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Table of Contents

1. Roger Nunn & Colin Toms	5-8
<i>Foreword</i>	
2. Haiying Feng.....	9-39
<i>Discourse, Knowledge, and Identity: An Autoethnography of Seeking Research Grants in China</i>	
3. Laura Ibrayeva & Carol Fuller.....	40-63
<i>The L2 Motivational Self System among Kazakh learners of LSP</i>	
4. Immaculée Harushimana.....	64-87
<i>A qualitative study of Proficiency Dilemmas of Korean Registered Nurses (RN) in a BSN Program in the US: For Whom Is Academic Writing?</i>	
5. Ourania Katsara.....	88-113
<i>The need to investigate the Greek cultural perspective within the teaching practice of an ESAP class</i>	
6. Wenhua Hsu.....	114-162
<i>A Formulaic Sequences List for Prospective EFL Business Postgraduates</i>	
7. Leila Dobakhti.....	163-190
<i>The Use of Hedges in the Discussion Section of Qualitative and Quantitative Research Articles</i>	

8. Safnil Arsyad..... 191-224

The Discourse Structure and Linguistic Features of Research Article Abstracts in English by Indonesian Academics

9. Sayako Maswana..... 224-242

Visualization of Textual Structure Based on Move Analysis of Research Papers

10. Mei-Hung Lin & Chih-Hua Kuo..... 243-274

The Rhetorical Functions of Lexical Bundles in Computer Science Research Article Introductions

Book Reviews:

Professional English in Use Management..... 275-278

Reviewed by Emilia Plăcintar



Foreword

Celebrating Intercultural Communication and Cross-Cultural Diversity

Roger Nunn

The Petroleum Institute, Abu Dhabi

Colin Toms

The Petroleum Institute, Abu Dhabi

Welcome to the December 2014 issue of the Asian ESP Journal. As this is the first issue of the new editorial board, we would like to thank the previous board under the leadership of Professor Winnie Cheng for successfully developing the journal. As a sister journal of the Asian EFL group, the new ESP board would like to re-emphasize the Asian EFL philosophy of encouraging alternative approaches to writing papers. We strongly encourage an author's voice and agency to appear transparently in the paper and would like to discourage authors from hiding their agency behind formal impersonal language. From a phenomenological perspective, we do not believe an author can be absent from the belief system underlying the paper. A first person subject of an active voice is therefore a choice that is always available and we would not like to limit the choices available to our authors. At the same time, we would encourage experiments with the generic structure of a paper and would like all our reviewers to support alternative research approaches. This is all the more true as we accept papers from a very broad range of authors. Academics do not belong to impervious national discourse communities. They cannot easily be

divided into native/non-native speakers. Our mission is to celebrate intercultural communication and cross-cultural diversity and to tolerate different styles of research and drafting.

It is therefore very appropriate that our first paper by Haiying Feng, who since the acceptance of this paper has become an associate editor of the journal, introduces us to autoethnographic research in *Discourse, Knowledge, and Identity: An Autoethnography of Seeking Research Grants in China*. Most expatriates may agree that crossing cultures is no easier when one returns to one's mother country after an extended stay overseas. We believe that this experience can also be extracted from the particular contexts described here by readers for whom some kind of reverse culture adaptation proved to be the one we are least prepared for. This paper is an excellent way as a reader to embrace and to celebrate diversity.

Another form of adaptation is evident in *The L2 Motivational Self System among Kazakh learners of LSP* by Laura Ibrayeva and Carol Fuller. In this paper, jointly written by authors from different cultural backgrounds, the relationship between fast moving global perspectives and the way these influence very local needs is highlighted. They refer to "the context of globalization and the increasing need for language learners to develop *language skills for specific purposes*" in relation to the local needs of Kazakh learners. Employability and future professional careers are common local concerns. Another more academic concern is the need for local adaptation to more global norms that influence motivation and we assume this adaptation is a two-way process.

Wholly in keeping with our stated mission is *A Qualitative Study of Proficiency Dilemmas of Korean Registered Nurses (RN) in a BSN Program in the US: For Whom Is Academic Writing?* by Immaculée Harushimana. In this study, Harushimana explores differences in perception between faculty and Korean nursing students in a U.S. college setting, contrasting the traditional faculty emphasis on academic discourse conventions with that of the written and verbal English needed for success in the workplace. The author goes on to advocate a curricular rethink in both countries, arguing that, on the one hand, U.S. nursing programs should do more to accommodate non-native English speaking students while on the other, the Korean educational system should ensure more equal coverage of all four skills.

This paper involves the analysis of self-assessment questionnaires “used to identify parameters for appropriate pedagogy,” affirms Ourania Katsara in the article *The Need to Investigate the Greek Cultural Perspective within the Teaching Practice of an ESAP Class*. The salience of the piece hardly needs elaboration – for while the focus in this instance might be Greek, its significance is arguably translatable across contexts. Put succinctly, “the importance of the process of forming the conception of culturally responsive pedagogy” is an imperative pertinent to every professional in the field of teaching English.

The article *A Formulaic Sequences List for Prospective EFL Business Postgraduates* provides another perspective on the linguistic underpinning of intercultural communication. Adopting a Taiwanese perspective, the author, Wenhua Hsu, notes that learners need knowledge of some 8,000 word families to ensure reasonable comprehension of an English-medium business research article. In pursuance of this target vocabulary, Hsu outlines the creation of the Business Formulaic Sequences/Formulæ List, a corpus drawing upon more than two thousand research articles. The result is a functional list of just under 1,200 items, representing the most frequently occurring two- to six-word sequences, according to frequency, range, dispersion, meaningfulness and grammatical well-formedness. In conclusion, the author states “we hope that the BFL can be used to inform EBP teaching materials development.”

Hsu’s theme finds a natural concomitant in Leila Dobahkti’s paper *The Use of Hedges in the Discussion Section of Qualitative and Quantitative Research Articles*. ‘Hedges’, according to the author, are “are one of the rhetorical strategies that writers use to interact with their readers” and the article focuses on the distribution of hedging words in both qualitative and quantitative research articles, concluding that hedges occur more frequently in the latter. Similarly, Safnil Arsyad’s article, *The Discourse Structure and Linguistic Features of Research Article Abstracts in English by Indonesian Academics*, offers another corpus-driven investigation, this time into the rhetorical characteristics of research article abstracts written by Indonesian academics. The piece culminates in a series of practical recommendations of value to writers and teachers alike.

In *The Rhetorical Functions of Lexical Bundles in Computer Science Research Article Introductions*, Mei-Hung Lin and Chih-Hua Kuo examine vocabulary use, specifically in the form of lexical bundles, as it occurs in the introductions of computer science research articles. They conclude that a corpus-based approach to the study of field-specific move structures, move-signaling words and lexical bundles in research articles provides insights relevant to course design and materials development in academic writing.

Continuing, yet extending, the theme of move analysis, our final author Sayako Maswana proposes something of a methodological departure. Taking the position that “move analysis in ESP research has often been applied to specific sections of research papers,” and acknowledging the limitations of that approach, *Visualization of Textual Structure Based on Move Analysis of Research Papers* outlines the use of Graphviz software when applied to complete papers. Maswana argues that this approach allows researchers and teachers alike to “see the pictures of entire research papers”. The resulting breadth of vision allows interconnectivity across moves and sections to clearly emerge from the text, thereby permitting a greater awareness of logical flow.

While the nine articles presented in this issue may differ in approach, all are nonetheless united around the core values of intercultural communication and cross-cultural diversity, values which lie at the heart of the Asian ESP Journal’s mission.



Discourse, Knowledge, and Identity: An Autoethnography of Seeking Research Grants in China

Haiying Feng

*University of International Business and Economics,
Beijing, China*

Bio data

Haiying Feng is an Assistant Professor at the University of International Business and Economics in Beijing. Her primary research interests are in English for Specific Purposes, genre analysis and second language writing. She has published several articles and a book with Peter Lang on grant-seeking activity and recently an article on Chinese scholarly publication policy in the current trend of internationalization.

Abstract

This article presents an autoethnography of a recently returned, western-trained scholar's grant-seeking experiences in mainland China based on reflexive journals, fragmented memories, consecutive drafts of proposals, and interviews and email communications with a co-investigator and six western-trained Chinese scholars. Through *self-un-masking* (Sparkes, 2007) her feelings of frustration and hope, acts of compliance and resistance in three consecutive grant applications, the author directs the readers' attention to the identity struggles of western-trained returnees in their professionalization. "Relat(ing) the personal to the cultural" (Richardson, 2000, p. 11), the author further attempts to cast an insider view on life in Chinese academia in general, and on the

problematic aspects of the discourses and practices in local knowledge production in particular. Using this autoethnography as an illustrative example, the author calls for more scholars experimenting with this unorthodox method for identity and community research.

Keywords: autoethnography, grant seeking, knowledge construction, identity, professionalization

1. Introduction

In this age of globalization, the academe has become a social space in which different intellectual traditions, embodied in academic texts and afforded with hierarchical values, complement and compete with each other (Canagarajah, 2002a, 2002b, 2005). An increasing number of bilingual scholars face the need to shuttle between academic communities—the Anglophone center and their geolinguistically-periphery vernacular communities, and juggle academic writing *games* with differential rules (Casanave, 2002). The challenges they face, especially in seeking publications in Anglophone journals, have attracted extensive attention in recent years (e.g., Belcher, 2007, 2009; Casanave, 1998, 2002; Curry & Lillis, 2004, 2010; Flowerdew & Li, 2009; Lillis & Curry, 2006; Li, 2006; Li & Flowerdew, 2007; Salager-Meyer, 2008; Uzuner, 2008). These challenges, to name a few, include the shortage of material resources in some periphery countries (Canagarajah, 1996), “stigmatized” writing forms (Flowerdew, 2008), different knowledge contours as to what to research and how in different academic communities (Curry & Lillis, 2004), and lack of network and literacy “brokers” (Curry & Lillis, 2010). Most challenging for bilingual scholars in this sort of shuttling between two communities is perhaps the constant process of attempting to figure out how to position themselves and construct their academic identities in various literate activities.

In recent years, a number of daring bilingual scholars in language education revealed their academic literacy lives, including their struggles, via literacy autobiographies in some edited volumes (e.g., Belcher & Connor, 2001; Braine, 1999; Casanave & Li, 2008). Despite the fact that these bilingual scholars were already legitimate or even core members of the English

academic community when the autobiographies were written, they more or less expressed the feeling of being peripheral or marginalized. Canagarajah (2001) for instance, called himself “an outsider” both at home and in the western community, because his academic writing was seen by his home colleagues as carrying “a tone of condescension” (p. 35) to periphery scholars, while at the same time criticized by some American reviewers for being overly “impassioned”, the vernacular style coming from an oral rhetorical tradition, and for being “too ideologically biased against the West” (p. 34). For Xiao-Ming Li (1999, 2008), even after obtaining her tenure in the United States, “the feeling of alienation”, in her words, has often stopped her cold in her tracks. As a non-native speaker of English, she said that she read and wrote in English slowly, and when burdened by teaching and parenting duties she felt her participation in the academic community had to be “punctuated by non-participation or selective participation” (2008, p. 55).

It takes courage to face resolutely the insecure feeling of being peripheral, which is however shared by many bilingual scholars, and even native English scholars like Casanave (2002). In Canagarajah’s (2002b) view, there is an advantage for bilingual scholars/students to maintain their outsider status for it “provides a critical detachment towards the academic community that can lead to creative text construction” (p. 41). Retaining their vernacular cultural identities and weaving together their plural identities is actually what most bilingual scholars have been doing. Connor (2011) for example, used a colorful jacket as an apt metaphor to show how her native Finnish culture and her exposure to various cultures have enriched her perspectives or ways of doing things. She compared the black background of the wool jacket to the Finnish culture she grew up with and patches of various sizes and colors woven into the fabric to the multiple other cultural influences she has had and the multiple identities she has chosen.

It is nevertheless not easy to stitch together patches of identities. In these literacy autobiographies, we see bilingual scholars’ attempts to achieve identity *coherence* (Casanave, 2002) via *identifications* (Wenger, 1998), for example, Li’s (2008) adoption of an Anglophone argumentative edge, Connor’s (1999) adherence to the linear style, and Canagarajah’s (2001) early attempts to subdue display of feelings. We however also see their efforts to assert their vernacular identities as productive of meaning (Wenger, 1998). Bhatia (2001) for example, at a

very early stage of his academic career, when a native English editor found the use of an expression in his submitted manuscript inappropriate and offered a few alternatives to replace it, he took the risk of refusing to change as he found no alternative could better convey his claim. His negotiation, through a lengthy explanatory letter to the editor, turned out to be a success.

These first-person accounts of bilingual scholars' identifications and negotiations, as Belcher & Connor (2001) commented, are "easy to relate to" (p. 4) and can increase novice scholars' awareness of their own formative literacy processes. However, as we can see, most research on bilingual scholars and their academic literate activities, including the literacy autobiographies reviewed above, were focused on the scholars' relationship with the Anglophone community rather than with their home community. In fact, only a few studies (e.g. Casanave, 1998, 2002; Shi, 2002, 2003) have looked into the quandary and struggles of western-trained returnees in their home communities. Casanave's (1998) case study described for us the juggling game four Japanese returnees played when they faced the difficult decision as to whether to write more in English at the expense of possibly losing local reputation or to participate more in local scholarly activities at the risk of forswearing their ties with the English academic community. Their dilemma was due to "the competing and sometimes conflicting demands of writing in two languages" (p. 196). While the purpose of English academic writing is to contribute to the knowledge of a disciplinary area, Japanese academic writing is often motivated by the need for writers to align themselves with more senior colleagues. While in English academic community, scholars establish their reputations and networking connections through successful writing, in Japan, scholars had to establish a rich network first if they want to be invited for publication.

In China, western-trained returnees* are in a similar quandary. As Shi (2002, 2003) noticed, despite the returnees' great admiration for English academic conventions and pride of being western-trained scholars, they prioritized local publication and chose to comply with local rules, for example, by reducing the number of citations in academic writing. Xu (2009), a professor in management and a returnee himself, similarly observed that most returnees in China were quickly immersed in local politics and networks and very few of them had the interest and capability to engage in meaningful research targeting international academic outlets and

readership. Ladle et al (2012), a bibliometric study assessing national insularity in global science, has provided a good explanation for the phenomenon. As their study shows, the geographically vast, so-called BRIC nations (Brazil, Russia, India, and China), and Iran, which has a strongly ideological political regime, have higher than average levels of national self-citation in publications during the period of 1996–2010. The academic/scholarly insularity of these nations, as the researchers explained, is mainly due to the localized and politicized research agendas, encouraged by the proliferation of national journals. A recent study (Feng, et al., 2013) revealed that the Chinese government has recently redirected its internationalization policy from encouraging Chinese scholars to publish overseas to encouraging the development of Chinese academic journals, encouraging journals to “go out” so as to win so-called “discourse power” in global competition. This shift comes at a time of China’s growing global economic and geopolitical influence. When the local research agenda is strict, narrow, and influential, while seeking research outlets in Anglophone journals is not an easy task (Uzuner, 2008), returnees are tempted to choose to align with the local research agenda.

Meanwhile, because of their western educational background, returnees are short of literacy and network “brokers” in their home community, and face difficult tasks in familiarizing themselves with local writing conventions and knowledge contours. More studies, especially thick descriptions of returnees’ literate activities, are therefore most essential, to examine how this special group of bilingual scholars negotiate their identities in juggling two sets of rules of the academic game, and how their choices of identification and negotiation shed light on the knowledge construction in “marked local” countries (Curry & Lillis, 2010).

In response to this need, the present study is an autoethnography of my grant-seeking experiences in China as a western-trained returnee. Grant seeking, as we know, has become the first step of knowledge construction (Berkenkotter & Huckin, 1995; Myers, 1990) in today’s academic world where “the slogan ‘papers out and grants in’ shaped the collective and individual consciousness” (Sparkes, 2007, p. 532). It is also a localized literate activity, strictly defined and shaped by the local research agenda, which makes it a perfect window to look into the local knowledge generation. Because of its occludedness (Swales, 1990), only a limited number of

studies have been conducted so far. While some offered linguistic and rhetorical descriptions of the genre of grant proposals (Connor, 2000; Connor & Mauranen, 1999; Connor & Upton, 2004; Connor & Wagner, 1999; Upton & Connor, 2001), some looked into the grant application process (Myers, 1990; Van Nostrand, 1994) and the intertextual genre system (Tardy, 2003). Most of them are about the grant-seeking endeavors in Anglophone community, and there is only one genre-based study of Chinese grant writing so far (Feng, 2008). The present autoethnography aims to fill in the niche by providing a narrative of a western-trained returnee's compliances and resistances, identifications and negotiations in the grant-seeking activity, via which to cast an insider view on life in Chinese academia in general, and on how local knowledge is constructed in particular.

In the following section, I will first introduce the research method of autoethnography, and discuss why and how I applied autoethnography to examine a returnee's identity construction in her grant-seeking activity in China.

2. Autoethnography

2.1 Evocative, analytic, and double autoethnography

As part of the methodological innovation identified by Denzin and Lincoln (1994) as the fifth “moment” of qualitative inquiry, autoethnography is an approach to research and writing that applauds systematic analysis (*graphy*) of personal experience (*auto*) to gain insights of the life world of a people (*ethno*) (Ellis et al., 2010; Wall, 2006). As clearly defined as it seems, it bifurcates into two epistemologically different strands: *evocative* and *analytic*.

Drawing upon post-modern sensibilities, advocates of *evocative* autoethnography (e.g., Ellis & Bochner, 2000; Bochner & Ellis, 2001; Richardson, 2000) emphasize self-reflexivity as a valid and valued way of social inquiry, disrupt the boundary of social sciences and literary work, write personal stories therapeutic for authors and readers, and have as its major aim to “invoke an epistemology of emotion, moving the reader to feel the feelings of the other” (Denzin, 1997, p. 228). There have been quite a few autoethnographic studies that provided thick descriptions of

embodied struggles of academics. Pelias (2003) for example, used second-person to “bring readers into the scene, to actively witness, with the author” (Ellis et al., 2010) the monotonous and superficial academic life. Sparkes (2007), in response to Pelias's (2004) call for “a methodology of heart”, described how “waves of disillusionment engulfed him” when academic life, once “put fire in his belly”, becomes so uncertain and the only certain thing is that “...the policing of the scholarship became more open, more evident, more in-your-face” (p. 524). It is very easy for scholars, as readers, to relate to their stories, and thus reflect upon the problems in academia. The literacy autobiographies reviewed earlier, although the authors or editors referred to them in different terms** are also evocative autoethnographies according to Ellis et al (2010), as they have evoked many bilingual scholars’ emotional identification and made them understand and cope with their own literacy lives better.

While recognizing the value of self-reflections and inner knowing in investigations, Duncan (2004) attempted to differentiate autoethnographic studies from other storytelling approaches by emphasizing “scholarly and justifiable interpretations” (p. 5) based on multiple sources of evidence, logical chains of evidence, and peer review. She suggested that autoethnographers should delineate boundaries of their studies and make explicit their research protocols to ensure reliability, and move beyond personal experiences by demonstrating connections to broader themes and relevance to others. Anderson (2006) proposed *analytical autoethnography* as opposed to *evocative autoethnography* with five key features: (1) complete member researcher (CMR) status, (2) analytic reflexivity, (3) narrative visibility of the researcher’s self, (4) dialogue with informants beyond the self, and (5) commitment to theoretical analysis. While evocative autoethnography “refuses to abstract and explain” (Ellis & Bocher, 2000, p. 744) for fear of losing the evocative power, Anderson argues that the autoethnographer should be a “more analytic and self-conscious participant” (p. 382), engaging in both practically oriented, first-order interpretation and the more abstract, transcontextual, second-order constructs of analysis, in order to “gain insight into some broader set of social phenomena” (p. 387).

Learnmonth and Humphreys (2011) is an interesting “doppelganger” article exploring the two researchers’ “doubleness” in identity work using a “double” autoethnography - seeking to be

evocative while at the same time engaging in *analytic* thinking about identity construction. In their first evocative tales, the two business school academics wrote about their experiences of attending two contrasting academic conferences, one attended by a preferred self who values knowledge for its own sake, and the other attended by a disturbing self who makes careerist calculations. They however did not stop there letting the tale explain for itself like most evocative authethnographies do; they attempted three different readings of their own stories and came to realize that their first tales, despite the good motive to “signal an identity resistant to dominant ideas about academic work” (p. 111), “must be subject to critique and analysis” (p. 112). Their iterative process of writing and reading has thus become “a process of relentless self-un-masking” (Coetzee, 1992, p. 280, quoted in Learmonth & Humphreys, p. 110) and a process of academic identity construction. Autoethnography therefore, as the two researchers argue, is valuable for identity and organization research.

2.2. Why autoethnography?

The present study intends to be a double autoethnography integrating story-telling with iterative reflections. Autoethnography is used as the method of inquiry for mainly two reasons. First, as discussed earlier, grant seeking is an occluded literate activity, with grant proposals and grant reviews not open to the public. If we use traditional ethnography, seeking permission to be a participant observer in a scholar’s literacy life can pose a great challenge. In this autoethnography, I was fully immersed in my own grant-seeking activities as *a complete member researcher* (CMR) (Anderson, 2006), able to explore the activity system and the academia in which I live, “externalize(d) my inner dialogue” in decision making (Duncan, 2004, p. 3), and reveal conflicts, compliances, and resistance that may otherwise be “cloaked in secrecy” (Ellis et al., 2010).

Secondly, one major aim of autoethnography has been to confer voices to previously silenced groups and inform specific problems and situations (Denzin & Lincoln, 1994; Wall, 2006). Western-trained returnees often see themselves and are seen as marginalized members of both Anglophone and local communities; yet not enough attention has been given to this special group

of bilingual scholars. Using self-observation and self-introspection as legitimate methodological tools, I can render my feelings and experiences of being a returnee, reveal the way I grappled with my membership and identity in grant writing, and more importantly, “relate(s) the personal to the cultural” (Richardson, 2000, p. 11) to “extend(ed) sociological understanding” (Sparkes, 2000, p. 21) of academic literacy practices in China through descriptions of my personal experiences.

2.3 Data and data analysis

I applied for three research grants in 2010 after I obtained my doctoral degree and resumed my work as a university teacher in China. Self was an important source of data. I drew upon fragmented memories about “epiphanies” in my life that shaped who I am (Ellis et al., 2010), journals written in the grant application processes, and consecutive drafts of three research grant proposals. Self was however not the only source of data. I interviewed or communicated via emails with my co-investigator and six western-trained scholars, and invited them to comment on my unfunded proposals. In addition, I compared the discursive features of my unfunded proposals with one scholar’s national-level funded proposal. In so doing, this autoethnography benefited from being illuminated by a variety of perspectives.

I chose to organize the narrative chronologically, centering round the themes that were developed through comparing and contrasting my grant-seeking activity with the literacy experiences of other bilingual scholars in the existing literature (Ellis et al., 2010). Like Casanave (2002), I have no interest in “analytical games such as model building and theory construction” (p. 33), but the autoethnography is analytic in the sense that it is “data-transcending” (Anderson, 2006, p. 387)—I exposed my struggles that other western-trained returnees may relate to, and described grant seeking in China that may unravel issues in local knowledge construction.

2.4 Ethics

Ethics has been a concern throughout the research and writing process. While traditional researchers can use anonymity to protect the privacy of research participants, autoethnographers, in using self as data, “not only implicate themselves with their work, but also close, intimate others” (Ellis et al., 2010). I worried about my vulnerability of being unable to take back what I said in this autoethnography and of possibly having my academic life judged or critiqued while having no control over it at all (Ellis, 1999). I am also concerned about the possibility that those scholars who appeared in my autoethnography, talked to me or showed me their proposals based on trust or friendship, accidentally get hurt. To address this relational ethics issue, I used some protective devices including blurring identifying characteristics of my informants, and revealing less textual details of the proposals. As Ellis et al. (2010) pointed out, autoethnographers have to be able to “continue to live in the world of relationships in which their research is embedded after the research is completed”.

3. A Returnee’s Grant-seeking in China

In this section, I will first turn to the first-person narrative in the hope of bringing a sense of immediacy, leading my readers to see, palpably, my bafflement and frustrations, compliances and resistances in re-adapting to the Chinese academia through three consecutive grant application endeavors. It is then followed by an analytic re-reading of the narrative, extending beyond my personal experience to consider the positioning and identity struggle of western-trained returnees as a group, as well as the problematic aspects of knowledge production in China.

Residing in the margins

I’m back. I thought I had a lot to offer to my home academic community. I remember in 2001, I interviewed nine scholars in Beijing for a study, who told me that few social sciences departments in China offered courses on research

methodology or academic writing. Even today, a sketchy review of CSSCI (Chinese Social Sciences Citation Index) journals can reveal that a large portion of journal articles in social sciences only have 3-5 pages, not empirically-based, with limited number of citations, most of which are endogenous. Academic writing is a mirror of academic work. I was so sure that with my educational background in English-speaking countries, I could bring in some fresh air.

