interpretation of the quantitative patterns. Far from the historical view of ESP register analysis, contemporary studies emphasize describing and explaining patterns of use in context. Biber, Conrad, and Cortes (2004: 376) make this point explicitly as they introduce a study of lexical bundles in university teaching and textbooks, stating, "we do not regard frequency data as explanatory. In fact, we would argue for the opposite: frequency data identifies patterns that must be explained."

For the quantitative analyses in corpus-based studies, three approaches dominate. A few studies use a perspective more associated with variationist sociolinguistics; the goal is to describe the variants of a linguistic feature and the characteristics associated with use of those variants (Biber & Conrad 2009: 265). To take a simple example, Biber et al. (1999: 839) report that, compared to conversation or fiction, non-finite circumstance adverbial clauses in academic writing have a higher percentage of subordinators (25% compared to about 10% for conversation and fiction – e.g., using *in order to explain* rather than *to explain*). Such an analysis tells us something about the register influence on the variants, but it is generally more interesting to grammarians than ESP professionals. More typically, studies calculate the frequency of features, using the 'text linguistic' perspective (Biber 2012). Features are counted per text, normalized to a standard such as

per 1,000 words. Measures of central tendency and dispersion are calculated for the features based on the counts in the texts that represent the register. Inferential statistics are used to test the significance and strength of differences between registers. Thus, for example, Biber et al. (2011) show that there are statistically higher frequencies of most finite dependent clause types in conversation than in academic writing and statistically higher frequencies of most phrasal modification types in academic writing.

The third approach to the quantitative analysis, often used when studies are conducted with concordancers, is to count features collectively for the registers. For example, Charle's (2006) study includes the total frequency of reporting clauses for one group of theses in politics and another in materials science. This approach allows variants to be further broken down (e.g., how many reporting clauses in each discipline have human subjects versus non-human subjects), but it is impossible to use inferential statistics to test the significance of differences or to know how much variability exists across the texts in each discipline.

Within corpus-based register analysis, a particular methodology is notable. Multi-dimensional (MD) analysis was developed by Biber (1986, 1988) specifically for analyzing register variation. It uses factor analysis to investigate patterns in numerous co-occurring linguistic features, interpreting those patterns as major continua along which registers vary. It is best known within EAP. Biber's initial study analyzed dimensions of variation for 23 spoken and written registers of English including academic prose (Biber 1988). Contemporary studies have used MD analysis for a variety of interests in EAP, including variation in research articles (Gray 2015), disciplinary differences in student writing (Hardy & Römer 2013), assessment of second language writing (Friginal, Li, & Weigle 2014), students' perceptions of textbook readability (Egbert 2014), and variation in abstracts by Chinese and English L1 writers (Cao & Xiao 2013). In most MD analysis studies, texts are identified a priori (e.g., divided into disciplines, proficiency level, or first language group), but it is also applied in studies that identify groups of texts based on the co-occurring features, as in Thompson, et al.'s (2017) study of interdisciplinary environmental science articles.

For any corpus-based study, interpretations of the quantitative patterns rely on examining the linguistic features in their discourse contexts and tying their functions to the situational characteristics of the register. For ESP studies, this often requires specialist knowledge of the practices and values of a field. Several studies include interviews of specialists to aid in corpus design and gain a general understanding of disciplines or assignments (e.g., Gray 2015; Hyland 2005; Nesi & Gardner 2012). Occasionally, interviews are used to assist in the interpretation of quantitative findings or to gain a more general understanding of challenges faced

by students (Conrad 2017, 2018; Pessoa, Miller, & Kaufer 2014), as exemplified in the next section.

Methods for register analyses using SFL differ greatly from the corpus-based approach. Studies note that full texts are analyzed, but typically, short extracts are presented as examples (e.g., Gardner 2012; Hunston 2013). The extracts are described with respect to the variables of Field, Tenor, and Mode, as discussed above, demonstrating how the features contribute to meaning and "construe their contexts of situation" (Gardner 2012: 59). These variables can describe a single text or be used for comparisons. An illustrative example is Gardner's (2012) analysis of student experimental reports from linguistics, psychology, and chemistry. Gardner uses different types of highlighting to foreground words' contributions to the particular types of meaning, consistent with SFL theory (i.e., Field related to ideational meaning, Tenor related to interpersonal meaning, and Mode related to textual meaning). For example, in the psychology text, Tenor includes the use of first person pronouns and modals, which the other texts do not use. Evaluation and judgment are part of Tenor, too, and the psychology text uses affect (*interesting*), the linguistics text uses judgment (*deviant*), and the chemistry text uses measurement (*four sets of*). Gardner (2012: 60) sums up, "these features combine to construe A [the psychology text] as affectively involved, B [the linguistics text] as judgmentally remote, and C [the chemistry text] as technically absent." Counts of some linguistic features, such as finite and non-finite verbs, lexical density, and type-token ratios are included for the example extracts, but not for the full texts. The impact, overall, is very different from a corpus-based register analysis, providing a more intensive analysis of features rather than larger quantified patterns as in most corpus-based studies.

Register analyses can be combined with other methods for ESP research, too. For example, Walsh, Morton and O'Keeffe (2011) combine corpus-based register analysis techniques with conversation analysis as they describe spoken interactions in small group seminars and tutorials. They study patterns in words and discourse markers using corpus techniques; then, they use conversation analysis techniques to investigate the specific contexts where the frequent features are used. Their findings help to clarify internal variation, showing words and expressions that commonly differentiate among different types of talk such as empathic talk, procedural talk, and didactic talk. I return to the topic of combining register analyses and other research techniques in Section 5.

4.   What does a typical register study look like in EAP/ESP?

In this section, I describe a study that provides a concrete example of ways that register analysis contributes to ESP. Given the diversity that exists in ESP register analyses, it is difficult to pick a 'typical' study. Since I know it best, I have chosen an example from my own work, illustrating a corpus-based approach. As I describe the study, I point out some major similarities and differences with other common practices for register analyses in ESP.

The study concerns registers in civil engineering. It is part a larger project, The Civil Engineering Writing Project, whose goal is to better prepare undergraduate students in civil engineering programs in the United States for writing in the profession after they graduate (Conrad, Kitch, Pfeiffer, Smith, & Tocco 2015). English for science and technology has received a great deal of attention in ESP (Parkinson 2013). However, this study is somewhat unusual in emphasizing students' preparation for writing in engineering workplaces. Although there are notable exceptions, such as Hong Kong Polytechnic University's profession-specific projects (Research Centre for Professional Communication in English 2017), the majority of register studies concerned with science and technology focus on academic contexts. Most studies also target needs of second language students, not all students, as my example study does.

Typical of ESP register analyses, this example study is motivated by needs in education. Surveys of employers and engineering program graduates consistently emphasize the need for better communication skills (Reave 2004; Sageev & Romanowski 2001). Within civil engineering, the stakes for professional writing are extremely high. Communication has been identified as the single most important factor in infrastructure project success (Thomas, Tucker, & Kelly 1998), and structural failures, causing injuries and even deaths, have been traced to ineffective writing (Banset & Parsons 1989; Parfitt & Parfitt 2007).

Numerous analyses have been conducted within the Civil Engineering Writing Project. This illustration focuses on an analysis of the use of passives and other features of impersonal style, situating the civil engineering registers along a dimension of variation from Biber's (1988) analysis of 23 spoken and written English registers.

This analysis is particularly useful for demonstrating how a register perspective can help resolve conflicting claims in a specific field. Most of the teaching of writing for engineering occurs within technical writing programs, where passive voice use is contentiously debated. On the one hand, passives are claimed to be useful because they reflect the worthy goals of cooperation and falsifiability in science (Ding 2002), allow discourse to remain focused on objects (Wolfe 2009), and help writers to avoid sounding "obnoxiously egocentric" (Spector 1994: 47). On the

other hand, active voice is characterized as more "vigorous, direct, and efficient" and as "admitting reality" because it includes human agents (Beer & McMurrey 2014:57). Passives are said to be "the perfect vehicle for documents that record material of no intended consequence to anyone at all" (Gwiasda 1984:150). Based on some surveys and interviews, engineers in workplaces are said to prefer passive over active voice because they want to sound impersonal and objective (Couture 1992; Sales 2006). However, few studies do more than offer anecdotal evidence from real texts. Systematic comparisons are not made with other registers of English to show the extent to which impersonal style features characterize engineering writing. Advice for students typically does not differentiate academic and workplace contexts either.

To understand civil engineers' use of passives and impersonal style features, and to identify students' weaknesses for writing in the workplace after they graduate, the study described here investigated the following research questions:

– To what extent do journal articles, practitioner reports, and student reports in civil engineering differ in their use of features of impersonal style, including the passive voice, both in comparison to each other and from the perspective of a wide range of English discourse?
– In what ways are students' use of the impersonal style features likely to be problematic if transferred to workplace practice?