I'm however stunned at how corporatized the Chinese academia now is. I hear words like SSCI, CSSCI, impact factors all day long. Although the National Science Funding Committee of China was not established until 1986, grant seeking seems to have become part and parcel of Chinese scholars' professional life—your worth equals the number of grants you can bring in. While the US academia is often criticized for aping the corporate world, the Chinese academia now seems no less corporatized; not backward at all in this aspect.

Suddenly I realize, as a new doctoral graduate, I don't have much to offer. I don't have the numbers they want. I need to publish as quickly as possible, and before that, to get some grants.

Am I able to play by the local rules?

I remember a Canadian professor said to me years ago in an interview, "You don't want to play by the rules of cricket when other people are playing football". She was then referring to her grant application experiences when she first moved from UK to Canada; I however find it fits perfectly with my situation. I need to play by the local rules, I know.

I attended a training session before I applied for the NPOPSS grant, the most prestigious national grant in humanities and social sciences. NPOPSS stands for National Planning Office for Philosophy and Social Sciences ([http://www.npopss-](http://www.npopss-.)

cn.gov.cn). The hall was full of attendees, and the speaker, Professor Lin, was a big name here as he had brought in large amounts of grants for the university. What Professor Lin lectured was at first quite a relief. How to write the literature review, how to write the research method...all seemed to be following the Anglophone standard:

“When indicating the gap, we should not blatantly claim that ‘the proposed research fills the gap’. ... When describing the research method, we should be as explicit as possible; it is no longer appropriate to include the purchase or reading of English books and articles as part of the research methods... ”

Professor Lin was lecturing, and I was nodding my assent; yes, he is right, those were exactly the weaknesses I found in the Chinese NPOPSS grant proposals in 2002. Changes in these years are however evident. From some funded proposals I've read, I can see that scholars begin citing works overseas in the literature review, and they no longer claim their competence by reporting their health conditions or that they have access to updated English research articles or books thanks to the economic boom and thanks to the electronic databases now available at university libraries...

“Before you choose the topic of your proposal, you need to read the application guidelines (Shen Qing Zhi Nan) very carefully”, Prof. Lin proceeded, “you need to find out policy orientations, and whether there are any changes this year in the suggested topics. No matter what, when you apply for NPOPSS, your proposed topic needs to be ‘Ding Tian Li Di’... ”

“Ding Tian Li Di” is an idiom in Chinese, which literally means standing upright between the heaven and earth, with head in the clouds and feet on the earth. As Prof. Lin explained, it means that the proposed topic needs to be grand, to address the national research needs mapped out in the application guidelines. “Ding Tian

Li Di” was what NPOPSS preferred ten years ago, and still is, it seems. I know of proposal topics such as “to establish an independent Chinese discourse analytical model in order for China to win discourse power in the current trend of globalization” or “researching into the hypocritical nature of western ‘freedom of speech’”. Perhaps these are what topics of “Ding Tian Li Di” look like, I thought.

Proposing such topics are however challenging for me; they are not in line with the education I have received, the literature I read, and the research methodology I was trained to use...

Identification and negotiation: three attempts

Learmonth and Humphreys (2011) are right; academics are haunted by the co-existence of two inner selves, a preferred self and a disturbing self, a self that values knowledge for its own sake and a self who makes careerist calculations. Although I found proposing a topic of so-called “Ding Tian Li Di” distasteful, I made an attempt to comply in applying for the NPOPSS grant.

The topic I proposed was : *A multi-dimensional analysis of business discourse in China: Genre system and professional expertise*. My co-investigator suggested that we include the word “multi-dimensional”, as it made the topic sound more grandiose. We proposed to provide a “comprehensive description” of the genre systems in four business industries in China, although we knew the objective was far too ambitious, and what we actually planned to do was to select one business workplace or two, and then look into its genre system and business professionals’ discursive activities in-depth. Given the lack of empirical studies on real-world business discourse in China, we thought our study would be good enough.

We didn’t get the funds to do that. We learned the result from a name list of grant winners posted on the NPOPSS web site. There was no formal rejection letter, no

reviewers' feedback. There was no way to know for what reasons the proposal was rejected.

In darkness, I tried to apply for another research grant, one offered by the Ministry of Education. This time I proposed to conduct an ethnographic study of the grant-seeking activity in China, a continuation of my previous publications. Nevertheless, I knew it was a risky topic. As I noticed, studies on academic literate activities were few and far between in local academic journals. Studies on academic publishing conducted by Chinese scholars, for instance, were mostly published in English journals (e.g., Li, 2006; Li & Flowerdew, 2007; Flowerdew & Li, 2009; Shi, 2002, 2003) or by overseas publishers in English. The difference in contours of knowledge between Chinese and Anglophone academic communities are quite obvious.

But it is worth having a try, I said to myself, to see if Chinese grant reviewers would allow a space for negotiation. As Flower (2003) said, the real challenge of knowledge building is “to tolerate dissonance, and to embrace the generative possibilities of conflicting ideas and competing realities within the process of inquiry” (p. 239). Disappointedly, after a long waiting period, this second proposal was turned down as well, again without a rejection letter or reviewers' feedback.

Although the grant application has become a guessing game which I dislike, the pressure to get funds pushed me to submit a third proposal for a local grant of Beijing. It was a participatory action research based on a course I was offering on business English writing. This time I shifted back to alignment and accepted an experienced professor's suggestion to revise my proposal title into: *A study of how to nurture innovative talents among Business English major students*. His reason was that that the term “innovative talents” (Chuangxinxing Rencai) repeatedly occurred in the funding agency's guideline; to echo its call for “nurturing

innovative talents”, I should include it not just in title, but also in the first section that emphasizes the social value. To help me, he actually almost dictated the first paragraph for me. Gratefully I followed his advice and his wording, although I felt uncomfortable with my writing replete with words that were strange and alien. The proposal unfortunately failed again, even at the expense of losing my own voice. The reason(s) for the failure still remains unknown.

What is the missing link?

Nothing is more frustrating than not knowing what the missing link is. When I was investigating the grant seeking in Hong Kong, some Hong Kong scholars argued that rebuttal should be allowed and negotiation between reviewers and applicants should be encouraged. Now in retrospect, although rebuttal is not allowed in Hong Kong, scholars still find various ways to negotiate the funding decision, because they have access to reviewers’ comments. By contrast, in mainland China, everything is behind the curtain, everything is only anecdotes, bits and pieces divulged by someone inside the loop. Scholars have no grounds to negotiate or rebut when an unfavorable decision is made. Nor do they know how to improve their proposal for their next grant application.

What makes things worse is that some people can have a peek behind the curtain. During the excruciating six months waiting for the NPOPSS result, a close friend told me that a committee member on the review panel had put in good words for her proposal and tipped her off the good news far ahead of the formal announcement. It reminds me of an article in *Science* written by Yi-Gong Shi and Yi Rao (2010) on research funds allocation and academic culture in China. Shi is the dean of School of Life Sciences in Tsinghua University, who was a chair professor at Princeton University; Rao is the dean of School of Life Sciences in Peking University, who was a chair professor at Northwestern University. These two western-trained returnees point out in their article that, although Chinese

research funds increase annually by more than 20% these years, the hidden rule in allocation of research funds has stifled the research development in China. This hidden rule is that “doing good research is not as important as schmoozing with powerful bureaucrats and their favorite experts” (Shi and Rao, 2010, p. 1128), because these people dictate the writing of application guidelines. The guidelines, which are supposed to delineate national research needs, are somehow often specifically and narrowly put for the convenience of allocating funds to intended recipients. Although I’m just a low rung applying for a youth project, is it also the case that I will not be able to get a grant without establishing guanxin (networking) first? I wondered.

Discourses & identity cards

As Gee (1989) said, discourses are identity cards that reveal who is “in” and who is “out” of the club. In order to figure out the identity card that I do not have, I invited six western-trained Chinese scholars to give comments on my unfunded NPOPSS proposal and help me analyze the problems in my proposal that led to the failure.

Their comments were incisive and very helpful. They made me realize, to use Scholar A’s words, that I “entered a different activity system”. I was writing a Chinese grant proposal as if I were writing an English PhD dissertation. “Your proposal is too pedantic”, Scholar B commented, “Not every reviewer is the esoteric expert in your field. The cramped theories and terminologies made it less appealing. You should use common language to explain the significance of your proposed project and how it fits the nation’s needs. That’s what grant reviewers really care about.”

Similarly, Scholar C expressed the concern that the literature review part may be hard for reviewers to follow. He said:

Grant reviewers are also human beings. You bombarded them with theories, notions and terminologies they are not familiar with, and then provided English wordings within brackets to suggest their lack of knowledge of these theories or notions. What do you think their reactions could be?

Apparently I made a mistake that many new doctoral graduates would probably make—we are so eager to demonstrate our knowledge of the field that we ignore the communicative purpose of the genre we are dealing with. This mistake may somehow become even more serious for a returnee in China. The heavy citations of the English literature and the frequent use of English terminologies, may be seen as showing off, or could be critiqued, as Scholar D put it, as “blindly following the western research paradigm”.

To further my investigation, I compared my unfunded NPOPSS proposal with a scholar’s funded proposal, which was also submitted for a national grant and proposed to investigate business discourses in China. In many ways this funded proposal differs from my unfunded one. For instance, while I used only one paragraph to discuss the social significance of the proposed research, this funded proposal devoted one page to the discussion of social value with no citation, and left only one-page space to the literature review, which in my eyes is unbalanced and inadequate. It may however seem more appealing to the reviewers as it was easy reading and explained clearly why it should be funded.

Its one-page literature review consisted of two sub-sections, one reviewing research abroad and the other reviewing local studies, ensued by the niche indication. As can be seen below (a verbatim translation of one paragraph), its literature review was a simple enumeration of “who did what” rather than a discussion centering round the proposed topic:

In the past two decades, business workplaces, where languages meet, have attracted attention of researchers in the fields of discourse analysis, cross-cultural communication, and multi-disciplinary research (Harris & Bargiela-Chiappini, 2003). In recent years research on business discourse has made a breakthrough, for instance, Bargiela-Chiappini, Nickerson & Planken (2007) and Bargiela-Chiappini (2009) described the processes and strategies languages are involved in business activities, and analyzed business discourse and business activities using cross-disciplinary perspective. Gee (2000) did some deep theoretical analysis; Scollen & Scollen (2001) proposed the ‘discourse system’ in business communities; Bhatia (2008) proposed the notion of ‘professional expertise’ and discussed the model for analyzing business discourse. Zorn & Simpson (2009) proposed three dimensions, micro-level, meso-level and macro-level, to analyze discursive practice in terms of workplaces, institutions or professions, and the general society and culture.

The sentence in bold—“Gee (2000) did some deep theoretical analysis”—seems to be a good example of simplified interpretation of previous research: what was the theoretical analysis about? In what way does it enlighten the proposed study? How do the cited works relate to each other?

The paragraph which reviewed local studies was filled with more details and praises. More importantly, “Chinese roots”—“theoretical framework and research methods that work on Chinese business discourse” and “research paradigm that is rooted in China” were highlighted, catering to the nationalistic need:

Local researchers of business discourse, while learning and adopting western researchers’ theories and methods, are concerned about Chinese contemporary discursive practice, and attempt to propose theoretical framework and research methods that work on Chinese business discourse. X proposed basic principles that define the discipline of Business English, and analyzed business texts from

the angles of discourse analysis, cognitive studies, pragmatics, and cross-cultural communication. Y (2010) proposed a set of research paradigm that is rooted in China and at the same time connected to the world, based on which he conducted trial analysis of the discourse in difference fields, political, economic, cultural and societal. These ontological studies on business discourse have provided potential path and paradigm for researching Chinese business discourse.

The paragraph that served to indicate the niche consisted of generalized statements with no citations:

Neither western nor Chinese scholars have done much socio-linguistic research on business discourse. Nowadays scholars who are interested in business discourse research mainly come from three fields--discourse analysis, cross-cultural communication, and language education. Research on language education lags far behind ontological research; discourse analysis has discursive or non-discursive events as research target, and attempt to interpret interlocutor's intentions by analyzing discursive features such as turn-taking; cross-cultural communication emphasized that successful communication requires appropriate interpretation of your interlocutor's business discourse and business behavior. Nonetheless, no research from the above three fields has studied the political nature of business environments and the core socio-linguistic notion—power.

My reaction to the niche statement was that I would have never been so bold to claim that '*no research from the above three fields has studied the political nature of business environments and the core socio-linguistic notion—power*'. It could be the grant writer's distorted or simplified understanding of the English literature that may result from Chinese scholars' language difficulties in reading the English literature (Flowerdew & Li, 2009), or could be because, as Scholar C pointed out, 'the grant proposal is a popularized genre instead of an academic one in China'.

To be eye-catching and easy to understand is perhaps the major goal as there may not be real esoteric experts to review the proposal. This funded proposal, with elaborate discussions of social values, simplified review of previous research, emphasis on national research paradigm, and categorical niche indication, meets the communicative purpose to be eye-catching and comprehensible. It is not surprising that it had an upper hand in grant application than mine.

The problem is, am I willing to change, to write like this funded proposal? Am I willing to give up what I have been educated, what I thought I could bring back and contribute to my home community, what I am proud of and has already become part of my identity? I'm still at the intersection of choosing.

Analytic Re-reading of My Grant-seeking Experience

I see this section as another opportunity to re-read my grant-seeking experiences in year 2010. In responding to Anderson's (2006) call to be *analytic*, I extend my re-reading from centering round a personal literate activity to discussing a returnee's professionalization and local knowledge construction in China.

In re-reading my narrative, I can sense the feelings of uncertainty, frustration, and sometimes even cynicism, which I have no intention to hide or erase during several rounds of re-writing, because they truly record how I felt in the first two years of my re-adaption to the Chinese academia. I felt so much relief when I read Casanave (2002)'s study, in which she recognized that such feelings are natural among scholars who are in the process of transition to a new academic environment or learning a new writing game.

There is a recent blog article written by a prestigious historian at East China Normal University (see <http://blog.sina.com.cn/u/1908195982>), Ji-Lin Xu, who discussed the universal feelings of confusion and resentment among Chinese intellectuals in facing "institutionalization" (Ti Zhi Hua). He defines "institutionalization" as the phenomenon of having academic assessment

subject to various kinds of quantitative calculations, such as the number of grants obtained, articles published, or awards won, a term quite similar to the “corporatization” I discussed earlier. Doing research is more often motivated by professional promotions and socio-economic gains rather than by the inner drive to explore and to construct knowledge. Feelings of disillusionment resulting from it, as we can see, have also been expressed by scholars in Anglophone communities, as in Pelias (2003), Sparkes (2007), and Xiao-Ming Li (2008) reviewed earlier. However, the situation that Chinese intellectuals face may be even worse, because as Ji-Lin Xu points out, the allocation of resources for knowledge production has been strictly controlled by various levels of administrative departments. Even when there is peer review, as Xu said, the assessment criteria and the final decision-making are not in the hands of expert reviewers; sometimes the review results are kept secret to the reviewers themselves in the name of avoiding leaks, which is in fact for the convenience of “black-box” administrative manipulation. Xu’s disclosure is clearly consistent with what Shi and Rao (2010) discussed about the importance of establishing network with government officials and prominent scholars for getting funds. In my grant-seeking experiences, I witnessed, like these scholars, the “black-box” operation and the hidden rule. However, more serious harm that this hidden rule brings to the Chinese academia is not to individual scholars, but to the research culture, which had already suffered significant damage during the Cultural Revolution in 1966-1976. The insularity of Chinese research and the strict and narrow research agenda as revealed in Ladle et al (2012) could be a direct result of this hidden rule and the administrative manipulation.

In light of this, should western-trained returnees adapt to and abide by this local rule of the game? Ji-Lin Xu said that many young Chinese intellectuals exhibited a mixed feeling and acted in a contradictory way: while they vent anger at the system, they are eager to become a member of it. Similarly Shi and Rao (2010) noticed that many western-trained scholars quickly adapted to the local culture and practiced the hidden rule. If this continues, as they argue, the hopes and expectations of western-trained returnees to bring in intellectual freshness and reform the research system is bound to be dashed.

How should returnees position ourselves then? Ji-Lin Xu's advice is “to light a candle instead of cursing the darkness”. I am not sure as a junior scholar I have the ability to light a candle, but I think I can be a “broker” as Canagarajah (2012) advised. In his autoethnography about his professionalization, Canagarajah wrote:

Rather than striving for insider identities, I resolved to skirt the boundaries of my profession and serve as an effective broker who challenges the dominant assumptions by bringing new thinking, values, and practices from the outside (p. 271).

“Brokering” is a term he borrowed from Wenger (1998), referring to the “use of multimembership to transfer some elements of one practice into another” (p. 105). As a critical researcher residing in the United States, Canagarajah’s purpose is to encourage periphery scholars to bring in their vernacular cultures and practices to challenge the dominant Anglophone research paradigm, and reconstruct language education as a profession embracing diversified practices and discourses. As a western-trained returnee, my brokering work should be bidirectional, but my priority will be to bring new thinking and practices from the Anglophone community (without seeing them as orthodox) to my home community, engage in academic conversations, and try to change its practices gradually. This brokering role, I hope, could help me develop a stronger professional identity.

4. Conclusions

This paper has presented so far an autoethnography of my grant-seeking experiences in China, in an attempt to bring to the reader’s attention the identity struggles of western-trained returnees and the problematic aspects of local practices in knowledge production. When trends in critical research emphasize the relevance and value of local practices, it comes to my attention that I must be very cautious in critiquing the practices of my home community, even though the critiques were out of sincere concern. I admit, just as Anderson (2006) put it, “even complete membership confers only a partial vantage point for observation of the social world under study”

(p. 381). Readers are therefore invited to re-read this autoethnography and to further the discussions. I, however, hope that this autoethnography could provide some useful insights for funding agencies and policy-makers in China in terms of how to reform the academic review system to eschew administrative interference and be more open.

Although what my study examined is the grant-seeking activity in China, it has however addressed a series of questions researchers of academic publishing are concerned about. It traced back to the first step of knowledge construction to explore why peripheral scholars have difficulties in seeking international publication, and why even western-trained returnees prioritize local publication (Flowerdew & Li, 2009). Scholars who investigate academic publishing may gain more useful insights by looking at these two academic literacy activities—seeking research grants and seeking publications—together.

Finally, I would like to say a few words about autoethnography as a research method. This autoethnography experienced several rounds of revisions and finally takes on a traditional IMRD (Introduction-Method-Results-Discussions) format with the narrative embedded in the result section. This format reflects my compliance and resistance in negotiating publication of an unorthodox research study in an Anglophone journal, the same acts that I performed in seeking grants in my home community. The process of both *doing* this autoethnography and *writing* this autoethnography has been a continuous, inseparable, and iterative process of *self-un-masking* (Sparkes, 2007) and a process of developing my professional identity. I therefore find that I have benefited from the autoethnography not just for the research's sake, but have also achieved my identity *coherence* (Casanave, 2002) in the process.

Yet autoethnography is still a forbidden genre, especially to young scholars. Casanave (2002) had an insightful discussion of how senior scholars may be more entitled to practicing experimental writing while young scholars are often seen as having not yet “earned” the credit to write personal reflections. She quoted Cheryl Geisler (1992), who was then a young scholar discussing the problem she countered in doing such unconventional research, and I would like to repeat the quote here:

As a consequence of academic conventions, whenever we venture to account for our research and place this account in print, we run the risk of being taken as less than serious, of having our claims assessed as less than valid, and of being accused of methodological impurity. This will happen to some extent no matter how good our intentions are, and it is particularly likely to happen when the person giving the account has not "earned" the right of personal reflection through a long and distinguished career, as I certainly have not. (p. 41)

I resonated strongly with her narrative, and I hope that this autoethnography would be viewed as a definite attempt of a young scholar reflecting upon her academic life so as to inspire more researchers into choosing this rather unorthodox method in their alternate routes of seeking and proposing knowledge.

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*According to the figures released by the Ministry of Education of China, there have been altogether 1,905,400 Chinese who studied overseas from 1978 to 2010, and 632,200 chose to return to China. However, in one single year of 2010, there are 134,800 returnees, about one fifth of the total number (see <http://www.neworiental.org/publish/portal0/tab391/info626682.htm>).

**For example, Casanave (2002) referred to these personal narratives as “literacy autobiography”, and Belcher and Connor (2001) described them as “autobiographical narrative, or auto-ethnography” (p.3).



The L2 Motivational Self System among Kazakh learners of LSP

Laura Ibrayeva

Kazakh-German University, Almaty, Kazakhstan

Carol Fuller

University of Reading, UK

Bio data

Laura Ibrayeva was a research intern and an academic visitor at the Institute of Education, University of Reading, UK (February, 2013-February 2014). She holds an MA in Foreign Philology, Kazakh Ablay Khan University of International Relations and World Languages, Kazakhstan. She is an EFL teacher at the Kazakh-German University, Kazakhstan. Her research interests lie in the area of ESP, EFL, and learning theories.

Carol Fuller PhD, is Associate Professor at the Institute of Education, Faculty of Arts, Humanities and Social Science at the University of Reading, UK. She is programme Director for the Educational Doctorate (Ed D) Programme and Assistant Director of Research.

Abstract

In the context of globalization and the increasing need for language learners to develop *language skills for specific purposes*, this paper considers students' motivations to learn, in relation to intrinsic and extrinsic factors. Drawing on data collected via an on-line survey of 112 undergraduate and graduate students undertaking ESP/FS courses at a University in Kazakhstan, this paper suggests that factors connected to employability and future professional careers were

highly relevant in explaining the respondents' high levels of language *learning motivation*. However, whilst students were very motivated to learn ESP/FS, the quality of course content, curriculum design, as well as the expertise of the teachers, were also very relevant in explaining extrinsic *motivation*. In developing language learning further it will be important to make explicit the value of programmes of this type so as to ensure that all levels of language learners are motivated to learn.

Keywords: Motivation; L2; ESP, Intrinsic; Extrinsic; Ideal-Self

Introduction

Since its independence in 1991, Kazakhstan has undergone significant reforms in most if not all the spheres of society including its economy and education system. The president of Kazakhstan has recognized the particular importance of education to the development of the Kazakh economy. Yet, in order to access the full scope of education and thus develop economically within a global context, competences in foreign languages are required. At the beginning of 2012, in his annual message, the president reminded the nation that in order to be prosperous, a modern Kazakhstani should master three languages and that knowledge of English was a necessity without which, it would be difficult to achieve integration into a world community and economy (Назарбаев, 2012). This is because English is a global language used for exchanging information in the business world as well as in daily communication. In this paper, the role of motivation in language learning is explored as well as the perceptions of the relevance of language to future lives and careers.

Literature Review

Currently there are many changes occurring in Kazakhstan, most notably in the economic and education sphere. These changes can be seen as a response to globalization. Whilst some might argue that globalization is not a new phenomenon, Waters (1995, p.3) defines globalization as 'a social process in which the constraints of geography on social and cultural arrangements recede

and in which people become increasingly aware that they are receding'. Globalization is seen to affect all aspects of the world community including its economy, international labour, information, education, science and art. Arguably, when we think about globalization, the first language we associate with it is English. English plays a crucial role in international communication, and as a 'lingua franca' it is used world-wide, also indicative perhaps of the globalization process. As a result, this period of globalization has also resulted in significant changes in the structure of specialist educational programmes. For example, English for Specific Purposes (ESP) has become an international phenomenon. The development of ESP could therefore arguably be understood as reflecting explicitly the requirements of a society to be competent not just in Standard English but also in academic and professional English. This is because professional language is required in the work place and therefore it is essential in countries hoping to participate in an international market place.

As the role of English is becoming more and more significant, English as a foreign language is becoming more important to educational institutions in Kazakhstan. Yet teaching a foreign language in a mother-tongue environment can be difficult. When the language skill is a specific requirement of an educational institution issues such as a lack of motivation can be important. Learning a language which is not spoken in the home environment takes more time, energy and finances compared to learning the language in a native speaking environment. Motivation is therefore one of the major factors ensuring good outcomes in learning a foreign language.

But what is motivation and how do we motivate language learners? Motivation is highly complex. Weiner, however, defines motivation as 'the study of the determinants of thought and action – it addresses why behaviour is initiated, persists, and stops, as well as what choices are made...' (Weiner, 1992, p.17).

Dörnyei and Ushioda discuss the most influential motivation theories in psychology which relate to cognitive theories of motivation. Primarily, these theories are: expectancy-value theories, Atkinson's achievement motivation theory, attribution theory, self-efficacy theory, and goal theories, which are the goal-setting theory, the goal-orientation theory, and self-determination

theory (Dörnyei, 2001). Alongside these broad theories of motivation, there has been substantial research work carried out on motivation theories regarding learning a foreign/second language, which draws on these cognitive theories (see Gardner, 1985; Clement ,1980, 1986; Dörnyei ,(1990, 1994, 2005, 2009, 2011); Tremblay and Gardner, 1995;; Deci and Ryan, 1985; Ushioda, 1998; Dörnyei and Otto, 1998; Chambers, 1999). Theories of motivation in foreign/second language learning provide the main framework for this paper, as opposed to more general theories of motivation.