The methodology and results are briefly described below. More details about the analysis can be found in Conrad (2018).

4.1   Methodology

This study analyzed 60 practitioner reports, 60 student reports, and 50 journal articles (Table 1). Compared to many corpus-based register studies, the corpus is small, but small corpora are common in ESP studies that are highly specialized and include student papers. For example, Charles's (2006) study of reporting clauses used eight theses for each discipline, totaling approximately 190,00 words in politics and 300,000 in materials science.

Table 1. Corpus of civil engineering registers in the analysis

	Practitioner reports	Student reports	Journal research articles
Texts	60	60	50
Words	201,700	207,700	270,900
Sources	10 firms	9 senior-year courses	10 journals

For this study, the practitioner and student reports were selected from the larger corpus for the project for as much consistency as possible in their situational characteristics. Most importantly, all reports were written to specific clients for specific projects, and the student task requirements mimicked the practitioner context as closely as possible (for example, meeting with clients). The reports from the two groups differed in that I asked practitioners to contribute 'successful' workplace documents in order to include a standard of acceptability while also capturing some variability, but I solicited all student papers because I wanted to investigate the range of needs in student writing. In contrast, corpora of student writing designed for general use tend to include only papers that received high grades (Nesi & Gardner 2012; Römer & O'Donnell 2011).

The research articles were published in 10 well-known journals specific to the branches of civil engineering represented in the reports. The articles are empirical studies; typical of journal research articles, they are concerned with generalizable concepts and models, not with solving a specific problem for a specific client.

The linguistic analysis used multi-dimensional (MD) analysis. For MD analysis studies, two approaches are possible. One is to investigate the dimensions of variation within the domain being studied. That, for example, is the approach used by Egbert (2015) to describe dimensions of variation in biology and history research articles, textbooks, and popular academic books. This perspective is useful for understanding linguistic variation and associated functional correlates for the registers. However, such an analysis does not compare the registers under investigation to other registers that students might be more familiar with. The alternative approach is to investigate new registers along dimensions found in a previous analysis. In the study described here, I used the findings of the analysis of 23 spoken and written English registers by Biber (1988). A limitation is that the MD analysis of English was conducted almost 30 years ago and did not include some registers that are now very familiar to students, such as blogs and text messages; however, it currently is the most feasible way to compare new registers to a wide range of English discourse.

In Biber's (1988) study, one group of co-occurring features was dominated by passive structures of various types (Table 2). The dimension was characterized as 'Abstract Style' or 'Impersonal Style' (Conrad & Biber 2001: 37–39). Texts with a high score on the dimension (i.e., frequent use of the features) typically cover technical information, and if agents are mentioned, they are typically inanimate and incidental to the main purpose of the text. The dimension also has a high frequency of certain connecting words – linking adverbials, such as *however* and *therefore*, and subordinators, such as *while* and *since*. These connectors are used to overtly mark the logical relationships in the often complicated, technical content of the texts. Given the features and their typical functions, this dimension

works well for the purpose of the present study. My example is unusual, however, in describing just one dimension.

Table 2. Features in the Impersonal Style dimension and factor loadings (based on Biber 1988)

Language feature	Example	Factor loading
linking adverbials	*however, in conclusion therefore*	.48
passive verbs, agentless	The culvert *was installed* in 1955.	.43
past participial clauses	*Based on the groundwater measurements*, the horizontal groundwater gradient was calculated as…	.42
passive verbs with *by* phrases	This model *was developed by* the Federal Highway Administration.	.41
past participial noun postmodifiers	The activities *outlined in this report* will be…	.40
adverbial subordinators with multiple functions	*since, such that, whereas, while*	.39

To conduct the multi-dimensional analysis, I used the typical procedures described in Conrad and Biber (2001). The texts were grammatically tagged with the tagger developed by Biber. The tags were checked for accuracy and corrected with an interactive tag-checking program. Following the text linguistic approach described in Section 3, linguistic features were counted in each text at a normed rate per 1,000 words. The counts were standardized to the findings of Biber's (1988) analysis so that comparisons could be made with a range of English discourse. The standardized counts were used to determine the score for each text on the dimension and then the mean score for each of the three registers – journal articles, practitioner reports, and student reports. The mean scores of the registers were analyzed for significant differences with analysis of variance and a post-hoc Scheffe test. They were compared descriptively to registers from the 1988 study.

Typical of corpus-based register studies, after the quantitative analysis, I reviewed features in their discourse contexts to see how they functioned in the texts, connecting their functions to the situational characteristics of the registers (topics, purposes, audience, writers' level of expertise, etc.). I also considered linguistic principles, such as the connection between the use of the passive voice and information structure (the placement of known information before new information; see Biber et al. 1999: Section 11.3). I also used interviews to help with interpretation of the findings. I conducted interviews with 16 practitioners from 13 different civil engineering workplaces, 22 students, and eight faculty. In addition to general information about writers' experiences and the values and practices

involved in civil engineering, I used discourse-based sections of the interviews to assist in interpreting the linguistic findings. I showed participants text samples that exemplified typical linguistic patterns and asked about the samples' effectiveness and impacts and about the consequences of certain rewordings. Practitioners were also asked explicitly for evaluation of student writing features in order to identify the most serious problems for engineering practice. Most interviews were audio-recorded and transcribed, but some were documented with notes (if participants chose not to be recorded, noise made recording impractical, or participants were clarifying an answer in a follow-up phone call).

4.2   Findings

This section covers three aspects of the findings that highlight the contribution of a register perspective. The first aspect concerns the quantitative analysis, which contributes perspectives on both similarities and differences among the registers. Figure 1 is a traditional display of a dimension in MD analysis, where 0 represents the mean for the 23 registers of the Biber (1988) study. It shows that, as commonly found for engineering writing, the civil engineering registers do have frequent use of passives and other features of impersonal style when compared to other registers of English, especially fiction, popular non-fiction or conversation. However, the difference between the two types of professional texts is striking, with practitioner reports using fewer features of impersonal style. The student reports – written for contexts that mimic practitioner reports situationally – are linguistically more similar to the journal articles. In fact, the ANOVA found a statistically significant difference among the three engineering registers with almost a fifth of the variation in the registers explained by the impersonal style features: $F(2,167) = 19.89$, $p < .0001$, $\eta^2 = .19$ (Table 3). The post-hoc Scheffe pairwise comparisons found a statistically significant difference between the practitioner reports and student reports, and between the practitioner reports and journal articles, but not between the student reports and journal articles. The ability to see these multiple relationships among the registers, and test their significance, would be impossible without the systematic register analysis methods.

Examining the use of the features in context provides the second important contribution of this perspective, demonstrating the impact of the different quantitative patterns in the discourse. Text Sample 1, from a study about detecting damage to foundations due to seismic activity, illustrates a typical journal article. Passive voice dominates the methods description, and no human agents are mentioned. Passives are also common in reduced relatives that create condensed noun modifiers (e.g. *plate used in this study, fibers reinforced with*…). They also occur in discussion of the analyses, where they allow concepts and processes (*the accuracy*
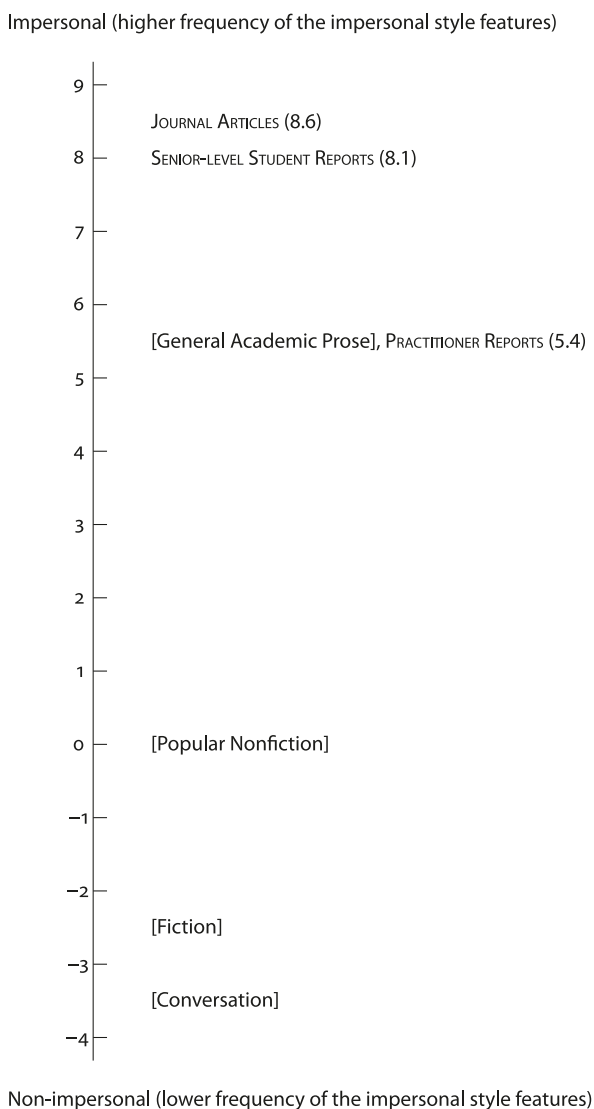
Impersonal (higher frequency of the impersonal style features)

```
9 ─
            JOURNAL ARTICLES (8.6)
8 ─         SENIOR-LEVEL STUDENT REPORTS (8.1)

7 ─

6 ─
            [General Academic Prose], PRACTITIONER REPORTS (5.4)
5 ─

4 ─

3 ─

2 ─

1 ─

0 ─         [Popular Nonfiction]

−1 ─

−2 ─
            [Fiction]
−3 ─
            [Conversation]
−4 ─
```