There are various definitions of motivation for language learning, depending on the various researchers who study the subject and the areas of study. For example, in his ‘Socio-Educational Model’ Gardner (Gardner, 1985, p.10) defines motivation as “the combination of effort plus desire to achieve the goal of learning the language plus favourable attitudes toward learning the language”. By contrast, Dörnyei and Otto (1998) define L2 motivation as : ‘the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritized, operationalised and (successfully or unsuccessfully) acted out’ (p.65). The types of motives and their classification can therefore be seen to depend on the scholars’ understanding of the nature of motivation. Thus, divisions of motivation into biological and social, motives of self-respect, self-actualization, achievement motivation, the motive to avoid failure and the motive of success are all based on the classification of various types of human needs, which are, at their core, both biological and social.

How motivations are categorized will also depend on whether the stimuli of these needs are internal or external. Thus, one of the commonly accepted distinctions in motivation theories is that of *intrinsic (IM)* versus *extrinsic (EM) motivations*. The first type of motivation (IM) addresses motivation arising from performing a task, i.e. the task is pleasurable in itself for the individual, or from satisfying one’s curiosity. The second (EM) stems from potential reward or avoidance of punishment, i.e. receiving a recognized qualification or being denied access to a higher class and/or having to resist exams (Dörnyei and Ushioda, 2011, p.23). Extrinsic and intrinsic motivations are important when looking at motivation theory, be it psychological

motivation or L2 motivation theory. It is worth pointing out that Dörnyei also includes ‘amotivation’ (AM) as part of the motivation types. However, this aspect is not included in this discussion.

Dörnyei (Dörnyei, 1994, p.280) devised the components that make up a framework for understanding Foreign Language Learning Motivation, referring to this as a General Framework of L2 Motivation. The framework consists of three levels: the Language Level (the L2), the Learner Level (the L2 learner) and the Learning Situation Level (the L2 learning environment). The first level (the Language Level) is described by Dörnyei as two motivational subsystems: integrative motivation and instrumental motivation. Learners with an integrative motivation want to learn a second/foreign language because they want to communicate and interact with the people speaking that language and know more about their culture. Dörnyei (1994) states that integrative motivation ‘is associated with a positive disposition toward the L2 group and the desire to interact with and even become similar to valued members of that community’ (p.274). By contrast, instrumental motivation occurs when learners want to learn a second/foreign language for practical reasons such as applying for a better job, getting a higher salary or achieving higher social status etc.

The Learner Level is the second level of Dörnyei’s framework of L2 motivation. He identifies two motivational components at this level: a need for achievement and self-confidence. A need for achievement is considered to be the main element of achievement motivation theory. Individuals motivated by a need to succeed tend to work harder at learning a language and are less discouraged by any failure (Dörnyei, 1994). The second component is self-confidence, which Dörnyei (1994) suggests includes different aspects of “language anxiety, perceived L2 competence, attributions about past experiences, and self-efficacy” (p.279). Self-confidence is therefore present/existent when a learner feels that he can use the language in different situations.

The third and final level is The Learning Situation level. This consists of three components and relates to course-specific motivational components (the syllabus, the teaching materials, the teaching methods and the learning tasks), teacher-specific motivational components (the

teacher's personality, teaching style, feedback, and the relationship with the students), and the group-specific (the dynamics of the learning group) (Dörnyei, 1994, p.277). This third level becomes one of the most significant components of Dörnyei's motivation theory as it focuses on the importance of the learning environment and experience in motivating learners and is, arguably, also closely related to the first and second levels.

Many L2 motivation theories have been developed by drawing on motivation theories from psychology, and Dörnyei can be seen as having contributed considerably in this area, largely as a result of his dissatisfaction with Gardner's (1985) concept of integrative motivation, which had been popular in L2 motivation research for decades. In the last twenty years motivation theorists have increasingly criticized Gardner and Lambert's concept of integrativeness, that is, the idea that you need to be/feel part of the community of the target language to be able to learn most effectively. They argue that integrative motivation only really works in certain sociocultural contexts, such as Canada, where they conducted their research. Another reason for concern regarding integrative motivation is the increasing prominence of English on a worldwide scale. The reasons for this change are due, in part, to the development of technology (satellite TV, the Internet) and the improvement in communication worldwide. Without needing to go to other countries, people can communicate with each other around the world (both English speakers and other language speakers) using English as a shared medium. Technology has therefore facilitated a great learning opportunity in that it affords many learners of English an opportunity to practice their English without having to integrate into a particular community. The L2 Motivation Self System is thus seen as a natural progression from Gardner's theory (Dörnyei and Ushioda, 2011, p.80). Gardner suggested that 'motivated behaviour is determined by three major motivational dimensions, Integrativeness, Instrumentality, and Attitudes toward the learning situation, and these [can be seen as corresponding closely] with the proposed L2 Motivational Self System' (Dörnyei, 2009, p.30). Dörnyei's (2009) model is based not only on Gardner's theory but also on his own empirical findings, Markus and Nurius's (1986) theory on the concept of 'possible selves' and Self-discrepancy theory (Higgins 1987).

For Dörnyei (2009) ‘the ideal self’ and ‘the ought self’ are the main components of the L2 Motivational Self System. However, he added one further component related to the students’ learning environment (Dörnyei, 2009). Thus his model consists of three main elements: *the Ideal L2 Self*, *the Ought-to L2 Self*, and *L2 Learning Experience*, which are briefly discussed below:

The Ideal L2 Self motivation stems from a personal desire to become what we perceive to be our ideal self. Commonly integrative and internalized instrumental motives would be part of this component.

The Ought-to L2 refers to the qualities /skills one feels they should have in order to avoid potential negative outcomes and be able to meet other people’s (parents, friends and teachers) expectations. This component is in line with Higgins’s (1987) theory of selves and, as a result, covers more extrinsic motivations.

Dörnyei and Ushioda (2011 p.83) states that it is necessary to remember that even though ideal and ought selves both relate to achievement of the self one aspires to be, there are marked differences between them. He cites Higgins, stating that ideal self-guides have a *promotion* focus which stems from a personal desire to improve and achieve goals one sets for oneself. He believes that “... ideal self-guides have a promotion focus, concerned with hopes, aspirations, advancements, growth and accomplishments”. Ought self-guides come from a *prevention* focus, a desire to avoid negative outcomes or disappointing others. Higgins points out that this is in line with the well-established motivational principle that one will seek pleasure and evade pain.

The L2 Learning Experience covers motivation resulting from the learning environment. This is influenced by many factors including the quality and nature of the teacher, the learning material, fellow students, the classroom and the track record of the course.

In summary, the L2 Motivation Self System proposes three main sources of motivation for learning a foreign/second language. These sources are the learners’ perception of themselves as proficient L2 speakers, motivation due to the learners’ circumstances, and environments

conducive to learning. Research from around the world, including studies from Japan, China and Iran (Taguchi et al, 2009), Hungary (Dörnyei et al, 2006), Pakistan (Islam et al, 2013), Korea (Kim, 2012) etc. supports its value as a theoretical tool. A study in Hungary, for example, involved over 13,000 students over a period of 12 years. The research focused on attitudes towards five target languages, English, German, French, Italian and Russian, and the L2 Motivational Theory was useful in understanding the findings. L2 Motivation Self System is arguably relevant particularly to motivation issues related to ESP, and so the L2 Motivational Self System will be used to provide the theoretical framework for this paper.

What is ESP?

In order to understand motivation in ESP it is necessary to first define what ESP is as it is different to ESL. ESP as a concept goes back to the 1960s. Several notable scholars from a variety of countries have studied ESP (see Hutchinson and Waters, 1987; Robinson, 1991; Dudley-Evans and St John, 1998; Basturkmen, 2010; Nunan, 2004; Belcher, 2006) and they offer many different understandings and varying definitions of it. For example, Hutchinson and Waters (1987) explain how ESP is related to ELT, and show this relationship in the form of a tree. According to them, ESP is not a special form of language and nor is it just about teaching a special vocabulary and special grammar, for example the language of science or accountancy. They consider ESP as an approach and not a product, i.e. an approach to language learning based on the specific needs of a learner. They believe that the most important thing about ESP is the reason why a learner wishes to learn a foreign language, and the context in which the learner is going to use it. Whether there is a specific need for learning is also important. While Hutchinson and Waters define ESP by explaining what it is not, Robinson (1991, p.2-3) defines ESP according to the criteria and characteristics of what ESP is. She states that ESP usually has a specific goal, thus it is “goal-directed” (p.2). The second criterion has to do with a needs analysis, which she suggests is ‘to specify as closely as possible what exactly it is that students have to do through the medium of English’ (p.3).

Dudley-Evans (1998) is perhaps one of the most distinguished scholars who has contributed significantly to ESP as a concept, most notably with respect to three absolute and four variable characteristics. Within these absolute characteristics, ESP is understood to fit the requirements of the learner; and that using the specific methodology and activities in teaching ESP matters. Finally, ESP focuses on specific language including grammar and vocabulary, skills, discourse and genres suitable to these activities. Within the variable characteristics that specific disciplines may have a specially designed ESP course, which will have a different methodology than that used in teaching general English, is the key. ESP is also considered to be usually intended for adults, but it may be also be used in secondary schools. The last one of the four variables is that traditionally ESP courses can be taken by intermediate or advanced students, but they are also open to beginners.

David Nunan (2004) believes that ESP has increased in importance because we use language as an instrument for communication and not just for memorizing phonological, grammatical and lexical items. He adds that, for each particular group, a very specific learning programme should be developed according to the communicative needs of students because ESP is ‘an important subcomponent of language teaching, with its own approaches to curriculum development, materials design, pedagogy, testing and research’ (p.7).

Ibrahim (2010) concludes that most of the definitions given to ESP include ‘three themes: the nature of language to be taught and used, the learners, and the settings in which the other two would occur’ (p. 202). He states that these aspects are interconnected. Having reviewed several definitions by Nunan, Dudley-Evans, St John, Holme, Burnard and Zemach, Basturkmen (2010) identifies a common feature, namely that ESP courses are narrower in focus than ELT courses because they focus entirely on the specific needs of the learner. She concludes by stating that all definitions demonstrate that ESP courses are mainly used in a work-related or educational context rather than for general use.

ESP is therefore understood to be a language course for which the programme of learning, both its objectives and content, is designed for the specific needs of a particular group of learners. The

difference between ESL and ESP is that in ESP, the needs analysis / assessment is very important in helping to find out which aspect of language learning is most needed by the learners. While ESL is more general as a subject, ESP by its nature is specific to the needs of the learner and this arguably increases the motivation of the learner. Therefore, ESP is not only about teaching English but also includes the subject matter which makes it possible for the learners to use their English in their major area of study or work. This in turn should impact on a student's motivation to learn the language.

When applying Dörnyei's L2 Motivation Self-System and *Ideal L2 Self* to a consideration of motivation with respect to ESP, the first component is that learners of ESP should have a personal desire to become what they perceive to be their ideal self, that is, what they want to be as a professional and as effective L2 speakers with knowledge of specific terminology and vocabulary connected to their major. Because they understand the importance of ESP for their future, and see the pragmatic benefit associated with being able to speak the L2 in a professional context, according to this theory, they will have a strongly internalized instrumental motivation.

Linking the *The Ought-to L2* component of the L2 Motivation Self-System -to the qualities/skills a student should have in order to avoid potential negative outcomes also places onus on L2 learners. In this instance, without ESP courses, learners will not have the best employment prospects and/or will not be able to continue their studies abroad due to a lack of knowledge of more specialized language. For ESP to facilitate these opportunities, clear extrinsic, instrumental motivations should be therefore involved.

The third component of L2 Motivation Self System – *The L2 Learning experience* – covers motivation that emerges from the learning environment. The environment is influenced by many factors including the teacher, the learning material, fellow students, the classroom and the curriculum. In ESP the importance of the third component could be considered as particularly significant. The role of an ESP practitioner, the ESP teaching methodology and ESP teaching materials will clearly be key in terms of an authentic and meaningful learning experience. Whilst

not the specific focus for this paper, the link between learning and motivation is important to recognize.

This paper aims to investigate students' perceptions of the different ways in which foreign languages for specific purposes are taught at KGU, and the impact these approaches may have when considered in relation to motivation to learn a language. There is little research that links theories of motivation to ESP learning. This paper draws on theories of motivation in ESL to explore ESP, considering how we can best help learners to make progress in learning a foreign language for specific purposes and what appears to matter in course content which will be helpful for teachers and will motivate students. It is hoped that this paper will be useful to both foreign language teachers and those teaching ESP specifically.

Research Methods

Kazakh-German University (KGU) was established in 1999 and it is the only German higher education institution in Kazakhstan and Central Asia. KGU has been working successfully in cooperation with German Partner Universities and the German Academic Exchange Service (DAAD). The programmes offered by KGU focus on the specific needs of the economy and industry of Kazakhstan, particularly in the engineering and technical areas. The best students have the opportunity to get a joint Kazakhstani and German diploma accorded via a special programme. This is called the 'Double Diploma'. KGU uses innovative educational technologies and carries out scientific activity in the sphere of the sustainable development of the Central Asian region, focusing on the problems of the environment and the effective use of natural resources. One of the distinctive features of the university is that students study not only the subjects of their major but also German and English language intensively.

3rd year students of KGU are taught both English for Specific Purposes (ESP) and German for Specific Purposes (FS). These are mandatory subjects for all students. The two different teaching approaches that German and English teachers use at KGU in teaching ESP and FS form the broader focus of this study. For example, the English approach divides course topics

and vocabulary according to major areas of study such as marketing, management, finance, telematics, environmental engineering etc. The German approach utilizes general economic or technical topics and vocabulary.

In order to understand students' motivations in ESP/FS learning, data was therefore collected from both undergraduates and graduate students, that is, those who are currently taking, and those that have taken the courses. These students were selected as they were seen as being able to comment on the current teaching methods used in the classes, evaluating both language teaching approaches, as well as reflecting on the value and usefulness of the courses (postgraduate).

Data collection

All students were asked to complete an online survey questionnaire consisting of 30 questions. The survey questionnaire was conducted using the online survey tool 'SurveyMonkey'. The majority of questions included were of the multiple answer type, with some open-ended questions to enable a more detailed exploration of views on the various teaching approaches applied at KGU. The survey questionnaire was designed to understand our undergraduates' and graduates' experience, thoughts, opinions and suggestions for more efficient ways of teaching 'Language for specific purposes'. For example, questions that explored the value of language learning, the modes of content delivery, teaching materials etc. and how these link to motivation. Questions exploring students' intrinsic and extrinsic motivations were also considered with respect to the value of language learning, employability and future careers.

Sample

In total, 112 students took part in the survey. This represents 41 % of the student body who were contacted and invited to take part. Of these, 68% were female and 32% were male. 53% of the sample were 3rd year students, 20 % were 4th year, and 27% graduate students. All of these participants studied both ESP and FS. In terms of subject majors, 23% of students were

majoring in International Relations and Finance, 14% majoring in Transport Logistics and 63% majoring in Marketing, Management, Business Informatics, Telematics and Energy and Environmental Engineering.

Data analysis

The online survey included closed and open-ended questions. The survey data was analysed in Excel with frequencies of responses and cross-tabulations used to explore the data. Using frequencies allowed for an overall picture of the data, whilst cross-tabulations enabled the exploration of patterns and trends. The open-ended questions were explored in relation to the key themes emerging. For the purposes of this paper, the data is broadly presented in relation to *intrinsic (the Ideal L2 Self)* and *extrinsic (the Ought-to L2 Self and L2 Learning Experience)* motivation in language learning for specific purposes.

In carrying out this research full ethical clearance was sought from and granted by The University's Ethics Committee and all ethical procedures and guidelines were complied with. In reporting the data, all identifying information has been removed.

Results and Discussion

Here the results of the research carried out with students at KGU are presented and discussed. As noted earlier, these are presented in relation to the broad themes of intrinsic and extrinsic motivation in ESP and FS language learning.

Intrinsic (the Ideal L2 Self)

The analysis of the data showed that all three components of the L2 Motivational Self System are important in ESP learning. The first component, *the Ideal L2 Self*, is the most powerful in students' motivation to enhance their language proficiency and to integrate L2 competence into their future ideal self. To find out indirectly about this motivational self-concept, the questions regarding ESP/FS courses and their importance and value were explored.

Data suggests that most students feel they were capable of taking both the ESP and FS courses. Whilst 78 out of 112 participants had been learning English for 7 or more years, 59 students had been learning German for 3 to 5 years. In terms of the perception of their levels of competency, 44% of respondents describe their level of English as upper-intermediate, with 35 % at advanced level. By contrast, 50% describe their German level as upper-intermediate and 29 % as intermediate level. In spite of the fact that almost 70% of the students have been learning English for longer than 7 years and so describe their level of English as higher than German, they still felt that their level of German was good enough to take the course. Dudley-Evans and St John (1998) state that one of the four variables for ESP learning is that traditionally, ESP courses can be taken by intermediate or advanced students. As 96% of the students at KGU state they have intermediate-advanced levels of both English and German, they are therefore ready for the ESP/FS courses.

In terms of intrinsic motivators in language learning, 70% of the respondents agree or strongly agree that ESP is very effective in increasing their employment competitiveness. For FS, this number is almost the same at 68%. This was primarily because they believed that learning a general foreign language was not enough to become competitive in the employment market, but that a foreign language learnt in a professional context would increase their competitiveness because of its greater applicability. Students also felt that it would aid in the future, enabling them to be not just highly-qualified professionals in the sphere of their major but also proficient in foreign languages, and this was key. Thus, they are intrinsically motivated in their language learning because they aspire to an ideal self in which they are specialists with a good command of specialist English/German.

Almost all of the respondents also believe that there are future/professional benefits of studying ESP, with more than two thirds believing that, as a result, these courses should be mandatory. The reasons for this are:

1. The importance of mastering foreign languages in the context of globalization.

2. The potential opportunities to get a better job both in Kazakhstan and abroad.
3. The opportunities to practice English and German in a non-native speaking environment.
4. Better understanding of the lectures in German conducted by professors from Germany, especially by those students who are going to study further in German universities (double diploma programme).
5. The importance of learning specific vocabulary related to their major.

In spite of the fact that the majority of participants have been learning languages for some time, most of them would still like to further improve their language knowledge and therefore expressed a desire to have more hours of ESP/FS learning and reiterated that these subjects should be compulsory.

Some of the open-ended comments demonstrate the respondents' willingness to advance their language proficiency and accomplish their goals:

That's good for future work and that's interesting.

It's more than useful.

It's really good to know our profession-specific terms in different languages.

It seems to me that all students of KGU understand the value of ESP and FS and they will take both courses any way.

It is extremely necessary, because we (Students) must be able to speak not only conversational language, but also business!

I think yes. For development of current knowledge, the skills of a person are important. Courses help people to use the new received knowledge in future on a practice.

In my humble opinion, all students should decide themselves whether it would be efficient for them to learn German language or not, and whether it would be useful in their future life or not. But English courses should be mandatory, because we are studying now in time of globalization, when English is the most common language and language of international communication.

Without learning English, we wouldn't be able to understand scientific researches, to read foreign articles, so we wouldn't become competent specialists.

According to the L2 Motivational Self-System, one of the primary sources for motivation is the learner's vision of himself as an effective L2 speaker; in this case, students see the importance of becoming an effective competent L2 speaker with foreign language skills specific to their major. KGU offers ESP/FS courses only once a week, with each class lasting 90 minutes. The students suggest that it is not enough to achieve their personal and professional goals and so they emphasized the view that ESP/FS classes should be conducted with more frequency. Just under half of the respondents think that ESP and FS should be scheduled three times a week. Slightly fewer felt that twice a week was enough. This suggests that the students are intrinsically motivated to improve their English/German, primarily because the majority of the students find ESP/FS topics interesting and enjoyable as they are related to the subject they are studying and the future professions they hope to be employed in.

Extrinsic (the Ought-to L2 Self and L2 Learning Experience)

Data thus far suggests that participants in this survey are intrinsically motivated, having a vision of their future as specialists who possess not only general foreign languages but languages for specific purposes. However, some of the students' answers also demonstrated that motivation for learning ESP/FS is more an extrinsic type of instrumental motivation. As mentioned earlier, (Dörnyei and Ushioda, 2011, p.83) citing Higgins notes that 'ought self-guides have a prevention focus, regulating the absence or presence of negative outcomes associated with failing to live up to various responsibilities and obligations'. For some students, when explaining why ESP/FS should be mandatory, they refer to fear of negative outcomes, such as not being able to find a good job, not being able to study further abroad or not receiving the opportunity to get a double diploma:

In my opinion a person has to be ready for that and feel free. Some people do not have the disposition to learn something when it is mandatory. However I think the majority of people will

be glad and grateful to upgrade their skills into the new level. Without mastery of foreign languages nowadays person lose many chances. At any rate it has to be such an offer for Fachsprache courses. In the context of university studying I think it should be mandatory for every student.

Arguably, this person is motivated more extrinsically because he believes that there can be negative consequences for those students who do not understand the importance of English/German courses and that they will be grateful in the future when they realise it.

There's no way to study in Germany or to work in professions without these skills.

Those who're not participating in double diploma programme have no reason to attend this course

They are absolutely necessary for guys, who go to Germany for the double diploma program and for the rest too, for their overall development.

According to the second component of L2 Motivation Self-System, the ought-to L2 self, data suggests that the students are motivated by the belief that they should possess foreign language skills to avoid negative outcomes, which in this context is not being able to find a good job, or not getting an opportunity to study in Germany or to get a double diploma. This is similar to Chen's study of Taiwanese high school students who were motivated by their parents because of their perceptions of the importance of English in the children's future (Chen, 2012). In this sense, students' extrinsic motivations can be seen as linking to ideas of risk aversion. Students suggest that in a global context it is not enough to have good qualifications to secure good employment; other skills – such as language – are now just as important.

According to the survey results, the respondents are highly motivated both intrinsically (Ideal L2 Self) and in terms of a less internalized type of instrumental motivation (Ought-to L2 Self). However, when considering the third component of L2 Learning Experience, data suggests that

this area has the least influence on the motivations of the students included. Even though the students in this study can be considered as motivated by the ‘Ideal L2 self’ which according to (Dörnyei and Ushioda, 201, p.86) is ‘a powerful motivator’, they also need to be motivated by their learning environment. Dörnyei (2009) states that ‘...in order to translate the aroused motivational potential into action, he/she needs to have a roadmap of tasks and strategies to follow in order to approximate the ideal self’ (p.20-21). Results suggest that participants would like to be motivated much more extrinsically, such as by the teacher. The importance of teaching featured heavily, particularly with respect to the need for teachers who are competent not only in language teaching but also in the subject matter of Finance, Logistics or IT etc. Participants felt strongly that teaching should be interesting and should include relevant subject materials and a relevant curriculum etc. The first two components of the L2 Motivational Self System can therefore be further enhanced by the provision of the third component, which is L2 Learning Experience.

In terms of the 8 issues which were felt to be most relevant to the ESP/FS course, students were asked to rank order these in terms of priority. About 38 % of the respondents felt that the biggest issue was ‘not enough classroom hours’ followed by ‘student motivation’ and then ‘not enough qualified ESP/FS teachers’. ‘Course design’, ‘not enough opportunities to apply the ESP/FS knowledge gained’ and ‘Not enough good materials’ were also relevant.

The biggest issue raised was ‘not enough classroom hours’ which is likely connected to the next issue of ‘student motivation’. This was interesting leading to further investigation into why students do not feel motivated enough given that, in terms of intrinsic motivation, they appeared to be. The previous section suggests that the majority of students understand the importance of taking ESP/FS and have ambitions to be competent, highly qualified professionals in their future workplace. One possible explanation as to why participants did not express high levels of motivation could be linked to their level of English and German. However, according to the data the largest number of these students have C1 level in English (9 out of 17 students) and B2 level in German (10 out of 17), indicating that their level of both languages is very high. Almost all felt that their English and German levels were good enough to take both courses. It is likely then

that their dissatisfaction is related to the teaching contact hours, particularly as more than half of the respondents did not think they had enough classroom time.

Participants were also asked to give suggestions for ways that the ESP/FS courses could be improved and the most common proposal was to have more classroom hours, with specific topics related to their major cited as very important (e.g. Telematics, physics). More discussion, interaction, more student engagement, and creative work were also suggested. Participants would also like the teachers to be more qualified and know the subject matter better. It was considered as not enough simply to have teaching skills.