Non-impersonal (lower frequency of the impersonal style features)

Figure 1. Mean scores for three civil engineering registers on the Impersonal Style dimension. *Note:* General academic prose, popular nonfiction, fiction, and conversation are from Biber (1988) for comparison

of the method, care) to be the grammatical subjects of sentences and thus focus readers on them rather than specifying agents. Finally, there are numerous subordinators and connecting words that mark the building of the argument and contrasting points (*while, since, however*).

Text Sample 1. Civil Engineering Journal Article (impersonal style features in italics)

[Methods description] As with the aluminum specimen, the same test protocol *was also conducted* on a pultruded composite plate. The unidirectional carbon fiber reinforced polymer (CFRP) composite plate *used* in this study consisted of AS4D industrial carbon fibers *reinforced* with a DOW vinyl ester resin […] The plate *was* again *suspended* vertically by surgical tubing at each of the four corners, and the SLV *was placed* at the same location as before, with the aluminum specimen.

[Discussion of the use of the model] From the results, it *was* also *observed* that multiple modes may be necessary to accurately identify the damage locations, *since* such areas may coincide with nodal points or lines. *While* this is relatively easy from a detection standpoint, quantifying the severity of damage may require more robust damage indices than the SED values, *since* different modes may detect different damage levels. The accuracy of the method may also *be affected* by factors such as […] *However*, care in curve smoothing must be taken not to lose any damage information *while* performing these complex signal-processing techniques. (Chen, Boyajian & Inyang 2011)

The practitioner reports are illustrated by Text Sample 2, which also discusses a foundation design in an area with seismic activity. As in the articles, passives make it possible for the objects and procedures which are the topic of interest to be the grammatical subjects of sentences (*the borings, the drillings)*. Many passives also modify nouns as reduced relative clauses (*drill operated by…*). However, the practitioner reports contain some mentions of human agents for actions, observations, and judgments (*we drilled, we anticipate* in Text Sample 2). Complex sentences with subordinators are rare, and there are fewer linking adverbials. Even when discussing contrasts or conclusions that could be marked with *although*, ideas tend to be in independent sentences. Connections are made with previous ideas through the noun used as the subject of the sentence – e.g., *The results of the analysis indicate* rather than the linking adverbial *therefore*.

Text Sample 2. Civil Engineering Practitioner Report (impersonal style features in italics)

[Methods description] We drilled six exploratory borings on the dam between October 31 and November 4, 2017. The borings *were designated* BH-1A through BH-6A to distinguish them from the bridge borings. The

boring locations *are shown* on Figure 2A. The drilling *was completed* using a CME-55 truck-mounted drill *operated* by [drilling company name].

[Discussion of the design options] The factors of safety for the buttress option satisfy the typical factors of safety for most of these design scenarios. The exception is for the 84th percentile ground motions at Cross-Section F-F'. For this preliminary analysis, we did not account for a key trench and benching. We anticipate a factor of safety of 1.1 *can be attained* at this location with adjustment to the buttress configuration. The results of the analysis indicate the buttress option is feasible.

In the student reports, illustrated in Text Sample 3, features of impersonal style are used in ways that are consistent with the journal articles, not the practitioner reports whose situational context they mimic. Methods are almost exclusively in passive voice. In many student papers, it is impossible to know whether the writers themselves made observations and performed actions or someone else did. There are differences from both professional registers, too, with inappropriate verb choices, such as *was thought*, which rarely counts as evidence for engineering. Text Sample 3 also illustrates the typical high frequency of subordinators and linking adverbials in student reports. Many occurred with confusing content, as in this example where information alternates between the preferred option and the current conditions, and the importance of the ultimate conclusion is reduced through its placement in a concessive clause (*while…*).

Text Sample 3. Civil Engineering Student Report (impersonal style features in italics)

[Methods description] Due to the design of the intersection, initially it *was thought* that cyclists would merge to the right lane and *be forced* to compete with merging freeway traffic, but it *was observed* that most cyclists merged safely into the left car lane well before reaching the intersection.

[Discussion of design options] The existence of on-street parking prevents the creation of permeable bike lanes and bioswales, which negatively impacts the enhancement of a sustainable stormwater system management. *Moreover*, SW Elm is fully paved with standard asphalt (highly impermeable) and relies fully on gutters to carry off rainwater. *Thus*, water overflow can occur on the site during heavy rain seasons, *while* having permeable pavements and bioswales could solve this issue.

In this register analysis, examining how the features are used in context begins the interpretation of the findings. For example, it is clear that passives function to keep readers focused on objects in all the civil engineering registers, but that practitioners are occasionally overt about their responsibility. It is also clear that students' linguistic choices differ greatly from the practitioners'. But, interpreting why the practitioners show responsibility and how much the student differences matter requires more specialized knowledge.

A third contribution of this approach thus comes from the interviews, which help to tie the linguistic features to the contexts of use more specifically. For instance, when shown examples of active voice and human agents, practitioners discussed the importance of making it easy for readers to see who was responsible for different actions or observations. They were most concerned about clients' understanding but also about judges and juries if problems occurred in the project. They repeatedly noted the need to be as unambiguous as possible so clients could read fast without misunderstanding and so they did not cause unintentional liability for the firm. Several also mentioned they were hired to make subjective judgments, based on objective data, and many verbs occurring with first person pronouns reflected professional judgments (e.g., *we expect, we anticipate*). Their understanding of their field is thus quite different from generalizations from previous surveys and interviews, with correspondingly different linguistics choices. Furthermore, they disliked long sentence with many subordinators because reading was slower and meaning was less obvious. Student choices that left meaning ambiguous, agents mysterious, or sentences difficult to read were considered unacceptable.

The student perspective from interviews allowed a much richer understanding of the foundations of the student writing problems. In the interviews, students expressed conscious knowledge that writing a report for a client was different from their typical academic assignments, and they were concerned about meeting their clients' needs. However, their comments showed they held misconceptions about both the practice of engineering and the functions of language. For example, many students emphasized needing passives for objectivity and implied that using passive for a verb like *was thought* made it objective. Some said passives were part of the 'weasel words' that were necessary for liability management, believing that engineers needed to be vague in order to manage liability, not – as the practitioners said – to be as explicit as possible. They also reacted positively to sentences that had multiple subordinators saying they wanted to write to "sound fancy." One participant explained, "I kind of felt like I had to sound professional and smart. I mean, you want to sound really knowledgeable about things, and it seems like the easiest way to do that is to be wordy." In sum, it was clear that students needed instruction that integrated aspects of writing

on multiple levels – linguistic choices, functions that are important in engineering practice, and mapping the two onto each other. Without the interviews in conjunction with the text analysis, I would never have understood the misconceptions and intentions underlying the student problems, nor would I have fully appreciated the student differences as major problems for engineering practice.

In addition to the findings themselves, this register analysis is useful because the findings are directly applicable to teaching, which is a goal in many ESP register studies. In the larger project, the findings are used in creating new teaching materials that integrate writing skill development with civil engineering content and practice. Corresponding to findings from this impersonal style analysis, units address simple sentence structure, effective complex sentence structure, and the choice of active and passive voice. They exemplify and explain linguistic choices and contain 'myth buster' boxes that directly counter misconceptions, such as passive voice necessarily expressing objective content. The effectiveness of the new materials is assessed by comparing new student papers to earlier papers. For example, a comparison of passives in papers from seven courses at three universities found a statistically significant reduction in the frequency of passives and statistically significant increase in the effectiveness of passives, as judged by two raters, after the use of the new materials (see further details in Conrad, Lamb, & Pfeiffer 2018).