Many of the suggestions for the improvement of FS were similar to those for the improvement of the ESP provision, for example, more classroom hours, a textbook, more speaking tasks, more student engagement, and more creative work. However, the most common suggestion was that the FS course teaching content should be more specific to their majors. Some students commented that they would like to have more topics related to IT, Telematics, Logistics, and Ecology etc. Students also felt that that teaching content should complement the areas covered by the German guest lecturers – a particular feature of the programme. They would also like their FS teachers to attend the classes conducted by their German colleagues so as to familiarise themselves with the subject matter. Students would also like to be consulted and get involved in the curriculum design and choose the topics they are interested in.

The vast majority of participants agree that ESP/FS instructors should possess both language teaching competency and subject content knowledge and this was a key concern expressed in the open ended comments. Specifically, a lack of qualified ESP/FS teachers was considered an important issue. Many language teachers would no doubt agree that it is challenging to be a competent language teacher who also possesses good subject content knowledge.

Finally, participants felt that having an opportunity to apply the knowledge they gained in practice was important. Chambers (1999 p.37) states ‘within the UK modern languages context... [there was] evidence of pupils articulating a need to make a link between their

learning and the world outside the classroom'. The importance in language learning motivation for students to apply the specific language they have learnt in class outside of the classroom, via tasks or project work, was also evident in this study.

All of the suggestions can be seen to link quite explicitly with extrinsic motivation and comprise, very clearly, the aspects of the Third L2 Motivational Construction, which, according to Dörnyei (2009 p.29), help to remind the students of their vision about their future. He states '*classroom activities such as warmers and icebreakers as well as various communicative tasks ... can all be turned into effective ways of keeping the vision alive.*' All these components are interconnected and the teacher and his/her well planned strategies can help students to become their ideal selves. Dörnyei (2009. p.29) states that '*for an Olympic athlete the coach and the training plan are just as much a part of the complete vision as the image of stepping onto the top of the podium*'. The data in this study strongly identify the important role of the teacher in motivating students in ESP/FS learning.

Conclusion

The survey aimed to explore students' opinions regarding the ESP/FS courses so as to facilitate an understanding of the motivations in ESP learning and find ways to improve and make courses more efficient. This research drew on ESL theories of learning and applied these to the area of ESP, specifically the constructs of the ideal L2 self, the ought-to L2 self, and the L2 Learning Experience in the KGU ESP/FS learning context. The data suggests that for the students in this study the three primary sources of Dörnyei's L2 Motivational Self System were useful in understanding learner motivation for studying ESP/FS. The survey results also suggest that the majority of participants are motivated by two sources of motivation: the importance of the course to their future in terms of employability as well as future ambitions of themselves as effective L2 speakers who are able to communicate in a professional context. Data also highlights the importance of being motivated extrinsically or, in other words, the importance of the third primary source of the motivation, *the L2 Learning Experience*. A good teacher, well planned teaching strategies, a relevant curriculum designed specifically according to students' needs as

well as specific topics and vocabulary related to their major were highly relevant to students' interest in the subject and important in supporting students to become their ideal selves. In this study, this third component was not a source of motivation for students. Arguably, for students with a good level of language proficiency, this was a factor that related more to their experience of their programmes. However, for students with lower language ability, the L2 Learning Experience is likely to be much more important as this area could be seen as linking significantly to motivation levels in the other two primary sources of motivation. Whilst this is a small-scale study and therefore limited, in the context of globalization and the increasing need of many countries to have profession specific language skills, this paper raises relevant issues pertinent to ESP/FS teaching and learning, particularly in terms of the relevancy of the teaching content, and so adds to our understanding of this more specific area of language learning. In addition, the role that motivation plays in learning in terms of the motivational impetus associated with employability and future careers.

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A qualitative study of Proficiency Dilemmas of Korean Registered Nurses (RN) in a BSN Program in the US: For Whom Is Academic Writing?

Immaculée Harushimana

*Lehman College,
City University of New York*

Bio data

Immaculée Harushimana, Ph.D., is Assistant Professor of TESOL and Language and Literacies Acquisition in Secondary Classrooms at Lehman College, City University of New York. Her major area of inquiry is in critical linguistics and its implications for literacy instruction for urban adolescents. Her research interests include immigrant and refugee youth's school integration, multilingual identity, and alternative discourses. Her work has been published in several refereed professional journals, including the *Journal of Border Educational Research*, the *Journal of Urban Teaching and Learning Research*, *The Journal of Praxis in Multicultural Education*, and the *Journal of Peace and Justice Studies*. Her chapter contributions include a co-authored chapter in *African American children's mental health: Prevention, intervention and social policy*, edited by Nancy E. Hill, Tammy L. Mann, and H.E. Fitzgerald, and two chapters in *Reinventing second language writing identities*, edited by M. Cox, J. Jordan, C. Ortmeier-Hooper, & G.G. Schwartz.

Abstract

This article presents the results of a qualitative study that was conducted on a cohort of Korean-educated Registered Nurses (RN) in a RN to BSN program, in order to gain an understanding of

how the three groups diverged or converged in their views of and attitudes toward the relevance of academic writing in the nursing profession. The study reveals a dissonance between the faculty who emphasize the conventions of academic discourse and the students, who emphasize the written and verbal English needed for the workplace. Implications drawn from the study highlight the need for U. S. nursing programs to rethink their curricula to make sure that the views and considerations of the involved faculty and the needs and aspirations of the foreign-born nurses enrolled in the program are taken into account. The study also highlights the need to enhance the English curriculum in South Korea educational system to place equal emphasis on the development of all four language skills.

Keywords: academic adaptation, academic discourse, English for academic purposes, foreign-born nurses, textbook English, workplace discourse, writing convention

Introduction: Foreign-Born Nurses in U. S. Nursing Programs and Hospitals

As of late in the United States, the shortage of nurses (Goodin, 2003) has become so critical that the government has had to recruit nurses from non-English-speaking countries to fill the gap. Today, an estimated 30% of the nursing workforce in the United States consists of foreign-born (FBN) nurses of non-native English-speaking (NNES) backgrounds (Adeniran, Gonzalez, Jost, & Gabriel, 2008; American Society of Registered Nurses, 2007). Recently, the number of Korean nurses taking the National Council Licensure Examination (NCLEX) for registered nurses was reported to be on the rise (Choe & Yang, 2009). Recruited on temporary status, these nurses may require a longer adjustment period than their stay can allow because their adaptation needs (i.e., academic and linguistic) as non-native English speaking international nurses may not be given due attention.

Despite the growing trend in the United States to recruit foreign-educated nurses from non-English speaking countries and enroll them in nursing colleges while they fill the healthcare gap in U.S. hospitals (Aiken, 2007; Bieski, 2007), there is limited research on how these nurses perceive the training (clinical, linguistic and academic) they receive and how effectively it

prepares them to qualify for employment in the United states and meet the cultural and linguistic challenges of working with a multilingual and multicultural patient population. Additionally, the few studies that have focused on the adaptation of Asian nurses in Western and U.S. hospital and college settings consistently highlight the nurses' difficulty to communicate in English both verbally and in writing (Aiken, 2007; Davis & Nichols, 2002; Wang, Singh, Bird, & Ives, 2008; Yi & Jezewski, 2000). This is particularly true given the significance of their services in the U.S. healthcare system, which is highly diverse; they deserve due consideration in debates relative to the adequate socialization of nurses both in mainstream U. S. academia and hospitals. This article uncovers the perceptions of the status of academic writing and its relevance at the workplace, which transpired in a study of Korean-educated Registered Nurses (RNs) pursuing a Bachelor of Science in Nursing (BSN) in a RN to BSN program at an urban college designated as USCOL, their academic English faculty, and their nursing faculty/preceptors.

The Learning Climate in RN to BSN Programs: A Brief Overview

The shift from the designation of nursing as a practice occupation to being an academic/professional discipline not only has generated tensions between pro-academic (Oldnall, 1995) and pro-clinical faculty (Bishop & Scudder, 1997; Baynham, 2002); it has also created a sense of disenchantment among some nurses due to the discrepancy between the writing required at the workplace (i.e., the context they are accustomed to) and the kind of writing required in academia (Alster, 2004; Chevakasenook, Chapman, Francis, & Davies, 2006; Leki, 2003; Parks, 2000). This discontent may partly be due to the conviction that, as practicing RNs in their own countries who successfully applied for admission to academic programs in the United States, they have already demonstrated expert knowledge of the nursing profession as well as sufficient familiarity with English.

According to Trosman (2002), foreign-educated nurses entering on temporary or permanent employment-based visas are required to successfully take a predictor examination that forecasts their likely performance on the National Council of State Boards of Nursing's licensure examination (NCLEX) and includes "English proficiency testing, a review of the nurse's

educational preparation comparing it with the standard U.S. curriculum, and a check of the nurse's license in his/her home country to ensure that it is valid and unencumbered" (Trosman, 2002, p. 86). The fulfillment of these conditions may give foreign-born nurses the feeling that they do not need further academic instruction, be it in their discipline or in writing. However, not reinforcing the acquisition of proper nursing discourse – both oral and written – in English by NNS foreign-born nurses may have harmful consequences for the institutions that have hired them as well as the patients that they serve. Can a dialogic curricular reform which is informed by research that juxtaposes the views and attitudes of foreign-born nurses in a RN to BSN program with those of their faculty reduce the non-receptive attitude of the nurses in training toward academic discourse?

Through triangulation of views of the Academic English faculty, the nursing faculty/preceptor, and a cohort of South Korean-born registered nurses enrolled in a RN to BSN program at an urban US college, two key questions are explored:

How divergent (or convergent) are the views of nursing faculty from nursing and academic English toward academia's emphasis on academic writing for foreign-born registered nurses of non-English background?

How congruent (or incongruent) are the expectations and beliefs of BSN and English-for-Academic-Purposes faculty with foreign-born nurses' perceptions of the role of academic writing (and reading) in their career?

What strategies do the faculty and the nurses use to facilitate their socialization in US's academic discourse?

Research Context: USCOL's RN to BSN Program

In 2008, a partnership between USCOL, Sungshin University, and Korea's Department of Human Resources allowed Korean students who graduated from Sungshin University with a Registered Nurse degree to enroll in USCOL's RN to Bachelor of Science in Nursing (BSN) Program. Acceptance into the program earned the candidates exemption from college

composition courses. Upon successful completion of a 33-credit program of coursework and clinical experience, the Korean RNs would receive a BSN degree and become eligible for a one-year practical training which would give them official permission to work in US hospitals. To ensure adequate preparation for academic work and instruction in English, the students were required to take three weeks' intensive course (60 hrs) in academic English with an English-for-Academic-Purpose (EAP) faculty from the School of Continuing Education and Professional Studies (SCEPS), who also covered tutoring hours geared towards helping the students understand homework assignments from the nursing faculty.

Methods

Participant Selection

The 15 participants in this study included 10 students and 5 faculty (i.e., 4 clinical preceptors and one 1 EAP faculty from SCEPS). All 10 South Korean students were recruited for the study from USCOL's RN to BSN program. The participant selection followed a purposive sampling approach. That is, the study was limited to same-cohort South Korean students brought in through the partnership described above. Additional inclusion criteria were:

Enrollment to and successful completion of USCOL's English-for-Academic- Purpose program through the SCEPS.

3 to 6 months length of residency in the United States; and

No prolonged prior residence or education in the US or any other English-speaking country.

To qualify for the study, the nursing faculty/preceptor participants had to be directly involved with the selected cohort of South Korean students either in the capacity of instructor and/or clinical preceptor. Like the nursing faculty, the English-for-Academic-Purposes (EAP) faculty was required to have taught the participating cohort.

Design and Data Collection

A hybrid research design with qualitative dominance, which combined quantitative and qualitative methods, was used. The study was based on three sources of evidence: surveys, audiotaped interviews, and interactive online journals.

Surveys, which provided the quantitative data, were comprised of questionnaires aimed at gathering key biographic information from the participating students, on the one hand, and key curricular considerations by faculty, on the other. Specifically, students' questionnaires targeted information about their RN degree type (associate or baccalaureate degree), their experience with English instruction, their age, marital status, and gender. The actual questions are provided in Appendices I and J. Faculty questionnaires sought information regarding teachers' course allocation, assessment methods, rubrics, and student performance.

Open-ended, one-on-one, audiotaped interviews were used to gather in-depth faculty perceptions of the students' academic and linguistic aptitudes. The interviews with faculty were sixty to ninety minutes long, and focused on their perception of students' linguistic and cultural adaptation to the nursing curriculum as well as the academic and professional environments. The interviews also sought to find out how the faculty helped students become socialized in the nursing discipline's academic discourse.

Interactive online journals through Nicenet (a free, public access website, with a web-based format to carry out online, interactive conversation) were used in lieu of interviews for the students. Each of the participating students joined Nicenet discussion board anonymously (or using pseudonyms) and voluntarily and participated in one-on-one asynchronous conversations with the researcher regarding five questions central to the study. The questions mainly focused on the students' perceptions of the impact that prior (language) education had on their academic experiences at USCOL and the role that the nursing education played in their cultural and linguistic adaptation process, both in the workplace and in the US college setting. Follow-up questions probed the nurses to reflect on their personal efforts to meet the expectations of the

BSN program at USCOL. Each student consented to posting two to three paragraph-length entries per question. The study was approved by USCOL's Internal Review Board (IRB).

Data Analysis

As suggested by the hybrid design, the data analysis combined quantitative and qualitative approaches. Averages and means were calculated, analyzed, and interpreted to determine the extent of linguistic emphasis reflected in the faculty and students' perceptions and its impact on the students' self-assessment of adaptability both in healthcare and college settings. The survey findings were reported in two summarizing tables, where applicable, and each table was followed by an interpretive paragraph. Both the faculty's audiotaped interviews and the students' written responses were analyzed qualitatively, i.e., transcribed, coded, and categorized. Recurring themes were identified, interpreted qualitatively and reported as findings. A cross-interpretation of the qualitative findings and the tabulated information from the surveys led to culturally-sensitive and NNS-conscious recommendations aimed at reconciling the students' views and those expressed by the faculty and clinical preceptors.

Findings and Discussion

The findings shared in this study include the results of the biographic surveys administered to the students, the students' responses through interactive online journals, and the interviews with a nursing faculty/clinical preceptor and the EAP faculty. The Nicenet conversations between the researcher and the participating RN's uncovered some apprehension toward the college emphasis on academic writing conventions, finding them unfamiliar and remotely relevant to their adaptation in U.S. hospitals. The RN's expressed the wish that the faculty should create opportunities for them to acquire hospital discourse and gain practice in writing hospital-related genres. The two major themes that emerged from the study are presented below, followed by a global evaluation.

1. Evaluation of writing skills—“Academic” emphasis vs. “Content” teaching (Question 1): Writing well or not writing well: Some differences in perspectives between a nursing and an EAP faculty.

As members of the university professorate, both Prof. M*** (the nursing faculty) and Prof. S*** (the EAP faculty from SCEPS) expressed concerns over the foreign-born nursing students' poor academic skills and lack of critical thinking abilities. However, the two faculty members had major philosophical differences in regard to whether or not rigor should be exercised in assessing the writing abilities of and envisioning of EAP instruction for foreign-born and-educated RN students. A summary contrasting the attitudes and performance of these two faculty members is presented below in Table 1 (Insert Table 1).

Table 1: EAP and Nursing Faculty's Conflicting Views on Reading and Writing Emphasis
(see Research Question One: How divergent or convergent are the views of nursing faculty from nursing and Academic English toward academia's emphasis on academic writing for foreign-born registered nurses of non-English background?)

EAP Faculty	Nursing Faculty
Students' reading and writing skills are key	Students' nursing expertise is key ; the job of language teaching is outside the scope of the nursing faculty.
Rigorous practice of academic reading and writing is the best approach to preparing the foreign-born nursing students for their role of nurse in U. S. hospitals	Writing models and peer collaboration constitute the best approach to preparing the foreign-born nursing students for their role of nurse in U. S. hospitals
Skill at nursing care is not enough to earn a BSN and compete for employment in U. S. college and hospital	Registered nurses are successful in the workplace without a BSN degree

Professor M*'s motto: “I will not penalize them on grammar”.**

Prof. M***, the nursing faculty, believed in a non-punitive attitude toward the students' writing difficulties and the poor quality of their written English. She did not feel that it would be fair to

expect “perfect” English grammar from students for whom English was not a first language. When asked what she thought about the students’ written communication competency, M*** expressed a real ethical dilemma:

Are we failing them because they do not write well – I do not think so. [...]. They are quite successful in the workplace. English is not their first language; writing is not their best skill. It is only for us to influence them as much as we can. A year is such a short time to ask someone to be perfect in English. I tell them in 400 [i.e., Introduction to Professional Nurse Practice] I will not penalize them on grammar.

Prof. M*** refrained herself from interfering with their language skills acquisition process. As a nursing/clinical faculty, she did not perceive her role as being that of teaching students how to write. Instead, she saw the college, particularly the English department which is in charge of assessing their English proficiency, as responsible for the situation, given their recommendation that “the college does not impose the writing component” on these students. Therefore, she opted to stay outside of the students’ writing problems and encouraged the students to support each other, instead, as in the case of a student who she “had a displeasure of failing” due to “English.” She reported that “the other Korean students in the course gathered around him and worked with him”. In less extreme cases, when she felt that “most of them do not understand the assignment,” her solution was to “find a [sample] paper, remove the person’s name and show them the paper.” Her justification for the use of the model approach with them was that this was how she herself learned, as she eventually revealed that “... until I saw a paper, I did not understand it.”

Her awareness of the difficulty involved in acquiring academic discourse generated feelings of empathy in her. At times, the sense of empathy went a bit far when she admitted to tolerating a practice that most instructors, as the EAP faculty will confirm, would characterize as plagiarism. Prof. M*** admits to not penalizing a student who turns in work written by someone else, as in the following instance:

...I could tell someone wrote this one student’s paper...because she cannot write an e-mail. *That is okay* [emphasis mine]...because someone had to teach all of us.

A definition of plagiarism, I heard, is if you write a paper for somebody. People I know plagiarize all the time. I do not want to penalize them because English is not their main language.

In Prof. M***'s view, it is only normal that someone for whom English is not the main language should ask someone else to write his or her paper; it is part of the learning process. Thus, for her, plagiarism is no longer seen as a crime but rather a venue for giving or receiving help on their papers. By using of students' model papers, encouraging peer collaboration "in Korean language," and minimizing direct instruction or expert demonstration, Prof. M*** claims to have witnessed students' improvement in reading and writing to "near perfection" level. When asked for her perspective on the students' academic readiness, Prof. S***, the English-for-academic-purposes (EAP) faculty, drastically differed from M*** both in her assessment of and approach to the students' academic English expression. Whereas Prof. M*** displayed feelings of empathy toward the students, by bringing them model papers to follow and encouraging peer collaboration, Prof. S*** exercised rigor toward them. Unlike Prof. M***'s self-distancing stance from students' problems with English, as an EAP faculty, Prof. S*** viewed her mission as being to make sure that the students acquired the academic skills they needed to handle academic work in nursing within the three weeks they were allocated.

The EAP teacher's "Crash and Burn" approach

Upon discovering that some of "the people coming in had no idea how to write a paragraph," Prof. S*** felt compelled to take drastic measures, namely firmness and rigor, to ensure that they were adequately prepared to do junior level academic work. Unapologetically, she confessed:

At the beginning they crashed and burned. I did not care that they crashed and burned. After a while you could see...the progress My goal was...I wanted to see the progress..., that they were starting to catch on.

For Prof. S****, that the students were skilled at nursing care did not imply that they were able to understand academic instruction, earn a BSN degree, and compete for employment in the United States.

Prof. S*** selected *Medical detectives: Essays on the strange and unusual* by Berton Roueché as the textbook for the students. This acclaimed textbook (Cancillo, n.d.) is a compilation of 25 detective stories of medicine extracted from different issues of *The New Yorker* from the late 40s to the 80s. Aided by this book of high relevance to nurses, Prof. S*** engaged her students in critical thinking and problem-solving exercises. Through this book, not only did the students acquire disease vocabulary and medical technology, but they also created sketches that they role-played to develop conversation skills. Prof. S*** also shared that she made sure students practiced writing research papers and were acquainted with the conventions of academic and research writing, such as summarizing, paraphrasing, synthesizing, quoting from outside sources and citing consulted works. Her ultimate goal being to make students independent thinkers and competent academic readers and writers, Prof. S*** did not encourage copying from a model or turning in work done by someone else. As a result, she felt a sense of betrayal when she discovered that, in nursing, the students could easily get away with what she thought was plagiarism, as the following encounter proved:

These three girls came in together; they have a paper to do. I knew they could barely put something together. I have seen it. I know these people cannot write. I know they can't write. I am thinking they are going to fail that paper The following weekend I saw two of them walking past me in my direction and I asked them, "How did it go?"...The [only] comment at the bottom of the paper was "your APA was off." Of course it was going to be off. They copied everything; they put it together. And they handed it in and they got a B for it.

From the tone of her voice, Prof. S*** was offended by the B grade assigned to a paper which she believed paper was "a cut and paste from the Internet". It was as if her entire efforts were in vain, since the nursing faculty did not notice the violation.

Researcher's global evaluation: without a doubt, there seem to be irreconcilable differences between the two faculty's perspectives on the place and handling of academic English discourse

in the BSN curriculum designed for foreign-born nurses at USCOL. By the same token, one could infer from both instructors' comments that the students were having enormous difficulties in understanding academic instruction in English.

2. Student expectations vs. the reality of US Academia's culture

The students' constructed responses to the interview questions strongly suggest that the BSN curriculum did not turn out to be what they had anticipated. Additionally, their responses shed some light on some of the problems raised by both Prof. M*** and Prof. S***, namely students' prior experience with English and the noted poor performance of academic tasks in English.

Varied prior English exposure. Whereas the biographic data indicates that all the participants fulfilled the Registered Nurse qualification, their experience learning and practicing English privately varied significantly (see Table 2).

Table 2: Student Participants' Demographic Surveys

N (number of participants) = 10; P1-p10 means (participants 1 through 10)

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Non-nursing Degree Earned	0	0	0	1	0	0	0	0	0	0
Length of Stay in U.S. (prior to enrollment)	18 mo	18 mo	48 mo	0 mo	0 mo	0 mo	0 mo	0 mo	36 mo	0 mo
English Learning in Korea	20 mo	N/A	N/A	6 mo	11 yrs	0 mo	36 mo	N/A	36 mo	78 mo
English Learning outside of Korea	24 mo	18 mo	15 mo	24 mo	0 mo	0 mo	0 mo	0 mo	36 mo	0 mo

Through their biographic data, it transpired that the majority of the participants had little familiarity with English instructional approaches in the United States prior to attending USCOL. All ten (100%) student participants were practicing RNs from South Korea, with more than half of the participants (60%) reporting that they had never lived in the United States prior to joining the current program whereas the other 40% said that they had resided in the US for a minimum of 18 months. Almost consistently with the residence reports, half of the participants (50%) reported that they had not learned English outside of Korea, whereas others had more than a year and half of English experience beyond the Korean experience. Details from one of the participants highlighted that English was taught since middle school (7th grade in US), 3 hours a week. It was also remarked that learning English on one's own was common practice in Korea, that "usually students had added one or two classes for English in school informally, and over half of the students took private classes in the institutions of tutoring." With the background in English described above, and upon passing NCLEX examination and an international English proficiency test, the participating RNs were accepted into the "RN to BSN" program in the Nursing Program at USCOL, where emphasis of different aspects of English generated conflict in their minds.

Korean nurses' perceptions' of "University English" versus "Basic English." Through written interviews, the participants seemed a bit frustrated by USCOL faculty's tendency to overlook their "basic" English ability while attaching high importance to mastery of correct grammar. Thus, she says:

In my experiences, English is habit. More use, more improve. Of course basic is always important. Most of Korean nurses are highly educated in Korea. Without high grade of English score, we cannot attend nursing program. Therefore, there is [i.e., there should be] no concern about basic knowledge of an English grammar.

This student believes that her knowledge of English will improve with practice, and teachers should not be worried about their grammar skills as long as they obtained the "high grade of English score" required to be accepted in the nursing program. One student tried to clarify the

confusion around the English proficiency expectations through a distinction between three types of Englishes: “University English,” “professional-based English,” and “Basic English.” From her understanding,

It seemed that *University English* [emphasis mine] and doing well at the hospital does not have so much in common to begin with. *University English* is usually based only on higher education, but in order to do well at the hospital requires specific *professional medical based English* and also *Basic English* to understand the patient’s need. It seems that *University English* was needed only to do well in higher education even it is beyond my level of English.

In the above assessment, the participant seems to be questioning the relevance of textbook-based English that she is being taught at USCOL to her profession. Rather, she believes “professional, medical based English and also basic English” are the kinds of English she needs “to do well at the hospital” and “understand the patient’s need”.

Reading and writing require high level English. One of the reasons why the use of textbooks was not very much liked by the students was that they contained “high level English,” which they found “beyond [their] level of English,” thus corroborating Prof. M***’s earlier observation that understanding English was a major problem for the Korean students. Many participants recognized the difficulty they encountered in understanding both textbook information and instructors’ lectures, which made their writing and reading experiences a struggle, as explained by this participant:

When I started this program I struggled with reading and writing even [if] I studied English for taking IELTS [International English Language Testing System] test. To read and write was really stressful....[...]. For this problem I tried to read the textbooks as much as I can. In our group, we had a meeting for research class. Every week we had to read whole chapter to do assignment. Most of classmates were struggled with to read whole chapter. [...]. We translated into Korean.

For this participant, “University English,” as they labeled it, was particularly seen as stressful because it involved reading and writing about “beyond-basic-English” textbook information.

The other university practice which the nurses found challenging was USCOL’s emphasis on research papers and the use of documentation (i.e. the use of sources and APA guidelines) as part of essay writing requirement. Requiring APA from students who admit that when preparing for attending college, “my greatest challenges was an essay that has to write about me and reason for attending college. [...]. I spent a long time to complete an essay,” seems to be counterproductive, especially since the instructor had already noticed that the students could barely write a paragraph. Predictably, working with too technical textbooks was likely to generate little enthusiasm among these registered nurses, who admitted to struggling with less demanding writing tasks and had hoped that passing board exams would spare them the writing ordeal.

While they do not seem to enjoy the writing that they are required to do in the BSN program, they themselves recognize having had little preparation in writing, as the exit English proficiency required before graduation from high school in Korea included no writing component, as one student clarified:

Teaching English [i.e., English instruction] is focused on the exam especially for college. This exam test listening, reading and grammar. There is no section for speaking or writing.

Without prior adequate preparation in reading from and writing about academic texts, they find USCOL’s focus on textbook-based English counterproductive. Rather than spending time trying to understand textbook information that is beyond them and writing papers that do not advance their medical knowledge, the students feel that that time could be put to better use through training to “listen or see real experiences from nurses in US”.

The students seem to be in unanimous agreement that emphasis on workplace communication is the approach best suited to their needs, as illustrated in this comment: “Before starting work, I wanted to familiar with environment of hospital ^{sic}. Even though I have variety experiences, ineffective communication could make me difficult for nursing care.”

Given the unanimously expressed wish to spend more time in hospitals, listening to and learning from actual interactions in English between nurses and patients, one might wonder whether the students would become more receptive to writing assignments that would involve them in hospital visits and compel them to practice writing in the same format as they would be required to do in real practice.

Researcher's global evaluation: Throughout the study, the students confessed their lack of prior preparation for the kinds of reading and writing they were required to do in the BSN program, which they found challenging and beyond their basic-level English. This leads one to ponder the appropriateness of USCOL's decision to exempt the students from the college writing and assessment requirement. Moreover, the students' concerns that the BSN curriculum did not give them opportunities to develop the skills that they would need in order to be successful in the hospital environment leave one wondering whether they understood how important reading and writing were in the acquisition of the language of a discipline.

The main problem seemed to be that as foreign-born professionals, conscious of their own limitations in delivering nurse care in an English speaking environment, the students were mainly preoccupied with effective communication at the workplace, which they did not think could be developed through USCOL assignments that asked them to “summarize and write after reading for many report” (Student comment), but rather more practice with “writing and reading for charting about patient” (Student comment). If they could have it their own way, they would rather “... know delivering appropriate nursing cares; [...] ; [...] listen or see real experiences from nurses in U.S.” (Student comment).

There seems to be an important mismatch between the students' expectations and the goals and

objectives of the BSN curriculum, so that the nursing program might consider rethinking the foreign-born RN to BSN program's operating principles. Also, based on the feedback provided by the nursing faculty and the students who participated in this study, USCOL's English department should revisit their decision to exempt the students from the writing requirements. The following summarizing table highlights the major discrepancies between the foreign-born nursing (FBN) students' needs and USCOL's academic discourse-based goals, which are highly supported by the EAP faculty (see Table 3).

Table 3: Diverging Beliefs between Academic English Faculty and Foreign-Born Nurses
 (See research question 2: How does a BSN nursing program's focus on academic writing agree or disagree with the writing expectations and beliefs of foreign-born nurses?)

Academic English Faculty Beliefs	Foreign-Born Nurse (FBNs) Beliefs
Writing promotes learning.	FBNs believe they already know their discipline; they rather need workplace English.
Text is an important resource and thinking tool.	FBNs see the workplace as an important resource for foreign-born nurses interested in working in foreign hospital settings.
Effective writing needs to be part of instruction.	Effective writing alone does not directly help FBNs to communicate with patients and doctors in the hospital.
Opportunities to write in every class develop good writers.	Opportunities to communicate in hospital settings develop effective nurses.
Practicing thinking and writing conventions of an academic discipline leads to effective communication in that discipline.	Practice listening, writing, and charting information leads to effective communication in the workplace.

The wide dissonance between the EAP faculty, the nursing faculty, and the foreign-born nurses in this study is indicative of the importance of close collaboration between all the entities involved, including the students. Apparently, the feeling that the type of writing that the students were required to do was above their level made them wonder why it was the only type they were being exposed to. Besides, they felt that since they had passed the English proficiency exam,

they should be given opportunities to acquire the communication genre that they would need in the hospital setting.

Implications and Recommendations

Self-perceived needs of foreign-born nursing professionals. According to this study, some missteps in USCOL's design and students' lack of a solid foundation in academic English prior to applying for the RN to BSN program may have led the students to develop negative feelings towards a textbook-centered curriculum with its emphasis on the development of academic reading and writing skills. Despite their being enrolled in the BSN program, the students' self-perceptions as professionals and the successful passing of the required exam seems to have given them the feeling that the curriculum was redundant and counterproductive because it focused on their prior area of specialization. Also, based on the students' concerns and the nursing faculty's comments, there is an implied expectation that, because the students already have expertise in the nursing field, less rigor should be placed on academic processes, especially writing and reading comprehension. Instead of condoning weaknesses, the faculty needs training in implementing strategies that are tailored to the unique needs of non-English speakers with academic expertise in their native language and demonstrated basic knowledge of English.

Suggested examples of academic writing strategies for professional non-native English speaking professionals. This study has revealed that culturally-sensitive issues, like plagiarism, need to be given serious consideration both during the program conception and its implementation. In the case of developing second language users, overreliance on words from the original text when writing research papers is to be expected; instructors need to provide them with adequate guidance and necessary strategies to develop their authentic voices. Freewriting, guided writing, paraphrasing, synthesizing, summarizing, outlining and quoting are some of the techniques that can help minimize plagiarism. Moreover, more effective teaching and testing approaches should be devised to help the Korean nurses in this study, and other non-English speaking RN to BSN candidates, benefit from USCOL's emphasis on the academic aspect of the BSN curriculum. Multiple revisions and more collaborative approaches, such as discussion boards, work in pairs,

group projects, and peer feedback may help reduce the grade anxiety and the tendency to plagiarize. The literature also shows that Professor M***'s idea of providing writing models is popular and widely accepted in healthcare environments.

The role of dialogue and collaboration in educating them. Dialogue needs to take place between the Academic English faculty, the nursing faculty, and the students to brainstorm a curricular reform best suited to the students' needs. Moreover, less threatening approaches need to be implemented to help them acquire the needed skills. Another important dimension to build in a curriculum for foreign-born professionals of non-English speaking background is the role of faculty collaboration and dialogue with students. USCOL might benefit from experimenting with a more inclusive collaboration model which would bring together EAP, EFL/ESL experts and disciplinary faculty. For example, rather than believing in a-one-size-fits-all approach, EAP faculty dealing with foreign-born professionals might gain important insights from nursing faculty (i.e., Bosher, 2001; Sobralske, 1990) who have gone the extra mile to figure out strategies and approaches that would work best with these nurses. Both disciplinary and academic English faculty can benefit from holding frequent conversations with the students concerning violations of academic integrity, such as plagiarism and cheating, to ensure that the students are aware of USCOL's policy and what consequences there are for committing such violations. Also, in the case of mature students like practicing nurses, seeking their opinion about curricular decisions might ensure that their particular needs are taken into consideration.

Some administrators might misunderstand the suggestion to invite students in the conversation as loss of power of decision. Well, nursing program administrators must be prepared to negotiate with a group of individuals who, given the short duration of their stay and the fact that they see themselves as professionals, may not be enthusiastic about spending their time and money learning content that they believe they already know and acquiring skills that they do find relevant at the workplace. On another note, whereas as nursing professionals, the participants have a valid reason to question the academic faculty's overemphasis on textbook instruction and academic English over job-related language skills, it is also important for them to understand that the terms of agreement for their recruitment includes mandatory coursework toward a BSN

degree, in which case a conventional academic curriculum and academic requirements cannot be circumvented.

As an academic discipline hosting a significant number of non-native English students, USCOL's RN to BSN program cannot afford not to have a well-articulated academic writing policy for its foreign-born student population. Both the writing samples included in this study and the testimonies shared by all the participants indicate that as foreign-educated and non-English speaking professionals, international nurses need to develop basic syntactic skills in English. If it turns out that the use of textbooks gets in the way of the nurses' openness to writing, as it has been unanimously raised in this study, perhaps the program needs to examine the faculty's approaches to the curriculum.

Conclusion: Can Academic and Workplace Englishes Co-exist?

This study confirms the observations that were made in previous studies of nursing students and their perceptions of the writing focus in their programs; academic writing seems to be the likeliest point of contention for nursing students. As it was raised by both the participants in this study and in Leki's (2003), Non-native English speaking nursing students do not seem to see the importance of spending time on practicing a writing genre which does not prepare them for the workplace environment. Besides, considerable evidence (Parks, 2000; Parks & Maguire, 1999) has shown that the documentation skills learned through nursing notes, while considered to be the most important writing genre in nursing, do not have to be acquired in the classroom; they can be successfully developed on the job by either "mimicking the style and language already on the charts" (Sitler, 2001, p. 22), consulting care plan reference books, asking colleagues for help, or obtaining mentoring from an experienced nurse or a clinical educator (Parks, 2001).

Some RNs, both foreign-born and U.S.-born, have gone as far as to dismiss documentation as unimportant and unnecessarily taking time from the most valued role of the nurse, which is to provide nursing care (Chevakasenook, Chapman, Francis, and Davies, 2006; Leki, 2003; Parks, 2000; 2001). Additionally, some students enrolled in a RN to BSN program found writing-to-

learn techniques, such as journaling diary keeping, highly regarded by academic English faculty, at odds with the ethic of their profession, which attaches a lot of importance to privacy and confidentiality, whereas others found them more or less irrelevant to the writing demands in their career (Sitler, 2001; Turner, 2004; Zhu, 2004).

This being said, foreign-born nursing (FBN) students may need to be brought to realize that practice makes perfect and that on-the-job training and learning, alone, may not be enough to give them the confidence they need as foreign-born individuals to communicate effectively with English speaking patients, colleagues, and doctors. They also need to be made to understand that their agreeing to become a part of the U.S. academic and professional community implied the acquisition of the skills necessary to interact fluently with members of the academic discourse community both in the college and in the hospital setting.

Finally, it is important to recognize that the main root of the academic and rhetorical problems encountered by the nurses in this study, i.e. those referenced and those researched here, was traced to the English instruction they received in their country of origin. Consequently, it is highly advisable that Asian secondary and university institutions rethink their English curriculum to ensure that their students graduate from these institutions fluent in all four language skills (speaking, listening, reading and writing) and effectively prepared to compete at a global scale.

Suggestions for Future Research

Whereas this study has allowed the Korean-born nurses, the EAP faculty, and the nursing faculty to share their opinions about USCOL's adequateness in preparing them for the role of nurse in U.S. hospital settings, these opinions only paint a partial picture of the students' preparedness and adaptation process. A more complete picture would need to take into consideration the views of and recommendations by physicians working with the nurses and the patients that they serve, as well as the cultural negotiations and challenges incurred by Korean nursing students working in multicultural academic and hospital settings in the United States.

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The need to investigate the Greek cultural perspective within the teaching practice of an ESAP class

Ourania Katsara

University of Patras, Greece

Bio data

Ourania Katsara is an EAP tutor in the University of Patras. She gained her BA in English Language and English and European Literature from Essex University, UK, an MA in Applied Linguistics, from Essex University, UK and a PhD in International Education, from the University of Brighton, UK. Her research interests include culturally responsive pedagogy and intercultural communication.

Abstract

The role of culture in teaching and learning has been well documented in the literature but there is little research regarding the link between formative assessment and culturally responsive pedagogy in the context of English for Specific Academic Purposes (ESAP) for Greek students. This paper discusses a survey which involves the analysis of self-assessment questionnaires which were used to identify parameters for appropriate pedagogy. The main findings of the survey indicated that Greek students' behaviour corresponding to Hofstede's cultural variables requires that culturally responsive pedagogy in the Greek context should be more accurately

defined. The paper finally offers some implications placing emphasis on the importance of the process of forming the conception of culturally responsive pedagogy.

Keywords: formative feedback, culturally responsive pedagogy, self-assessment, English for Specific Academic Purposes

1. Introduction

This paper discusses the first part of a survey discussing how formative assessment and feedback is used to show that national culture plays an important role in the Greek teaching context of an ESAP course.

A central argument is that cultural dimensions may help explain how educational systems reflect social attitudes and values (Hofstede, 1986, 1996, 1997). According to Hofstede's analysis, Greek cultural variables exhibit large Power distance Index or PDI: 60 expecting the teacher to be the expert in a teacher-centered classroom. The Greek culture moreover has strong uncertainty avoidance index or UAI: 112 implying that Greek students prefer explicit instruction and become frustrated by the concept of independent learning. In addition Greece has a culture low in individualism index or IDV: 35 and somewhat high in masculinity index or MAS: 57. Thus, Greek students exhibit high collectivism which indicates that students often form subgroups in class and maintenance of "face" is important avoiding conflicts. The masculinity index implies that the teacher's academic reputation and students' academic performance and excellence are dominant factors. These cultural dimensions were found in another a survey published by Ioakimidis and Myloni (2010), where it was found that when instructors violated students' cultural expectations, students' ratings became negative in their perception of the instructors' ability to maintain control and discipline in class.

A survey undertaken by Katsara (2002) indicated that Greeks require a specially targeted approach and proposed ways in which Greek students' problems when studying in UK universities could be addressed: in particular on the use of ICT to provide students with specific

pre-arrival information. In addition, Greek students' concerns related to misunderstandings of study methods and assessment, e.g. about exam criteria and getting information directly from the tutor or via a site specially designed for the ESP course could be the best support strategy to help them adjust to the new academic environment (Katsara, 2010). It is implied therefore, that Greek students come from a learning culture in which students are made nervous by situations which they perceive as unclear.

The Greek case shows that the use of feedback in learning is crucial and the work on formative assessment and self-regulated learning by Nicol and Macfarlane-Dick (2006) explains how students can have a proactive role in generating and using feedback. Besides this, learning and assessment are interlinked and placing emphasis on assessment for learning is formative assessment (Sadler, 1998). However, the role of culture is very important in developing socio-cultural approaches towards teaching and learning. Lantolf's theory (2000) indicates that teachers need to take into account students' needs placing emphasis on cultural variables. This teaching approach gives merit to culturally responsive pedagogy which can be defined as using cultural knowledge, prior experience and performance styles of ethnically diverse students to make learning more relevant and effective for them (Gay, 2002).

On this basis, the overall aim of the entire investigation is to better understand issues related to cultural responsive pedagogy applied in a Greek ESAP class and to examine possible ways to design teaching approaches to help students in assessment.

2. Literature Review

Learner centered teaching is a multifaceted concept comprising assessment using performance assessment, portfolios, and student self-assessment (O'Malley & Valdez Pierce, 1996). There is a need to evaluate both the educational process and research quality and productivity in order to ensure quality in higher education (Moed, 2008). Good teaching practices (Harvey 2008, García-Aracil & Palomares-Montero, 2010) should include useful evaluation techniques such as frequent collection of feedback on students' learning and conduct of action research in order to

gather information on how students learn and respond to teaching methodologies (Angelo & Cross, 1993).

In order to contextualise the study, this section presents a) issues of assessment in Higher education and b) the impact of meta-cognitive knowledge on language learning in the Greek academe.

2.1 Issues of assessment in Higher Education

Assessment in Higher Education is plagued by issues regarding formative and summative assessment. Formative assessment focuses on approaches to monitor students' progress during the learning process or assessment for learning (Chappuis & Stiggins, 2002). Summative assessment on the other hand is an assessment scheme, which is designed to determine students' academic development after using a set of materials in the assessment of learning (Biggs, 1999, Stiggins, 2002).

Whereas these two forms of assessment are administered by teaching staff, the notion of self-assessment is also implemented in many cases in educational situations. According to Klenowski (1995) self-assessment is "the evaluation or judgment of the worth of one's performance and the identification of one's strengths and weaknesses with a view to improving one's learning outcomes" (p.146).

The benefits of self assessment are many: when students reflect on their work, they learn to evaluate their level of understanding, effort and strategies (Eva et al., 2004). Journal writing also helps students engage in self-assessment practices (Chirema, 2007) while the techniques of peer assessment and portfolio assessment provide opportunities for self-reflection (Falchikov, 2005). Other advantages of self-assessment lie firstly in evaluation, a procedure itself beneficial to learning. Secondly, it raises both the teachers' and learners' awareness of perceived levels of abilities and it offers motivation in terms of goal setting. (Oscarsson, 1984). Lastly, self-assessment reinforces students' involvement in their own evaluation (Dickinson, 1987). In an

investigation of the effect of continuous self-assessment on student course grades, the actual assigned course grades were higher, which implied that continuous self-assessment raises students' awareness in their abilities(Lopez & Kossack, 2007).

However, some researchers noted that the use of self-assessment is not very useful. When first year students were engaged with self-assessment tasks, they managed to achieve good results with minimal work (Maguire, Evans & Dyas, 2001). Students also had underdeveloped concepts of what assessment was whereas teachers were using assessment forms merely to rank and mark students (Struyven, Dochy & Janssens, 2006).

The above literature review shows that the issue of self-assessment needs further analysis. The effect of different forms of instructional feedback on students' performance can be valuable and can be used to help them understand better their mistakes (Ross, 2006). Ross argued that the strengths of self-assessment can be enhanced through training students to assess their work whereas the weaknesses of this approach could be minimized through teacher action. Students noted that comments were the most useful form of feedback while praise positively affected emotion but was not directly conducive to learning (Lipnevich & Smith, 2009). Teachers should teach the underlying skills and concepts and not simply focus on how to answer specific types of test questions (Tienken & Wilson, 2001). This is also noted by Ruutmann & Kipper (2011) who argue that teacher training includes "knowledge of a variety of instructional strategies and the flexibility to change them" (p. 107).

2.2 Self-regulation strategies regarding Greek students' academic behaviour

Studies suggest that self-regulated strategies have a positive impact on learning behaviour and academic achievement while encouraging students' involvement in the process. (Hattie & Timperley, 2007; Santangelo, Harris & Graham, 2008). This finding is reinforced when metacognitive awareness is encouraged. According to Nett et al. (2012) there exist two major approaches towards the assessment of metacognitive strategy use namely externally observed measures of behavioural or psychological indicators and self-report methods. The former refer to measures relying on evaluation by others which may lead to misinterpretations and experiment bias. The latter refer to self- reports via the use of questionnaires. This method, provides

information about aspects of metacognitive disposition but has little predictive validity in relation to achievement outcomes. In addition, think-aloud protocols and diaries are methods, which promote self-reporting (Nett, 2012). Specifically, think aloud protocols provide opportunities for self-regulated learning to be observed while it occurs. However, this method permits only short-term processes to be evaluated (doing a specific task) as opposed to long-term ones (during the week preceding an exam). Diaries, on the other hand offers to students a chance to reflect on their learning behaviour. However, a good diary depends on the learner's writing ability (Nett, 2012).

A few studies in the literature are reporting on the effects of metacognitive knowledge on language learning regarding Greek students. Self-assessment as an alternative method of assessing the speaking skills of a group of sixth graders of a Greek state primary school was researched by Chalkia (2012). The results indicated that students were positive towards self-assessment and enabled them to notice their strengths and weaknesses improving thus their speaking skills. Students became aware of the nature of the speaking skill which "means not only giving accurate answers to the teacher's questions but most importantly the ability to handle turn-taking and managing the interaction effectively while participating in realistic conversations" (p. 232).

At higher education level, students' perspectives on a web-based self-assessment test about the theoretical part of a course named 'Introduction to Computer Science' in the department of Logistics in Technological Education Institute of Chalkida in Greece were analysed by Marinagi and Karbulasos (2012). Students submitted their answers with specific time limits having the correct answers displayed on screen after test submission. Wrong answers were accompanied with commentary on each answer and links to corresponding educational material. An additional set of questions was answered by students giving their opinion about the usefulness of this tool. Students' responses were positive and the average written performance on students' written final exam improved. Marinagi and Karbulasos (2012) concluded that this procedure enhanced students' motivation to study during the semester instead of studying a few days before the exam.

In addition, methods of self-assessment on the grading of written and oral assignments in Aristotle University of Thessaloniki helped students understand the course subject-matter whereas checklists helped them on the preparation of their assignments (Joyce, Everhard & Antonopoulou, 2007). The researchers noted that in the initial stages, patience and tolerance are required. Time is needed to explain the procedure to students building on feelings of trust. Such assessment procedures can lead to more effective lifelong learning.

The above literature review indicates that Greek students were positive on the use of self-assessment practices during the learning situation. However, there is little research into the use of Greek students' self-assessment responses as a basis for changing the learner activities in the syllabus or adopting different teaching approaches which correspond to students' needs especially if instructional goals for tasks are made part of learning activities (Geeslin, 2003).

Student self-assessment then is the focus of this study and can be the impetus for the implementation of this tool in the Greek educational system. By having students self-evaluate their assessment strategies, they could reflect on their assessment strategies and this procedure would allow them to have control over their performance. The research questions that informed this study are the following:

- a) How does self-assessment help in identifying Greek students' knowledge on assessment?
- b) How does self-assessment help examine the nature and importance of assessment issues worrying such students?

Focus was put on students attending the class and taking part in classroom activities in order to check whether self-assessment would help them become aware of their strengths and weaknesses when using examination strategies.

3. Research Design

3.1 Research methods

The methods adopted to carry out the entire research used qualitative and quantitative approaches. The stages of the survey were a) a self-assessment questionnaire and b) a set of tutorial sessions.

Students who attended the course were asked to complete a self-assessment questionnaire in May 2010 on what exam taking strategies they would employ when they sit exams. Questions 1-3 contained general information regarding gender, age and year of study. Questions 4-31 in the questionnaire were adapted from the study skills handbook by Stella Cottrell (1999). These questions were used to measure Greek students' knowledge base in assessment. These questions included 28 exam strategies. Question 32 contained information about students' preferences regarding the most important strategies when sitting exams. Questions 33-37 contained students' opinions on the usefulness of weekly testing and group work and students' suggestions for better exam preparation.

Sampling for the selection of students completing the self-assessment questionnaire was based on the notion of intensity and purposeful sampling proposed by Patton (1990). The researcher tried to select "information-rich cases manifesting thus the phenomena intensely but not extremely" (p.171). According to Patton "information rich cases in purposeful sampling are those from which one can learn a great deal about issues of central importance to the purpose of the research" (p.169). In the current study, the purpose of the entire research was to make use of a self-assessment tool for students attending classes in order to improve teaching procedures for Greek students. Thus, one would learn a lot by focusing in depth on understanding the needs of a small number of carefully selected students than by gathering information from a large sample of the whole population of students registered for the course. For this survey, the researcher gave out a questionnaire to students in class and therefore only those students who were attending the course could take part in the survey.

After the analysis of the data produced from the questionnaires, a series of tutorial sessions were held. The aim was to compare responses and to further interpret and explain human action and thought. It should be noted that validity in the research was achieved by ensuring cross validity and in particular, triangulation of methods using a combination of qualitative (tutorials) and quantitative (questionnaire) data and triangulation of theory, using different strategies and theoretical perspectives to examine the phenomenon under study.

The main objective of the entire project was to further research Greek students' behaviour regarding assessment (Katsara, 2010) and to explore ways to implement appropriate teaching approaches to impart this knowledge. For this study, the researcher tried out an approach developed by Butler and Winn (1995) and further elaborated by Pintrich and Zusho (2002) where learner independence and self regulation is promoted by using a specific sequence of activities. This procedure is explained below.

3.2 Setting: description of the ESAP course and activities

The ESAP course taught at the Department of Business Administration of Food and Agricultural Enterprises in University of Patras offers three hours per week during the second term amounting to 156 hours of instruction of English. The course is compulsory and students need to sit exams at the end of the term in order to pass the course. Students were taught via the course-book by Ian Mackenzie, *English for Business Studies*: a course for Business studies and economics students plus additional weekly activities. These activities include writing short paragraphs in groups and taking business vocabulary tests. In this way, the course is taught in a student-centred style.