5.   What are the most promising areas of future register research in EAP/ ESP?

Register studies are already making important contributions in ESP, and, likewise, areas of work in ESP are contributing to our larger understanding of register variation. Nonetheless, I believe register studies deserve to have even greater impact than they currently have. Here, I highlight five areas of work which I believe are particularly important for the future of register analysis in ESP. Some are already well underway, and some I hope will expand greatly in the future.

One area that appears well underway is the investigation of variation in academic registers beyond disciplinary variation. With so many studies having used discipline as a major situational category, we are only beginning to understand more fundamental aspects, such as patterns related to qualitative versus quantitative methodologies or theory versus empiricism. Studies such as Gray' (2015) and Thompson et al. (2017) point the way in this newer area of work. A danger, however, is that studies of academic registers will continue to be dominated by studies of research articles. Other university registers, such as the study groups and institutional writing included in Biber's (2006) study, also deserve inclusion in

academic register research; they can be an important factor in student success at universities. The growing interest in English as a Lingua Franca corpora also holds promise for helping us include that large user group within EAP register studies.

Although space has not allowed thorough coverage here, register studies are already starting to investigate newer electronic registers (e.g., Biber & Egbert 2016; Myers 2010), and this work is likely to be a fruitful future area of investigation for ESP. For example, a recent editorial in the journal *Nature* emphasizes the importance of scientist-bloggers as counterweights to growing problems of bias and sensationalism in science journalism and peer-reviewed articles (Nature 2017). Thus, including blogs may be increasingly important for describing registers in English for science and other fields. This will raise some new issues for typical register methodologies, such as how to account for videos or other visual data in corpus-based analyses. More generally, since electronic registers are familiar to students, including a wider range of them in large-scale studies of register, such as a new MD analysis of English discourse, would provide a more contemporary baseline for understanding specialized registers.

Methodologically, register studies in ESP are advancing, in particular considering how best to design corpora to represent features reliably. To take just one example, there is now far more investigation into how best to design a corpus for lexical representation than when Coxhead first published the Academic Word List (e.g., see discussions in Miller & Biber 2015; Gardner & Davies 2014; Gries 2008). Of course, such studies are advances for the field only if they are applied in future work. In addition, I believe a useful methodological advance for the field would be to incorporate register analyses as part of more mixed methods research. To continue with the engineering example in the last section, for instance, some studies of engineering writing use ethnographic or interview techniques to investigate how rhetorical knowledge develops in novice and professional engineers; however, the ethnographic and interview data are not connected with systematic text analysis to see if changes are apparent in participants' writing. Combining register analysis with the ethnographic perspective could provide a much fuller picture of development.

Another area in which I hope to see change in the future concerns the sharp divide that has traditionally existed between academic and non-academic contexts in ESP register studies. Most studies investigate one context or the other, and they do not study the registers of a specific field more comprehensively. Non-academic contexts are often characterized as 'the workplace' as though workplaces do not exist as part of content fields. For example, one of the "Areas of ESP Research" covered in *The Handbook of English for Specific Purposes* (Paltridge & Starfield 2013) is English in the workplace, separate from medical, legal, aviation, nursing and other fields. In reality, most professionals experience a field

first academically, as students, and then in a non-academic workplace. Preparing students to be more successful in a specific field should include understanding not just academic registers but also preparing them for likely differences in registers in their field after they graduate. Register analyses can make valuable contributions to many disciplines by including more non-academic texts along with texts that are usually written by faculty or students.

A final area in which I hope to see expansions of register analysis concerns reaching a broader audience. Even within ESP, which has an inherent interest in language varieties, the field of register studies faces a historical hurdle. I suspect many register analysts do not realize the extent to which many in ESP still consider register a decontextualized, outdated concept from the 1960s. More generally, because ESP and EAP are traditionally associated with limited English proficiency students, the findings of register studies often do not reach other instructors or students, even when they reveal helpful insights for all educational contexts. In the future, I hope more register analyses will be made accessible for more audiences outside of those explicitly concerned with language education.

It may seem odd to conclude an article for this inaugural issue with a plea for register analysts to share their results more widely. After all, the audience of *Register Studies* is likely to already be convinced that register is important. However, my hope is that, as the journal provides a forum for more intensive discussions of registers, it also reinforces our understanding of just how important and pervasive register variation is, and therefore also inspires us to share our knowledge of register variation with others.

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