A questionnaire might reveal whether students are in favour of portfolio assessment in an ESAP course. According to Kavaliauskiene et al. (2007) portfolio assessment is one means of alternative assessment and it is linked to instruction because it brings into surface weaknesses in the instruction process (pp. 151-155). In addition, the important feature of alternative assessment

is that learners participate in the evaluation of their own performance and the development of reflective thinking.

Specifically, students are taking a business vocabulary test every week. Students are motivated to do this task because it gives them the chance to prepare for the final exam and they are also assigned a certain number of points. The points earned for weekly testing comprise 15% of the points allotted to the course. By asking students to comment on the usefulness of this activity, the researcher could gather information on whether masculinity in Hofstede's terms is important for Greeks or not. As far as group work is concerned the researcher's main purpose is to develop critical reading skills. The researcher introduces criteria for evaluating the arguments, evidence and conclusions in a written text. The terminology used in the text is also reviewed encouraging students to use this terminology as they complete the tasks.

Two tasks are assigned to groups of students. The first one involves concept summaries. According to Hall (1997) a concept summary is an activity in which students select a single concept from a chapter and then their task is to discuss it and explain it in depth. Students are encouraged to clarify the concept by relating examples to explain it. For example in the ESAP class the students were asked to explain in depth a specific argument in the literature review of a paper in a scientific journal and then prepare a concept summary. This task enabled them to sharpen their critical thinking. Another activity was to assign students to prepare a written text which relates to the discussion of the data in a report. Their task was to note the implications drawn from the data. This activity also involves critical thinking since students must select the appropriate points needed to be discussed and then explain them by highlighting their significance to the topic under discussion. In addition students should reach to a consensus on what the main points are. The points earned for group work comprises 15% of the points allotted to the course. By asking students to comment on the usefulness of group work, the researcher could gather information on whether the collectivist dimension in Hofstede's terms is important or not.

Class activities were introduced in class in line with the model proposed by Butler and Winn (1995), elaborated by Pintrich and Zusho (2002) and further discussed by Nicol and Macfarlane (2006). In this model, in the first stage "an academic task is set by the teacher" (as cited in Nicol and Macfarlane, 2006, p.202). In this study students were asked to sit exams on Business vocabulary and do group work every week. In the second stage,

engagement with the task requires that the student draw on prior knowledge and motivational beliefs and construct a personal interpretation of the meaning of the task and its requirements (as cited in Nicol and Macfarlane 2006, p.202)

In this study, students had already sat exams on some aspects of English for General Academic Purposes (EGAP) in the first term and thus had some experience on test taking. In addition in the second semester students were assigned to complete a self-assessment questionnaire on what exam strategies they employ and to report on the usefulness of given tasks. In the third stage "the student formulates his/her own task goals based on this internal conception" (as cited in Nicol and Macfarlane, 2006, p.202).

In this study, students' responses on which exam strategies were the most important were useful in identifying students' goals. In the fourth stage,

these goals would help shape the strategies and tactics that are used by students to generate outcomes, both internal and externally observable (as cited in Nicol and Macfarlane 2006, p.202).

According to the model internal outcomes refer to cognitive and motivational changes occurring during task engagement whereas externally observable outcomes refer to tangible products. In this study, students' participation in the tutorial sessions helped to gather information about both types of outcomes. This procedure which involves monitoring interaction with the task and the outcomes generates "internal feedback" (as cited in Nicol and Macfarlane 2006, p.202). This feedback is produced by a comparison between current progress and desired goals. In this way,

students are led to re-interpret the task or adjust their internal goals or strategies. This process triggers their self-regulation. Finally in the fifth stage "external feedback to the student might be provided by the teacher, by a peer or by other means" (as cited in Nicol and Macfarlane 2006, p.202). In this study the tutorial sessions (a discussion of these sessions is beyond the scope of this paper) were held in the form of a dialogue because in this way students received initial feedback and also promoted the tutor to discuss with the students about that feedback.

4. Results

4.1 Participants' profile

Thirty four students completed the self-assessment questionnaire. The students' gender, age group and year of attendance are shown in table 1 below.

Table 1: Participants' Profile

Gender	Percentage %
Male	41.17
Female	58.82
Age Group	Percentage %
17-21	88.23
Over 21	11.76
Year of Attendance	Percentage %
1st year	85.29
5th year	14.70

The smaller sample of students who attended other years of study than the first might be due to the fact that the ESAP course is taught in the first term for first years and at the time the course is taught, other than first year students attend other courses.

4.2 Presentation and discussion of results from the self-assessment questionnaire

Students' full report on what exam strategies they employ is offered in appendix A. The percentages show that students reported that they always employ orientation strategies during an exam. They read the whole exam paper (41.17%), they follow all instructions (41.17%), they answer the correct number of questions in full (47.05%), and they spend time considering which questions are best questions for them. These strategies are self-regulatory metacognitive strategies referring to students' ability to plan their action including analysing the task and making decisions on specific behaviours.

Students also reported that they always check answers for mistakes (44.11%) and they also check answers to see if they make sense (44.11%). Students' responses show that many times they apply strategies linked to essay writing techniques that is know what a good answer looks like (44.11%), know the correct format and layout(41.17%) and develop a clear argument (41.17%). These strategies are cognitive strategies involving organisational skills. They also reported that they many times ask themselves what the examiner is looking for (38. 23%).

Sometimes they do not apply structure techniques that is know which style is appropriate (29.41%) using exam time poorly that is share time according to marks available (29. 41%). Sometimes they do not prepare themselves properly for the exam since they do not study their course material (32.35%) Sometimes they do not know the value of information selection when answering a question (32.35%). These findings show that students are not familiar with elaboration strategies and they do not relate the tasks to what they already know.

A closer look at the percentages explains the above findings. 38.23% of the students sometimes feel confident about what they are expected to do. This finding is important because it implies that students are not sure whether what they do is the appropriate thing to do. This behaviour shows that students' self-efficacy is low. According to Bandura (1997) self-efficacy represents the students' confidence in their cognitive and learning skills in performing a task. In addition, this percentage indicates that students need explicit instruction on appropriate exam taking

techniques corroborating thus the strong Greek uncertainty avoidance dimension (UAI: 112) in Hofstede's analysis.

Moreover, these findings correspond to other surveys' results. According to Lakasa (2008), the findings from a study undertaken in the University of Athens and University of Macedonia in 2008, Greek students lack study skills. 25.3% of the students reported that they are in favour of rote learning without understanding what they study while only 10.5% of them reported that they are trying to understand the material. Students also reported that they usually study what is considered basic in a book. 62.5% of the students identify the most important ideas in a book and 25% of them just study the introduction and conclusion. 37.5% of them never use or study references while 56.6 % never keep notes because they do not know how to do it. From the 43.4% of the students who do keep notes, one in two do not know how to deal with those notes and thus very few look at them a week before the exams.

Question 32 contained information about students' preferences regarding the most important strategies when sitting exams. Results are shown in table 2 below.

Table 2: Students' reports on most important strategies

Strategies	Percentage %
Read the whole exam paper	47.05
Follow all instructions	47.05
Check my answers for mistakes	41.17
Share time according to marks available	38.23
Check my answers to see if they make sense.	35.29
Plan my answers (in paper or in my head)	32.25
Use all available time	29.41
Spend time considering which are the best questions for me	29.41
Avoid irrelevant detail	29.41
Keep focused on the exam during the exam	29.41
Plan time so that I can check my answers	23.52

Use examples from the course materials	23.52
Keep strictly to answering the question set	23.52
Avoid flowery language	20.58
Develop a clear argument	17.64
Include introduction and conclusion	17.64
Answer the correct number of questions in full	11.76
Share time according to marks available	11.76
Spend time working out what all questions mean	11.76
Ask myself what the examiner is looking for	11.76
Feel confident	11.76
Find I have revised enough topics	11.76
Get to the point quickly	11.76
Know that correct format or layout	8.82
Know exactly how long I have for each question	5.88
Know what a good answer looks like	5.88
Know which style is appropriate	5.88
Find similar questions I have practiced	2.94

This question is very important because it reveals information regarding students' priorities. As it is shown, students consider that the most important strategy in an exam is proper orientation and time management reflecting that students focus on metacognitive planning strategies. This finding is very interesting because it mirrors the most common pitfall in examinations. Students do not actually realize that they do not know how to deal with exam papers. This corresponds to what Ross (2006:3) states that students interpret assessment criteria differently than their teachers focusing on superficial features of performance. It is implied that students should strive to use effectively both cognitive and metacognitive strategies. According to Phakiti (2003) the use of cognitive and metacognitive strategies had a positive relationship to the reading test performance for Thai university students.

In Table 3 below, Questions 33-37 are presented, contained students' agreement on the incorporation of weekly testing and group work in the syllabus and students' suggestions for

better exam preparation. Students were asked to rate each activity by circling the appropriate number: 1= strongly disagree; 2= disagree; 3= not sure; 4= agree; 5= strongly agree.

Table 3: Weekly activities

Agreement Activities	5	4	3	2	1
Business vocabulary testing	55.88%	38.23%	2.94%	2.94%	0%
Group work	64.70	26.47	8.82	0	0

These questions were useful in gathering information concerning students' opinions about weekly testing and group work. The percentages show that students noted that these activities should be incorporated in the syllabus. In the open-ended question students had the chance to clarify their point of view. Students' comments showed that students thought that weekly testing is useful because in this way they get a habit of studying each week and they also prepare for the exam since this material will be examined in the final test. This finding corresponds to Hofstede's cultural dimensions concerning masculinity, MAS (57). However, the archival data shown in table 3 showed that students were not committed to this task. Forty six students attended a three hour session every week. The tutor gave the test to the students at different times every week. Any student who missed the test during that time could not sit the exam another time during that three hour session. In this way, only those students who attended the whole session could sit the exam. An interesting finding is that only 2% of those took part in all ten tests throughout the semester. Table 4 shows the picture of students' attendance to the weekly tests.

Table 4: Weekly Test frequency

Test frequency	%
10	2
9	2

8	2
7	7
6	9
5	11
4	22
3	13
2	19
1	13

Students' comments also revealed that students' attitude towards weekly testing reflected a general mentality regarding students' study. Students reported that in Greek universities the majority of students study for the exams at the end of the term because they don't have the time during the term due to their heavy schedule. They reported that they finish their lessons at 9 pm every day and after that they are too tired to study. This finding shows that students indeed use metacognitive monitor strategies since they acknowledge that participation of such tasks is useful. They also explain that in response to their monitoring they recognize that university schedule is an inhibitor in administering a positive evaluation, by adjusting learning plans to improve their performance.

As far as group work is concerned students reported that this activity was perceived more useful compare to the weekly testing. This finding implies that group work appeared to be a facilitator in the educational process reflecting the low score of individualism (IDV: 35) for Greece. Their comments showed that students thought that via these activities students learn to co-operate and they also learn by discussing their mistakes with their classmates. This source of external feedback to students- their peers is also identified by other researchers (Nicol & Boyle, 2003). In the current study students' comments revealed that students talked about their mistakes in a language that is more understandable since it is easier to accept comments for assignments from your classmates rather than your tutors. Moreover this finding corresponds to the argument that when students generate feedback, this procedure promotes self-regulation. In addition, they reported that they prefer to choose their own partner and not the one chosen by the tutor because sometimes students fail to take the assignment seriously. This finding corroborates Hofstede's

cultural dimensions on collectivist societies like Greece where the value of maintaining "face" in in-groups is important.

There were, however, a few comments indicating that both activities are not useful since some students lack linguistic capabilities and it was inevitable that they would fail the course.

5. Conclusion

Greek students proved willing to self-assess their exam –taking techniques. The findings from the self-assessment questionnaires revealed that Greek students recognized that they are not properly trained to deal with exam papers. Greek students' ratings showed that their answers are not consistent. Some (38.23%) reported that they do not feel confident employing certain strategies corroborating thus that they need specific instruction on how to apply exam taking techniques. This finding reflects the high score in strong uncertainty avoidance. It also indicates that it is important to identify students' perceptions of learning. Langer (2002) contends that the way in which a student perceives assessment will determine the way he/she responds to it. The main implication is that there is a need to explain to students the didactic purposes of these assessments before they engage in them. In this sense, for Greeks, culturally responsive pedagogy means clarifying teaching procedures in a University context. This is also suggested by Sleeter (2011) who argued that there is a need for more accurate views of the nature of culturally responsive pedagogy.

In addition, students rated weekly class-based activities giving more credit to group work. This finding indicated that Greeks prefer collective work. Sambwell, McDowell & Brown (1997) state that "conventional" assessment practices deal with factual knowledge testing such as multiple choice, essay tests and end-of-course examinations. Students reported that weekly testing is not as useful as group work because of preparation-time limitations. An explanation for this might be that students may have well-established ways of learning that they do not wish to change because it may be convenient for them, or simply that students lack the ability to effectively use cognitive and metacognitive strategies when dealing with examination papers. This finding indicates that

for Greek students, promoting positive community-based relationships should be given top priority. This reflects culturally responsive pedagogy principles indicating that creating caring classrooms involves situations where students are accountable for high quality academic work (Weinstein et al., 2003).

The main thrust of information from this research indicate that self-assessment sheds light on characteristics and factors which could account for national differences on students' self-assessment. The findings reveal that there is a need to approach or adopt strategy training in Greek Higher Education by considering both the specific context of Language for Academic Purposes and taking into account students' perceptions reflecting which areas students need to be helped most (Psaltou-Joyce & Kantaridou, 2009). The research procedure itself helps in building on existing literature on culturally responsive pedagogy and how it can be implemented in teaching situations. It is hoped that the results located in Greece might be useful for other English tutors who teach English for General and Specific Academic Purposes in other countries wishing to design approaches on how to teach students how to use appropriate strategies when engaging in examination practices. Those tutors could undertake similar research and based on the applicability of Hofstede's cultural dimensions produce a comparative corpus of data which might be valuable helping them to identify a set of common cultural features. In addition, these common cultural features could be used to conduct research on how a given conception of culturally responsive pedagogy derives from or fits the specific cultural context of students (Sleeter, 2011) and to verify data validity.

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Appendix A

Exam Strategies

Strategies	Always %	Many Times %	Some times %	A few times %	Never %
Read the whole exam paper	41.17	23.52	26.47	5.88	2.94
Follow all instructions	41.17	35.29	17.64	2.94	2.94
Answer the correct number of questions in full	47.05	35.29	14.70	2.95	0
Plan time so that I can check my answers	32.35	29.41	26.47	5.88	5.88
Know exactly how long I have for each question	14.70	20.58	23.52	29.41	11.76
Share time according to marks available	2.94	29.41	29.41	26.47	11.76
Use all available time	47.05	50	2.94	0	0
Read each question twice	38.23	32.35	20.58	5.88	2.94
Spend time working out what all questions mean	17.64	58.82	20.58	2.94	0
Ask myself what the examiner is looking for	14.70	38.23	14.70	23.52	8.82
Spend time considering which are the best questions for me	44.11	41.17	14.70	0	0
Feel confident	17.64	32.35	38.23	11.76	0
Find similar questions I have practiced	17.64	52.94	20.58	8.82	0
Find I have revised enough topics	14.70	35.29	23.52	26.47	0
Know what a good answer looks like	8.82	44.11	35.29	11.76	0
Know which style is appropriate	8.82	35.29	29.41	17.64	8.82
Know the correct format or layout	14.70	41.17	26.47	14.70	2.94
Plan my answers (in paper or in my head)	17.64	38.23	20.58	17.64	5.88
Develop a clear argument	20.58	41.17	26.47	11.76	0
Use examples from the course materials	8.82	38.23	32.35	20.58	0
Keep strictly to answering the question set	23.52	38.23	32.35	5.88	0
Avoid irrelevant detail	23.52	35.29	29.41	8.82	2.94
Get to the point quickly	14.70	52.94	20.58	8.82	2.94
Avoid flowery language	32.35	26.47	23.52	11.76	5.88
Include introduction and conclusion	38.23	38.23	8.82	14.70	0
Keep focused on the exam during the exam	52.94	41.17	5.88	0	0
Check my answers for mistakes	44.11	35.29	17.64	17.64	2.94
Check my answers to see if they make sense.	44.11	44.11	8.82	2.94	0



A Formulaic Sequences List for Prospective EFL Business Postgraduates

Wenhua Hsu

I-Shou University, Taiwan

Bio data

Wenhua Hsu is currently teaching at I-Shou University in southern Taiwan. She holds a PhD in the field of ESP from the University of Essex, UK and MBA from Kansas State University, USA. Her interest includes frequent academic/sub-technical and lay-technical vocabulary as well as lexical bundles in specialized fields.

Abstract

This paper describes the attempt to establish a pedagogically useful list of formulaic sequences for EFL business postgraduates, called the Business Formulaic Sequences/Formulae List (BFL). The BFL was compiled from a corpus containing 7.62 million tokens of 2,200 business research articles (RA) across twenty business sub-disciplines. Through the program *Collocate* and manual checking, five criteria were applied: frequency, range, dispersion, meaningfulness and grammatical well-formedness. A total of 1,187 items of 2-word to 6-word sequences were selected and they accounted for approximately 29.53% of the running words in the Business RA Corpus. Furthermore, this research explores how the BFL relates to the business field and how the formulaic sequences are used in the target register. For business research novices, the present BFL and the BWL (a business word list common to business subjects) (Hsu, 2011b) may be

mutually complementary in providing a pathway to business academic discourses. The present procedure also applies to other academic subjects for the establishment of a discipline-specific phrase list.

Keywords: Formulaic sequences/formulae; lexical bundles

1. Introduction

In Taiwan, Mandarin Chinese is the official language. However, at the postgraduate level, non-English majors are required to read English-medium international academic journals because they provide the most up-to-date information. Therefore, Taiwanese college graduates who intend to pursue further study, either in domestic postgraduate schools or in English-speaking countries, may need adequate English vocabulary in order to read research articles in their fields of specialization.

According to Hsu (2011a), in an EFL context like Taiwan, business majors may need to have a vocabulary of 6,000 to 8,000 word families plus proper nouns in order to command 95% to 98% lexical coverage for reasonable comprehension of an English-medium business research article (RA). To bridge the lexical gap between business students' limited English vocabulary and the vocabulary demands of business RAs, Hsu (2011b) identified 426 of the most frequent business words and compiled a Business Word List (BWL), which may boost additional 5.66% lexical coverage beyond the first 3,000 most frequent word families. To reach 95% lexical coverage for adequate understanding of a business RA, the BWL contains the next set of vocabulary to learn after the 3,000-word level for EFL business postgraduates.

In spite of being useful in terms of occurring frequency, a list of individual words common to business subjects is still not enough for non-English-majoring students. This research aims to go beyond single words to compile a Business Formulaic Sequences/Formulae List (BFL) used in the business academic register as complementary materials to the BWL.

2. Literature review

2.1 Formulaic Language

Language is not only made up of individual words but also a great many multi-word sequences. Some words frequently co-occur with other words and form relatively fixed word sequences. This phenomenon is generally referred to as formulaic language. Formulaic language is ubiquitous and makes up a large proportion of any discourse (Nattinger & DeCarrico, 1992). In their study on the idiom principle and the open choice principle, Erman and Warren (2000) estimated that various word sequences constituted 58.6% of the spoken English discourse in their data and 52.3% of the written discourse. They thus made the claim that more than 55% of any typical text comprised formulaic language. Altenberg (1998) calculated that 80% of the words in the London-Lund Corpus formed part of multi-word sequences. These findings concur with Sinclair's (1991) observation that language has phraseological components and large stretches of language consist of "a large number of semi-preconstructed phrases that constitute single choices" (p.110). To tackle the puzzle of native-like selection, Pawley and Syder (1983, p.214) put forward the possible explanation that adult native speakers have thousands of "lexicalized sentence stems" and other formulaic strings at their disposal and suggested that L2 learners may need to get familiar with a similar number of them for native-like fluency.

Despite the prevalence and importance of formulaic language, there has hitherto been little consensus on what word sequences are counted as formulaic language, since researchers differ in what they consider formulaic. As a result, under divergent interpretations of the construct, recurrent multi-word sequences have been labeled in a number of ways: *lexical bundles* (Biber et al., 1999; Biber, Conrad, & Cortes, 2003, 2004, Cortes, 2004; Hyland, 2008ab), *clusters* (Scott, 1996), *formulaic sequences/formulae* (Martinez & Schmitt, 2012; Schmitt & Carter, 2004; Simpson-Valch & Ellis, 2010; Wray, 2002, 2008), *sentence stems* (Pawley & Syder, 1983), *fixed expressions* (Moon, 1998), *prefabricated units/prefabs* (Bolinger, 1976; Cowie, 1992) and *lexical phrases* (Nattinger & DeCarrico, 1992) and *collocations* (Altenberg, 1993; Howarth, 1998) as well as *n-grams* (Stubbs, 2007) in the field of computational/corpus linguistics.

Among various types of formulaic language, Wray's (2002) definition for formulaic sequences seems to meet our concern: namely, to identify word sequences that constitute a phrase or a pattern of use as an individual lexical item for inclusion in ELT. Wray (2002) defined a formulaic sequence as "a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar" (p.9). In this definition, wholeness is one of the characteristics of a formulaic sequence. Fixed word sequences are stored and used as unanalyzed, whole units. In other words, this language processing mode (i.e. holistic processing) involves a holistic retrieval of lexical items of varied sizes from memory. Pawley and Syder (1983) asserted that formulaic language is easier to process and use than creatively-generated language. In view of such an advantage, it can be inferred that a familiarity with a host of formulaic sequences may enable language learners to reduce processing load and facilitate fluency in both language reception and production.

2.2 Multi-faceted nature of formulaic sequences

Formulaic sequences are multi-faceted from the range of ways in which they have been categorized. Some researchers classify them according to form, function or usage, while some researchers parse them based on formulaicity (the extent of fixedness) or substitutability of constituent elements. Still, some other scholars place them along continua of idomaticity (semantic non-compositionality). Due to this variability, we will refer to Wray (2002), Lewis (1993), and Biber, Conrad and Cortes (2004), and make some modifications to build our own operational measures for relatively fixed word sequences.

Wray's (2002) definition for formulaic sequences includes both continuous and discontinuous sequences. This means that there may be insertions in a sequence (e.g., *from ~ to ~, between ~ and ~, significant at the ~ level, ~ and ~ respectively*). However, substitution of items within a sequence (e.g. *more/most/less/least likely to; look for/out/like/after/at/into*) and transformations of a sequence (e.g., *focus on/the focus on/with a focus on; depend on/the dependence on/be*

dependent on) are regarded as different multi-word combinations, because they would engage in “generation or analysis by the language grammar” (p. 9). According to Grant and Bauer (2004), if a formulaic sequence held in memory is verbatim (i.e. the sequences are stored with little possibility of substitution or transformation), then the number of formulaic sequences is rather infrequent. As such, we did not strictly adhere to Wray’s criteria. To avoid a possible omission of some recurrent word combinations, we allowed slight insertion, inflection, substitution and transformation in the compilation of the BFL.

Lewis (1993) observed that in some cases of formulaic expressions, “the meaning of the whole is not immediately apparent from the meanings of the constituent parts” (p. 98). This non-compositionality denotes that the meaning as a whole cannot be derived from the component words. Non-compositional formulaic sequences are semantically non-transparent/opaque. Lewis called the varying degrees of compositionality “a spectrum of idiomativity” (*Ibid.*).

Along the axes of idiomativity and substitutability of component words, Cowie (1998) and Howarth (1998) suggested a fourfold classification of multi-word sequences ranging from least to most idiomatic: free/open combinations, restricted collocations, figurative idioms and pure idioms. Free combinations deliver the literal meanings of their lexical components, with the highest degree of semantic transparency and substitutability. Restricted collocations are word combinations in which some substitution is possible, but with some restrictions on substitution. Specifically, at least one word has a non-literal meaning and at least one word is used in its literal sense, and the whole combination is transparent (Cowie, 1998). Figurative idioms “have metaphorical meanings in terms of the whole and have a current literal interpretation” (Howarth, 1998, p. 28). Pure idioms, with the lowest degree of semantic transparency and substitutability, cannot be predicted from the individual meanings of their constituent parts.

From these four types of word sequences based on the scale of idiomativity, we would relinquish free word combinations for inclusion in the BFL. Because of high compositionality in meaning, they can be created unlimitedly but may not be frequent enough to be formulaic.

Formulaic sequences are also referred to as lexical bundles by some researchers. However, the scope of formulaic sequences is wider than that of lexical bundles. Lexical bundles are contiguous words that occur repeatedly together. They do not cover non-contiguous sequences and do not include sequences of two words either. Some researchers presume that many of 2-word bundles do not have a discourse-level function and exclude them from the research focus (e.g., Biber, Conrad & Cortes, 2004; Hyland, 2008ab). Most lexical bundles are semantically transparent (e.g., *as can be seen, if you look at, in the form of the*). However, they are usually structurally incomplete and may even cross the borderline of two neighboring phrases (e.g., *an important role in the, to the fact that, is one of the*). Despite so, they are pervasive and have identifiable discourse functions, which merit investigations and can be applied to analyses of other types of multi-word sequences.

Concerning the functions of fixed word sequences, Biber, Conrad and Cortes (2003, 2004) and Cortes (2004) designed a categorization scheme for lexical bundles in university spoken and writing registers. There are four core categories in their taxonomy: referential bundles, discourse organizing bundles, stance bundles and interactional bundles or engagement bundles in Hyland's (2008ab) terminology. Referential bundles perform an ideational function (e.g., *one of the things, the nature of the*). Discourse organizing bundles are concerned with the organization of the text such as contrast, inference and focus (e.g., *on the other hand, as a result of*) or signal transition (e.g., *in addition to the, with respect to the*). Stance bundles express attitudes that frame some propositions as in the cases of '*are more likely to*' and '*the fact that the*'. Interactional bundles are used in conversation to express politeness as in '*Thank you very much*' and inquiry such as '*What are you doing?*' The functional categorization of lexical bundles is pedagogically helpful and can be utilized in the practice of the present BFL.

As to subject-related formulaic sequences, an examination of the individual lexical components and their relationship with the subject is inevitable. Chung and Nation (2003, 2004) created a 4-point rating scale to measure the strength of the relationship of a word to a particular specialized field and applied this approach to an anatomy text. They defined non-technical vocabulary as a word with a meaning that has no particular relationship with or is minimally related to the field

of anatomy, and technical vocabulary as a word with a meaning that is closely related or specific to the field of anatomy. Fraser (2009) further divided the technical/sub-technical distinction into fully-technical, lay-technical, crypto-technical and academic categories. In his categorization, fully-technical vocabulary consists of words with meanings which are conspicuously technical and are not likely to be known in general language. Lay-technical words are the terms which have an obviously technical sense but whose meaning is basic and familiar to people without much knowledge of the field. Crypto-technical vocabulary involves polysemy and its multiple meanings may be obscure to non-specialists. Academic words perform some rhetorical functions in structuring the text of academic articles. Baker (1988) considered that academic vocabulary is one type of sub-technical vocabulary, which encompasses a large number of discourse-organizing words and words signaling the writer's intentions or evaluations. The best source of examples for this type of vocabulary is Coxhead's (2000) interdisciplinary Academic Word List (AWL).

On account of a multiplicity of multi-word sequences, it is difficult to make a complete list, but it may have a practical sense if the corpus is derived from the direct sources of learners' needs. Then the recurrent word sequences selected within would reflect how often they are likely to be encountered in the target field. However, before screening, selection criteria would influence what formulaic sequences are to be filtered.

2.3 Selection criteria of formulaic sequences

Multi-word sequences have been retrieved in a variety of ways. Among them, two fundamental criteria have often been considered: recurrence and dispersion.

The pre-determined cut-off values for frequency and distributional range have been arbitrary, subject to researchers' goals. Biber et al. (1999) adopted a very flexible cut-off point at recurring at least ten times per million words and in five or more texts. Cortes (2004) was more conservative and opted for 20 times, when comparing the frequencies and functions of lexical bundles used in published and student disciplinary writing in history and biology. Biber, Conrad

and Cortes (2004) were even more cautious in choosing lexical bundles from their corpora by setting a relatively high cut-off frequency at 40 times per million words. Following Biber et al.'s approach, Hyland (2008ab) increased the frequency cut-off point from a minimum of 10 times to 20 times per million words and decided on the breadth of lexical bundles at occurring in at least 10% of the texts in the sample, when selecting lexical bundles in his 3.5-million-word corpus of research articles, PhD theses and Master's dissertations. Hyland (2008a) found that the frequencies drop dramatically when strings are extended to five or more words.

Present-day phrase extractors (e.g., the software *AntConc*, *KfNgram* and *Collocate*) ensure the properties of frequency and multi-text occurrences. Nevertheless, purely based on frequency, an n-gram program may generate long lists of multi-word sequences, part of which have no meanings (e.g., *that do not*, *which is the*) or part of which are grammatically ill-formed, as in the instances of *the greater the*, *to changes in the*, *found in the*, and *of the two types of*. So far, there has been no easy way to automatically retrieve grammatically well-formed or meaningful word sequences.

In the selection of the most frequent collocations from the British National Corpus spoken section, Shin and Nation (2008) proposed a set of criteria, one of which was “grammatical well-formedness” (p. 341) and involved a great deal of manual checking. They targeted a sequence of words which do not span “immediate constituents” (Bloomfield, 1933, p. 161) (i.e. two neighboring structural units/phrases), because a grammatical well-formed word sequence is a comprehensible unit. For instance, ‘*the fact that*’ is more understandable than ‘*fact that the*’, since the retrieval of the former follows the dividing principle of “immediate constituents” (*Ibid.*).

To tackle the problem of teachability, Simpson-Vlach and Ellis (2010) proposed the idea of Formula Teaching Worth (FTW) by incorporating mutual information (MI) into their filtering procedure in lieu of a purely frequency-based approach. MI is a statistical measure of cohesiveness of words, which signifies collocational strength and a degree of idiomticity (Stubbs, 1995). Therefore, recurrent multi-word combinations with a high MI score are more

likely to be meaningful and hence pedagogically useful. Simpson-Vlach and Ellis concluded that the FTW that combines frequency and MI may provide teachers with a basis of prioritization, when judging word sequences in terms of whether they are worth teaching.

In summary, the review of previous studies has helped to shape our own approach to selecting recurrent word sequences for inclusion in the BFL. The present study targeted a subset of multi-word sequences, which have the following properties. They are (1) frequent, (2) contiguous or semi-contiguous word sequences, (3) a whole unit with a cohesive meaning, (4) semantically transparent or opaque, (5) structurally fixed or semi-fixed, allowing inflectional changes, slight substitution and transformation, and (6) have distinct discourse functions.

The purpose of this research was twofold: First, to obtain a wider view of language from a stock of single words to recurrent multi-word sequences, an effort was made to develop a formulaic sequences list across business subject areas, the so-called BFL. Second, an attempt was made to analyze the BFL in terms of importance and subject relatedness. This research sought to answer the following three questions.

1. What high-frequency multi-word sequences make up the Business Formulas List (BFL)?
2. How important is the BFL in the Business RA Corpus (specifically, text coverage in %)?
3. How does the BFL relate to the business academic context?

3. Research method

3.1 The corpus

The corpus contained 2,200 research articles (RAs) across twenty business subject areas (hence twenty sub-corpora), totaling 7.62 million running words. All the sampled business RAs were derived from the top forty business academic journals recognized by the *Financial Times* and *Business Week* and were downloaded from electronic databases purchased for educational and research purposes. Each sub-corpus consisted of 110 business RAs with an approximately equal

number of tokens (ca. 3,463 words each article), after eliminating references, figures and tables. Table 1 shows the composition of the Business RA Corpus.

Table 1: Composition of the Business RA Corpus

	Business sub-disciplines	Tokens		Business sub-disciplines	Tokens
1	Accounting	373,554	11	International business	382,688
2	Auditing	376,034	12	International trade	380,621
3	Business administration	384,718	13	Investment	382,831
4	Business education	381,395	14	Management	379,440
5	Business information system	383,041	15	Marketing	390,042
6	Business law	375,725	16	Money & banking	377,701
7	Economics	381,194	17	Organizational behavior	386,620
8	Entrepreneurship	383,101	18	Production & operation	383,039
9	Finance	379,538	19	Real estate	386,190
10	Human resources	382,996	20	Risk management & insurance	369,533

3.2 The procedure

The computer program *Collocate* (Barlow, 2004) was purchased to retrieve continuous word sequences from the Business RA Corpus. In the literature review of lexical bundles, 2-word items have often been excluded in order to keep the data set to a more manageable size. For the sake of completeness, strings of 2 to 6 words were decided in this research.

The frequency thresholds in previous studies ranged between 10 and 40 times per million running words. To prevent important multi-word sequences from being removed at the very beginning, a less rigorous criterion was set to start with, namely 10 times per million tokens (i.e., a minimum of 76 times, as far as 7.62 million words were concerned). Our goal was to identify the recurrent word sequences that are widely used in business RAs. If formulaic sequences occurred with a very high frequency but appeared in one or two business subject areas or in one or two papers, they would not be included in the BFL. These may have been attributable to a

particular business case or an individual writer's habitual use of certain phrases. In consideration of formulaic sequences in widespread use, two decisions were made: 50% distributional range across subjects and 10% dispersion across texts of the same subject as selection criteria for the BFL. The cut-off values for range and breadth of use were established at having to occur in at least 10 out of 20 business subjects and in at least 11 out of 110 RAs in each subject/sub-corpus. The decisions were admittedly arbitrary but relatively in agreement with the practice of bundle selection in the literature.

Another consideration given to the BFL was meaningfulness. The multi-word sequences retrieved must have meanings and can be learned as a whole. This principle would make the BFL comparable to a list of individual words. Before manual checking for meaningful units, the measure *Mutual Information* was used to do the initial screening.

As mentioned above, Mutual Information (MI) shows the degree of mutual dependence of two or more words, which can be used to filter out free word combinations. A high MI score means a stronger association between two or more words, while a lower score indicates that their co-occurrence is more likely due to chance. Multi-word sequences with high MI may thereby have more easily identifiable meanings and may thus be suitable for teaching. With the help of the ordering function in the *Collocate* software, those candidate word sequences at the top of the ranked lists by MI may be close to being integral in meaning. As a consequence, those word sequences with both high frequency and high MI were first and foremost chosen while those appearing at the bottom of both frequency and MI rankings were eliminated. Multi-word sequences with the MI score lower than the default value of the software (=3) were removed at this phase. They were, for example, *with which the*, *to that of*, and *to be of*.

After repeated automatic retrievals, meaningfulness and grammatical well-formedness guided manual checking. A great deal of analysis was carried out by the researcher and her colleague to sift comprehensible units from those straddling two immediate constituents but having an MI value higher than 3. The Cohen's Kappa statistic, used as the inter-rater reliability test returned a value of 0.92, reaching a highly acceptable level of agreement between two raters.

It is worth mentioning that in the process of manual vetting, we found that the discarded bundles, having no meanings (e.g., *that as the*, *with which the*, *it is of* and *that is the*), had MI scores lower than 6. This may be an important finding for phrase extraction programmers but beyond the current research focus.

3.3 Data processing

For pedagogical purposes, three major modifications were made in the compilation of the BFL. One was modified for similar word sequences that appeared in different inflected forms. They were combined, together with an accumulative frequency of occurrence, to form a single item with their lemma as the representative form. An example is *be likely to* (a sum of 1,529 times)=
is likely to (occurring 684 times)+
are likely to (392)+
was likely to (203)+
were likely to (186)+
will be likely to (64). The assumption was that focusing on a single entry at a time (*be likely to* in this case) may be simpler for EFL students to learn at the onset. After some familiarity with its meaning (something probable) and core pattern (followed by an infinitive), its variants may also be acquired with more exposure later.

Another revision was undertaken for overlapping word sequences. There were two degrees of overlap: complete overlap and partial overlap. For instance, '*due to the fact*' appearing 337 times came from the longer bundle '*due to the fact that*' with 337 occurrences. The identical frequency confirms that they overlapped completely. The longer expression '*due to the fact that*' instead of '*due to the fact*' was included in the BFL, because, from a pedagogical perspective, the former having the subordinate conjunction '*that*' reminds learners of the use of a noun clause as a complement of *the fact*.

Partial overlap refers to a situation where a longer phrase was the combination of two or more shorter phrases, each of which could occur as an independent subset of the longer one. Take '*due to the fact that*' as an example again. One of its subset '*due to*' appeared 2,597 times, while the other two '*the fact*' and '*the fact that*' appeared 1,193 and 1,152 times respectively. The

prepositional phrase ‘*due to*’ may have been connected with other nouns or noun phrases other than ‘*the fact that*’. ‘*Due to the fact that*’ was one of the combinations in connection with *due to*, as a substantial reduction of frequency from 2,597 times to 337 times has shown. By inference, ‘*the fact*’ may not need to appear with ‘*that*’ each time because it can be a subject of a verb, an object of a verb or a preposition. ‘*The fact that*’ is one of the extended phrases in association with ‘*the fact*’. ‘*That*’ in ‘*the fact that*’ works as a noun clause marker. The noun phrase ‘*the fact that*’ in combination with a noun clause performs the same functions as a noun does. Since these three phrases (*due to, the fact that* and *due to the fact that*) can stand alone as a comprehensible and meaningful unit, they were separately compiled into the 2-word, 3-word and 5-word phrases in the BFL. However, ‘*the fact*’ is a free word combination, so it was decided not to be included in the BFL.

To make the BFL more comprehensive and compact, the other modification made was the combination of a major word sequence and its other possible but less frequent word sequences. The examples are *based [on/upon], even [if/though], ~results [show/indicate/suggest] that, (be) [positively/negatively/closely/directly] related to*, and *(be) available [at/for/in/to]*. In each instance, the first word in the square brackets represents the most frequent form of similar word sequences, while the second and the third words stand for the second and the third most frequent forms. The parentheses beside the verb-be signify its possible omission. In the present corpus, frequently-occurring past participle phrases came from a reduction of an adjective clause by omitting the relative pronoun and the verb-be form and were used as a post-nominal adjective phrase to modify the preceding noun. When the verb-be was added, they formed an independent clause/sentence. For the sake of thoroughness and flexibility, they are presented as ‘*(be) + past participle + preposition*’, as in the cases of *(be) derived from* and *(be) associated with*.

To sum up, the selection of formulaic sequences for inclusion in the BFL involved the following sequence: (1) frequency (a minimum of 10 times per million words for initial screening), (2) range (across over a half of business sub-disciplines, that is, at least 10 out of the 20 subjects), (3) dispersion (distribution in more than 10% of the texts on the same subject, that is, 11 out of the 110 RAs per subject), (4) cohesiveness of words for meaningfulness (MI greater than 3), and

(5) grammatically well-formed units. Steps 2 and 3 resulted in an effective frequency threshold at having to occur over 114 times; meanwhile Steps 4 and 5 led to effective MI scores greater than 6.

4. Results and discussion

RQ1: What high-frequency multi-word units make up the Business Formulas List (BFL)?

A total of 1,187 formulaic sequences of 2 to 6 words were chosen and formed the Business Formulas List (BFL). They were, in turn, 316 two-word, 612 three-word, 198 four-word, 50 five-word and 11 six-word phrases. For a glimpse, Table 2 lists the top ten 2-word to 6-word sequences appearing in business research articles (see Appendix for a full list).

Table 2: Top ten 2-word to 6-word formulaic sequences in business research articles

	2-word sequences	3-word sequences	4-word sequences
1	such as	the [effect(s)/impact(s)] [on/of]	be [more/most/less/least] likely to
2	based [on/upon]	be consistent with	be [positively/negatively/closely] related to
3	for example	be related to	on the other hand
4	the same	be used to	not only ~ but (~) (also)
5	need to	as well as	in the case(s) of
6	change(s) in	be associated with	between ~ and ~
7	focus [on/upon]	~ type(s) of	the extent to which
8	lead to	in order to	from ~ to ~
9	due to	the number of	as a result of
10	according to	part(s) of [the/these]	~ results [indicate/show/suggest] that
	5-word sequences	6-word sequences	
1	have a [positive/negative/significant] [effect/impact] on	there [was/were] [a/no] significant difference(s) between	

2	~ studies have [shown/demonstrated] that	the period from ~ to ~
3	range from ~ to ~	it is [important/interesting] to note that
4	as shown in [table/figure] #	the difference between ~ and ~
5	significant at the # level	the relationship between ~ and ~
6	the [aim/purpose] of this [paper/research/study]	[the/this] paper is organized as follows
7	~ [result(s)/finding(s)] [is/are] consistent with	an increase in the number of
8	as in the case(s) of	beyond the scope of [the/this] [paper/research/study]
9	be shown in [table/figure] #	the book value of total assets
10	due to the fact that	from the point of view of

Note: The notations ~ and # are used to indicate that at least a word is needed to fill in the slot and are thus considered as a word in the categorization of n-gram FS.

Table 2 gives us a snapshot of the BFL. A large number of frequent formulaic sequences appearing in business RAs were composed of very common words, such as *on the other hand*, *due to the fact that*, *as well as* and *based on*.

Moreover, some of the most frequent business sub-technical and academic words, that is, the BWL identified by Hsu (2011b), were not found in the BFL, although the BFL and BWL were derived from the same source of data (for the said corpus, see Section 3.1). The formulaic sequences in the BFL were pairings or strings of lexical and grammatical words, the latter of which usually belong to the first 2,000 most frequent words. In comparison with high-frequency words, sub-technical and academic words are not sufficiently frequent in the language as a whole. The frequencies decrease as a high-frequency word is extended to 2-word or more than 2-word phrases. Likewise, the frequencies of formulaic sequences in association with the words in the BWL also dropped with word length. When the frequencies fell below the threshold, some of the BWL-related formulaic sequences may have been filtered out.

The same result can be found in Greaves and Warren's (2007) research on concgrams [all of the permutations of constituency variation (e.g., AB, A*B and A**B) and positional variation (e.g., AB and BA) generated by the association of two or more words (Cheng, Greaves and Warren,

2006)]. They discovered that the most frequent sub-technical words may not be found in any of the most frequent phrases in the same corpus. Conversely, there are words which are associated in some of the most frequent phrases but none of which are among the most frequent individual words.

Therefore, the researcher wishes to propose that the present BFL and the BWL (Hsu, 2011b) may be mutually supportive in providing a window to the specialized discourse in the business academic register.

RQ2: How important is the BFL in the Business RA Corpus?

Research Question Two can be reformulated as “What is the text coverage (%) of the BFL in the Business RA Corpus?” The BFL contained a total of 1,187 formulaic sequences of 2 to 6 words with an accumulation of 934,217 individual instances and 2,249,919 running words, which accounted for 29.53% of the tokens in the Business RA Corpus.

A short excerpt from the Business RA Corpus is shown below. This passage was randomly selected from a business research article in relation to economics. The BFL phrases are underlined and in bold, and may give us a picture of the frequent word sequences used in business academic discourses.

...successive price changes are random (as empirically seems to be the case of many speculative markets). Without the benefit of Samuelson's theoretical analysis, one could easily interpret the fact that these prices wander *like a drunken sailor* as strong evidence in favor of the previously noted Keynes view of speculative markets. Whereas had it been observed that speculative markets were orderly with smooth and systematic inter-temporal changes in prices, the corresponding interpretation could easily be that such sensible price behavior is at least consistent with that of the shadow prices of the idealized rational technocratic planner. In the light of Samuelson's analysis, the correct interpretations of these cases are quite the reverse. For speculative market prices

to correspond to their theoretical shadow values, they must reflect anticipated future changes in relevant economic variables. Thus, it is at least consistent with equality between these two sets of prices so that changes in market prices are random. On the other hand, if changes in speculative prices are predictable, speculators who are quick to react to this known serial dependency and investors who are lucky to be transacting in the right direction will receive wealth transfers from those who are slow to react or who are unlucky enough to be transacting in the wrong direction.

(Podczeck & Yannelis, 2008, p. 155)

(Source: *Journal of Economic Theory*, 141(1), 152-183)

Among the 212 running words in the above passage, 18 different types of formulaic sequences belonged to the BFL. (Those phrases that appeared twice or more were counted as one type). Their coverage in the passage was 28.77% (=61/212) in tokens.

Providing over one-fourth of lexical coverage in business RAs, the BFL may serve as reference for a business English course for academic purposes (cf. Hyland (2008a), in which 240 different 4-word bundles covered over 2% of the total words in a 3.5 million-token corpus of research articles, PhD dissertations and MA theses).

RQ3: How does the BFL relate to the business academic context?

Research Question Three can be approached from the attributes of formulaic sequences in terms of subject relatedness and how they are used in context. Mastering formulaic sequences with a technical and sub-technical (i.e., lay-technical, crypto-technical and academic) sense shows part of a system of specialist knowledge, as they relate to the learning of a specialized discipline. As mentioned in *Literature Review*, applying Chung and Nation's (2004) notion of subject relatedness (4-point rating scale of technicality) to distinguish technical vocabulary from non-technical vocabulary, the present BFL can be classified into four main types: (1) general

formulaic sequences, (2) business academic formulaic sequences, (3) business sub-technical formulaic sequences, and (4) business multi-word technical terms.

General formulaic sequences

Without specialist knowledge involved, general formulaic sequences (e.g., *as well as, on the other hand, based on*) that contain general words with a high frequency and a wide range of occurrence across subject areas constitute a foreground in a discourse, as discussed in RQ1. Table 2 demonstrates some instances of general FS, which were retrieved from the Business RA Corpus but which can actually be encountered in any genre. As mentioned, a large number of multi-word units are composed of the first 2,000 most frequent words. If no distinction is made between general words and general formulaic sequences, they may go unnoticed. These general phrases support Sinclair's (1991) observation that "the majority of text is made of the occurrence of common words in common patterns, or in slight variants of those common patterns" (p.108). They are concealed in general vocabulary and traverse the subfields of the business domain along with high-frequency words. Some phrases of general use may be known to EFL students, while some semantically opaque phrases may deceive them. For marginally transparent or non-transparent phrases, learners may presume that they know the component words well but actually they do not know the words in combination (e.g., *as of, take on, on the other hand, do with*). Therefore, even in a specialized field of study, general formulaic sequences should not be ignored altogether.

Business academic formulaic sequences

This research defines business academic formulaic sequences as multi-word units that comprise the words from the AWL and share the properties of academic vocabulary. They are used to express notions, approaches as well as procedures and can be found in different academic domains, as in the instances of *access to, the impact of, (be) required [to/for/by], (be) defined as, (be) derived from, (be) acquired [by/from], (be) obtained [by/from], can be attributed to, can be*

explained by, (be) referred to as, (be) interpreted as, (be) assumed to and on the assumption that. Incidentally, an important finding for the lexical behavior of academic formulaic sequences was that they appear very often in the form of past participle followed by a preposition or an infinitive. As with academic vocabulary, academic formulaic sequences assume an analytic, evaluative or rhetorical/organizing role.

Business sub-technical formulaic sequences

In terms of technicality, business sub-technical formulaic sequences lie in the middle ground between non-technical and fully-technical categories. Different from Fraser's (2003) dichotomy for technical vocabulary (i.e., fully-technical and lay-technical) and dichotomy for sub-technical vocabulary (crypto-technical and academic), the researcher reduced the lay-technical and crypto-technical categories into the sub-technical category. Because their relationship with a subject field involves degrees, it is not easy to make a distinctive line that separates lay-technical from crypto-technical formulaic sequences. Both lay-technical and crypto-technical word sequences may be composed of ordinary words, which combine and interact with other words that determine their business technicality. Their specialized meanings may emerge from the context.

For instance, the everyday word *market* may be associated with a traditional market or supermarket when it appears individually. When considering the words that keep company with *market*, a crypto-technical flavor may surface, as in the cases of *bull/bear market*, *gray/black market*, *money market* and *primary/secondary market*. Each of these word combinations has a specialized meaning in the business register beyond its literal meaning. Words collocated with *market* can also have a lay-technical sense, such as *the market value of*, *the market price of risk*, *the average share of market* and *in the market of*. These phrases in connection with *market* are at the threshold of technicality and can be easily understood by non-specialists.

Another three general words, *cost*, *price* and *expense* frequently occur as part of the multi-word units in the business world, for example, *at the cost of*, *at the price of*, *at the expense of*, *the*

opportunity cost of and *pay the price of*. These three familiar words that do not appear to be difficult when learned in isolation may turn out to be problematic when their collocations undergo a slight semantic transfer when used in general language. These phrases are often used in a literal sense in the business practices, meaning an expenditure of money when considering a trade-off. In contrast, in non-specialized use, they change into figurative expressions with a bad connotation in association with loss or sacrifice. If learners do not detect that they have become polysemous after a shift from a specialized register to a general use or vice versa, such word combinations with a lay-technical or crypto-technical dress may not be as easy as we expect.

More examples of crypto-technical phrases are *time to maturity* and *golden parachutes against hostile takeover*. Here, ‘*maturity*’ does not refer to age at maturity but the time when a note is due. ‘*Golden parachutes*’ does not really mean a device with the color of gold which is used to retard a free fall but an agreement that guarantees top executives lucrative severance benefits. It should be noted here that although *golden parachutes* and *hostile takeover* have very often been discussed in business journals, they do not appear in a wide range of business issues. The wide-distribution criterion has screened them out in the selection of the BFL.

There are also multi-word items which occur in general use with little change in meaning. They may be used equally with general and business specialized meanings. Therefore, phrases of such type can slip in and out of the business field and everyday conversation. They are, for instance, *return on [equity/assets]* versus *return on efforts*, *risk free rate* versus *risk free trial*, *carve out a market niche* versus *carve out a niche*, *the price elasticity of demand* versus *the fabrics elasticity of stretch sock*, *bubble economy* and *credit bubble* versus *bubble gum*, and *volatile stocks of high volatility* versus *volatile liquid of high volatility*. Interestingly, these instances are largely figurative language, using examples close to daily life to delineate the business battlefield. The pervasive life-related metaphorical words and phrases in the business community may partially explain the more accessible nature of business English than other English for specific purposes.

Furthermore, some of the sub-technical formulaic sequences in the BFL are literally made up of business sub-technical words. We can again refer to Hsu’s (2011b) BWL, which contains the

most widespread business sub-technical words, for example, *asset*, *competitive* and *marginal*. As expected, the formulaic sequences coupled with these recurrent sub-technical words also occur frequently in the business register. Some examples are *the book value of total assets*, *the marginal [benefit/revenue/cost] of* and *sustainable competitive advantages*.

To sum up, business sub-technical formulaic sequences reveal a sense of business content domain in relation to profit, risk and strategy, regardless of whether they are composed of general, crypto-technical, lay-technical or sub-technical words.

Multi-word technical terms

Multi-word technical terms reflect strictly technical knowledge and concepts and behave as specialized ones. They are largely unique to a business specialized field and are used almost exclusively in the business contexts (e.g., *discretionary accruals* and *mean reversion* used in accounting, finance and investment). Nevertheless, they may be made up of common words or sub-technical words that turn out to have a new fully-technical dress when combined in use, as in the cases of *initial public offering (IPO)*, *Gross Domestic Product (GDP)*, *[call/put] options*, *optimal leverage ratio* and *free on board*. The other type of multi-word technical terms is a long technical term subsumed in another technical term to form complex compounds, for example, *capital asset pricing model*, *deferred tax asset valuation allowance*, *convertible bond arbitrage risk and return* and *supply chain agility scale development*. Fully-technical terms, which have fixed meanings, may become less of a problem to acquire if learners have specialist knowledge of the discipline. Due to a very narrow area of use, they were also filtered out from the BFL in the process.

The analysis of formulaic sequences shows that apart from technical terms, business research papers use a great number of accessible phrases. This may contradict our perception that specialist texts are likely to have heavy technical phraseology.

How the formulaic sequences in the BFL are used in the business academic context

According to Biber (2006), Biber, Conrad and Cortes (2003, 2004) and Hyland (2008ab), multi-word sequences in academic prose are often used to bridge two phrases, introduce a dependent clause and function like scaffolding for new information. Applying their categorization of lexical bundles (see *Literature Review*), the BFL serves four purposes. Referential formulaic sequences perform an ideational function. The signals they send include time, location, procedure, quantity or the description of attributes. The cases which can be found in the BFL are *the book value of, in the long run, in the wake of, in the context of, and a wide range of*. Discourse organizers are used to organize texts. They function to indicate transition and inference, to direct readers to some other information elsewhere in text, or to specify framing and focus conditions. In the BFL, they are *on the other hand, in addition to, as a result of, with respect to, in contrast to, as well as, the extent to which and [in/from] [table/figure]*. Stance formulaic sequences express the writer's attitude and propositions, for example, *it is possible [to/that], it appears that, be likely to, be regarded as, can be explained by, in the sense that and it is assumed that*. Interactional/engagement formulaic sequences address the reader directly as in the instances of *it should be noted that, it is worth mentioning that, as can be seen in, when it comes to and the reader may be interested in*.

As shown in the instances, some formulaic sequences favor particular grammatical forms and patterns. This phenomenon could have some pedagogical implications. When teaching this type of word sequences, teachers may need to draw their students' attention to the most typical patterns of the words they may encounter in their academic field. There may be some advantages to overt instruction of these frequent expressions. The effectiveness of formulaic sequences learning is worth investigation but beyond the present focus.

Pedagogical implications

Although the present BFL provides a pathway to business research writing, it is not meant to be learned in isolation. As with the learning of individual words, the BFL should be learned in

context. Business English teachers can raise their students' consciousness of how the formulaic sequences from the BFL behave in context with the help of free online concordancers (at <http://www.lextutor.ca/concordancers>, <http://vlc.polyu.edu.hk>, the BNC at <http://www.natcorp.ox.ac.uk>, the COCA at <http://corpus.byu.edu/coca/x.asp?w=1280&h=720> and the GloWbe at <http://corpus2.byu.edu/glowbe/>). By using corpora, students can gain direct access to abundant examples of authentic language, resulting in a better understanding of the use and patterns of certain formulaic phrases.

Moreover, classroom exercises using concordances may be undertaken in a gap-fill or a rewriting exercise, as below.

1. Fill in the blanks with the correct phrases: *the fact that, the benefit of, in favor of*.

Without _____ Samuelson's theoretical analysis, one could easily interpret _____ these prices wander *like a drunken sailor* as strong evidence _____ the previously noted Keynes view of speculative markets.

2. Add discourse organizing phrases to make the following passage fluent.

_____ Samuelson's analysis, the correct interpretations of these cases are quite the reverse. For speculative market prices to correspond to their theoretical shadow values, they must reflect anticipated future changes in relevant economic variables. Thus, it is at least consistent with equality between these two sets of prices _____ changes in market prices are random. _____, if changes in speculative prices are predictable, speculators who are quick to react to this known serial dependency and investors who are lucky to be transacting in the right direction will receive wealth transfers from those who are slow to react or who are unlucky enough to be transacting in the wrong direction.

Answer Key: *In the light of; so that; On the other hand*

The two exercises demonstrate that the incorporation of concordance lines into formulaic sequences learning may enrich learners' language experience. With more exposure to business RAs, EFL students will consolidate the phrase knowledge acquired from the BFL.

5. Conclusion

In sum, a total of 1,187 items of 2 to 6-word formulaic sequences were selected for the BFL. They occurred more than 114 times (Criterion 1: Frequency), in more than 10 business subjects (Criterion 2: Range), in more than 11 different RAs on the same subject (Criterion 3: Dispersion), with MI scores higher than 3 (Criterion 4: Meaningfulness), and they did not cross over immediate constituents (Criterion 5: grammatical well-formedness). The BFL contained the most commonly-used phrases across the subfields of the business domain. Regardless of which specialty, business postgraduates may encounter these formulaic sequences very often while reading research articles in their fields.

Although the present study was intended to raise awareness of language learning beyond single words, we hope that the BFL can be used to inform EBP teaching materials development. Despite arbitrary decisions on cut-off values in the selection and compilation, we also hope that the BFL may provide some inspiration for future empirical studies concerning the learning of formulaic sequences.

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Appendix

The Business Formulas List (BFL)

The established Business Formulas List (BFL) contained 1,187 most frequent formulaic sequences of 2 to 6 words, making a total of 29.53% lexical coverage. They were, in turn, 316 two-word, 612 three-word, 198 four-word, 50 five-word and 11 six-word sequences.

The BFL

2-word sequences	3-word sequences
such as	5531
based [on/upon]	5241
for example	4504
the same	4384
need to	3899
change(s) in	3776
focus [on/upon]	3486
[more/higher/greater/better/larger] than	3368
lead to	3048
due to	2597
according to	2451
the following	2201
rather than	2191
have to	2083
refer to	2077
increase [in/with/by/from/to]	2067
result in	2046
tend to	2006
return to	1867
in addition	1685
research [on/of/in]	1634
at least	1624
	the [effect(s)/impact(s)] [on/of] 6042
	(be) consistent with 3493
	(be) related to 3487
	(be) used to 3129
	as well as 2952
	(be) associated with 2871
	~type(s) of 2669
	in order to 2427
	the number of 2339
	part(s) of [the/these] 2221
	the relationship(s) 2096
	[between/with]
	[an/the] increase in 2091
	in terms of 2011
	[in/from] [table/figure] # 1988
	the use of 1938
	the result(s) [of/for/from] 1837
	~ [find/found] that 1748
	(be) available [at/for/in/to] 1615
	one of [the/these] 1577
	(be) used [as/for/in/by] 1562
	[a/the] value of 1542

depend on	1514	a number of	1485
because of	1480	be likely to	1429
delivery option(s)	1473	be able to	1376
in particular	1469	the role of	1367
compared with	1436	some of [the/these]	1323
[less/lower/smaller] than	1424	the level(s) of	1316
account for	1365	the case [of/for]	1307
implication(s) [for/of]	1347	(be) based on	1303
apply to	1271	the ability [to/of]	1279
appear to	1267	[a/the] need for	1271
compared to	1249	as a result	1264
over time	1234	the importance of	1231
attempt to	1218	(be) relative to	1219
seem to	1202	(be) required [by//to/for]	1195
literature review	1201	[a/the] lack of	1187
for instance	1147	the development of	1175
even [if/though]	1111	the difference(s) [between/in]	1162
interest rate(s)	1109	the fact that	1152
supply chain(s)	1100	with respect to	1092
access to	1086	each of [the/these]	1092
in contrast	1080	in this [paper/article]	1063
contribute to	1066	the cost(s) of	1026
evidence [from/in/of/on/for]	1061	in [the/this/our] study	1020
engage in	1028	the [present/current/previous] study	1017
outside of	1009	(be) defined [as/by]	1008
out of	1008	the more ~	998
continue to	990	[a/the] set of	956
in all	982	may not be	950
prior to	947	(be) performed [in/by/with/on]	927
deal with	943	a frame to	920

the total	937	the presence of	898
money [supply/demand]	927	most of [the/these]	894
in that=because	917	a reduction in	879
in fact	898	the end of	877
as follows	890	(be) expected to	870
try to	878	(be) considered [as/by]	864
result from	874	[an/the] opportunity [to/for]	841
cash flow(s)	867	the nature of	824
look at	828	in section #	819
as to	819	(be) equal to	810
in general	819	in addition to	804
rely on	799	the context of	799
so that	788	[a/the] degree of	798
subject to	770	(be) involved in	792
consist of	761	(be) measured [by/as/in]	787
in turn	755	[an/the] investment(s) in	772
fail to	738	statistically significant difference(s)	762
demand for	731	in figure #	747
relate to	724	the basis [for/of]	732
support for	724	(be) provided [by/in]	722
point [out/to]	709	(be) included in	718
a few	690	appear(s) to be	707
seek to	684	be willing to	701
competitive advantage(s)	682	(be) presented [in/as/with]	696
the latter	678	the risk [of/in]	696
invest in	673	[a/the] process of	690
benefit from	649	the coefficient(s) [of/on/for]	689
[more/most] likely	644	the quality of	685
on average	614	(be) divided [into/by]	681
those who	605	the influence of	678

take place	596	(be) obtained [from/by/in]	671
ensure that	583	[a/the] form of	665
such that	578	the association	665
serve as	574	[with/between/of]	
variation(s) in	574	[an/the/our] analysis of	660
of course	566	the performance [of/on]	660
as well (=too)	564	the property of	655
[close/closer/closet] to	557	a variety of	654
incentive(s) to	553	[a/the] majority of	647
deviation(s) from	548	many of [the/these]	647
the above	545	in other words	641
much [more/less]	534	the existence of	639
[gross/yield] spread(s)	531	there [is/was] no	639
market share(s)	529	[a/the] framework [for/of]	624
return(s) [on/for/of]	520	all of [the/these]	613
allow for	516	the purpose(s) of	601
respond to	514	[a/the] sample of	591
attention to	511	the ratio of	591
exchange rate(s)	503	the accuracy of	589
as such	502	in relation to	587
emphasis on	501	the amount of	587
each other	496	(be) achieved [by/in]	581
balance sheet(s)	496	(be) influenced by	572
participate in	495	(be) cited in	569
come from	485	the price(s) of	567
correspond to	485	in the literature	562
allow to	483	in line with	558
instead of	473	the size of	555
along with	472	(be) seen as	553
influence on	459	the probability of	542

reduction in	454	[a/the] measure of	523
empirical evidence	452	the choice of	517
knowledge of	436	(be) found in	511
not necessarily	435	the material for	511
a lot	434	(be) different from	510
kind of	429	[an/the/our] understanding of	505
commitment to	424	(be) affected by	491
intend to	414	a function of	488
help to	402	the proportion of	486
call for	394	in this case	486
in part	394	[a/the] study of	481
the former	393	the relation between	481
decrease in	388	much of [the/these]	480
decline in	378	in response to	476
regardless of	373	the extent of	476
in practice	367	the contribution [to/of]	475
book value	366	(be) described [in/by]	471
explanation(s) for	365	(be) given by	470
the whole	365	(be) useful [for/in/to]	470
away from	358	as part of	470
no longer	354	the adoption of	469
a certain	351	the concept of	466
correlation(s) between	350	(be) characterized by	465
market segmentation/concentration/orientation]	348	not at all	465
the rest	345	the finding(s) [of/from]	465
stem from	341	there [have/ has] been	465
an additional ~	336	~ [argue/argued] that	465
act as	335	the potential [for/to]	464
differ from	328	(be) regarded as	463
the remaining	326	see table/figure #	463

in conclusion	322	the likelihood of	457
reaction to	313	(be) derived from	450
work on	311	a series of	450
look for	304	in combination with	449
risk premium(s)	295	the beginning of	447
even more	289	the absence of	446
information asymmetry	287	to ensure that	446
only to	286	(be) considered to	445
per capita	286	(be) identified [as/by/in]	442
add to	282	[a/the] source(s) of	442
aim to	282	it [appears/seems] that	442
as of	282	it demonstrated that	441
in place	281	in contrast to	436
set up	279	the possibility of	434
belong to	276	with regard to	433
other than	276	half of [the/these]	433
together with	274	[a/the] combination of	430
aim at	270	the introduction of	430
through which	266	(be) responsible for	429
work for	265	~year(s) of	429
enough to	264	the issue of	428
money market	263	the benefit(s) of	427
draw on	262	the creation of	426
arise from	261	the percentage of	424
condition(s) [of/for//on]	260	(be) followed by	421
participation in	257	the distribution of	419
[market/price] volatility	255	in our sample	417
shift in	253	[a/the] sum of	411
responsibility for	250	as a whole	410
not always	247	(be) driven by	408

at risk	244	(be) viewed as	408
incentive(s) for	242	(be) linked to	402
so far	242	(be) observed [in/for]	402
those with	242	a lot of	402
as expected	240	[a/the] reduction of	401
distinguish between	239	~set(s) of	397
plan to	238	as opposed to	395
compliance with	235	a range of	393
exposure to	235	the effectiveness of	393
work with	235	the decision to	391
the remainder	232	(be) concerned about	386
as for	228	(be) subject to	385
but rather	225	[a/the] question of	383
desire to	223	the management of	383
by contrast	222	the interaction(s) between	382
contrary to	222	[a/the] case of	378
significantly higher	220	as shown in	378
in total	215	the time of	378
as with	214	[can/may] also be	378
except for	214	the reason(s) for	377
say otherwise	214	(be) assumed to	376
turn to	214	the scope of	374
attribute to	213	the degree to	370
carry out	213	the rest of	370
search for	213	the field of	367
restriction(s) on	210	the interest(s) of	367
only if	208	the characteristics of	364
more specifically	207	in [favor/favour] of	360
enter into	206	[as/so] long as	359
come to	203	(be) published [in/by]	358

rise to	199	[an/the] indicator(s) of	358
think of	199	(be) reported [in/by]	357
risk exposure(s)	196	We believe that	356
comply with	195	the growth [of/in]	354
in nature	195	for future research	354
think about	195	the link(s) between	353
long term	194	~ [assume/assumed] that	353
necessary for	194	[a/the] loss of	351
improvement in	193	whether or not	347
appear in	192	as measured by	345
when compared	192	the availability of	345
present in	191	this suggests that	344
per share	191	(be) correlated with	342
insights into	185	[a/the] model of	342
occur in	185	[a/the] review of	342
preference for	185	the determinant(s) of	341
in sum	180	(be) similar to	340
in summary	177	(be) listed [in/on/as]	335
learn from	177	(be) performed using	335
involvement in	176	significantly different from	334
sort of	175	the magnitude of	334
among others	174	in the future	333
would like	173	[an/the] example of	332
confidence in	172	(be) opposed to	328
in short	172	[an/the] average of	328
trend(s) in	172	in light of	327
risk aversion	172	the focus [of/on]	326
pursuit of	171	[a/the] sense of	324
apart from	169	the strength of	324
in effect	169	in this section	323

interaction(s) with	169	the implementation of	321
optimal portfolio	167	any of [the/these]	321
awareness of	166	and zero otherwise	320
in appendix	166	a total of	319
serve to	166	[both/two] of [the/these]	319
relative to	162	be sensitive to	318
make sense	160	the structure of	317
in case	158	(be) determined by	316
start to	158	there [may/will] be	315
go public	155	the variance [of/in]	313
bias against	154	a proxy for	311
expect to	154	the application of	311
as described	152	the evolution of	311
one another	150	so as to	307
inherent in	148	[a/the] list of	304
very little	148	the remainder of	304
incorporated [into/in]	147	the success of	304
reference to	147	~portion(s) of	304
set to	147	[a/the] theory of	303
start with	147	the inclusion of	303
highly significant	147	the volatility of	301
as indicated	146	the outcome(s) of	299
antecedent(s) of	145	(be) concerned with	297
compensation for	145	the significance of	297
in public	145	(be) organized as	296
random variable(s)	145	the idea that	296
asymmetry between	144	the power of	293
incidence of	144	in accordance with	290
pertain to	144	the possibility that	290
a little	143	the notion of	289

ex post	142	the rate of	288
build on	140	the work of	288
concentrate on	140	the range of	286
prefer to	140	the notion that	285
perspective(s) on	139	as a consequence	283
uncertainty in	139	the dynamics of	281
value added	138	the definition of	280
more importantly	138	the problem of	280
a priori	137	(be) suggested by	279
significantly positive	137	in recent years	279
as defined	136	(be) explained by	278
as [if/though]	136	the emergence of	278
as suggested	136	[an/the] alternative to	277
of particular	136	the exception of	274
rationale for	136	[the/this] kind of	272
expansion of	135	the provision of	272
in detail	135	(be) held by	271
standard(s) for	134	the terms of	271
know about	132	the view that	271
see appendix	132	the perception(s) of	270
the follow-up	132	a group of	269
[incorporation/integration] with	130	a period of	268
as mentioned	130	the validity of	268
at first	130	(be) asked to	267
specific to	130	the share of	267
exist between	129	return on [equity/assets]	267
integrated [into/in/with]	129	(be) reflected in	266
success in	129	the idea of	266
coupled with	128	in this way	265
begin to	127	the advantage(s) of	265

begin with	127	the efficiency of	264
contract with	126	[a/the] decline in	263
listed companies	125	the hypothesis that	263
any other	124	the behavior of	262
do with	124	(be) developed by	261
ipo firm(s)	123	be seen [in/from]	261
take on	122	one or more	261
observation(s) in	120	the direction of	261
provide for	119	the profitability of	261
comment(s) on	118	(be) supported by	260
go on	118	(be) intended [to/for/as]	259
dependence on	117	(be) expressed [in/as]	258
ex ante	117	the failure [of/to]	258
after all	116	the state of	258
commonly used	116	[a/the] diversity of	257
far from	116	the distinction between	257
interact with	116	be unlikely to	256
weighted average	116	the pricing of	256
cope with	115	(be) found to	255
post hoc	115	[a/the] rise [in/of]	255
gain from	114	(be) classified [as/into]	254
go beyond	114	the return(s) of	254
owing to	114	none of [the/these]	254
per se	114	(be) perceived as	253
<hr/>		(be) interpreted as	252
4-word sequences		a percentage of	252
(be) [more/most/less/least] likely to	1865	~group(s) of	252
(be) [positively/negatively/closely/directly]	1431	as much as	251
related to		(be) caused by	250
on the other hand	1007		

not only~but (~) (also)	974	(be) shown in	249
in the case(s) of	948	the practice of	249
between ~ and ~	897	take advantage of	248
the extent to which	850	the consequence(s) [for/of]	248
from ~ to ~	847	the expense of	248
as a result of	830	on behalf of	247
~ results [indicate/show/suggest] that	795	a decrease in	246
[in/within] the context of	736	by means of	245
at the same time	663	(be) limited to	244
[in/through/by/with/for/on] the use of	605	the complexity of	244
it [is/has/was] suggested that	602	as far as	243
between the two ~	594	(be) owned by	241
[at/by] the end of	590	the aim of	241
on the basis of	559	this is because	241
[in/on/by] the number of	516	as discussed [above/in]	240
(be) [positively/negatively/significantly]	514	to what extent	240
associated with		the estimation of	239
it is important to	491	we expect that	239
in [the/a] form of	475	(be) detected [by/in]	237
in the market of	428	this means that	237
(be) the same as	412	~percent of	237
as can be seen	412	(be) relevant to	236
in the [next/following/previous]	402	in support of	236
section(s)		(be) necessary to	235
take A into account	394	[a/the] mean of	235
to the extent that	389	in this respect	235
at the beginning/start of	387	the assumption of	235
[in/for/on] the development of	380	an overview of	234
table # presents that	377	the formation of	234
the degree to which	370	the future of	234

this [paper/study] [is/was] to	351	the relevance of	234
(be) referred to as	350	the selection of	234
(be) organized as follows	349	(be) needed (to/for/in)	233
a [high/low] level of	349	[a/the] response of	233
can be used to	344	a matter of	233
[at/on/in] the level of	331	meet or beat	233
[on/for] the effect(s) of	311	the goal of	233
in the [present/current] study	309	(be) made in	232
a wide range of	308	the sensitivity of	232
at the time of	300	in this regard	231
a large number of	299	[a/the] system of	230
on the one hand	298	~ [suggest/suggested] that	229
as a function of	291	in spite of	228
the market [value/price] of	289	this implies that	226
in the absence of	285	(be) independent of	225
on the part of	285	statistically significant at	225
the total number of	285	an effort to	224
the ~ types of	282	in violation of	224
for the purpose(s) of	274	and so on	223
at the [expense/cost] of	273	as compared to	223
~ and ~ respectively	272	the market for	223
as a means of	272	a discussion of	221
it [is/was] possible to	272	the meaning of	221
with the exception of	272	the design of	220
when it comes to	271	the frequency of	220
the natural [logarithm/log] of	270	the supply of	220
it is possible to	266	more and more	219
it is important that	265	the period of	219
it is possible that	264	(be) applied to	218
table # shows that	259	an examination of	218

the way(s) in which	259	[a/the] fraction of	217
beyond the scope of	258	as suggested by	217
as a proxy for	253	the content of	217
in the process of	253	~billion(s) of	217
in the [context/setting] of	252	(be) offered by	216
the marginal [benefit/revenue/cost] of	250	more or less	216
in the sense that	246	(be) carried out	214
[during/over] the sample period	245	(be) dependent on	214
in the presence of	243	(be) known as	214
the standard deviation(s) of	242	(be) attributed to	213
as a percentage of	240	[and/or] vice versa	213
from the perspective of	240	more important than	213
a great deal of	239	the length of	213
in the course of	239	to some extent	213
in the face of	235	(be) aware of	212
the relative importance of	235	in view of	212
the mean and median	228	the likelihood that	212
(be) in line with	227	in conjunction with	211
in the long run	226	the identification of	211
the question of [whether/how]	226	the integration of	211
in a way that	225	the measurement of	211
in the short [run/term]	225	the pattern of	211
it is likely that	221	an average of	210
as a measure of	218	around the world	210
in the field of	216	nominal interest rate	210
[the/a] point of view	213	~ [conclude/concluded] that	210
by the fact that	212	(be) located in	208
it is difficult to	208	lower levels of	208
a high degree of	207	the [components/elements] of	208
It [is/was] found that	206	the establishment of	208

[on/under] the assumption that	203	the event(s) of	208
in an effort to	202	the point of	208
[the/these/our] findings suggest that	201	the probability that	208
in the area of	201	the subject of	208
in the event(s) of	201	in this area	208
~ and ~ respectively	200	in [some/all] cases	208
the book value of	200	a comparison of	207
it is clear that	199	the usefulness of	207
(be) excluded from	198	a part of	206
have the potential to	198	the [principle/rationale] of	206
for the first time	197	the requirements of	206
it is necessary to	197	a way of	205
to a [larger/less] extent	196	the volume of	205
the average number of	194	(be) drawn from	204
with high(er) levels of	194	[an/the] assessment of	203
can be seen as	193	(be) based in	202
the absolute value of	192	the age of	202
[can/may] be interpreted as	191	the right to	202
can be found in	190	the objective(s) of	201
can be seen [in/from]	190	exchange rate volatility	200
it [is/was] possible that	190	in charge of	200
it [is/was] noted that	189	in the world	200
in the wake of	188	have access to	199
one of the most	188	(be) proposed by	198
the null hypothesis of	185	a summary of	198
have an impact on	184	gross domestic product	198
[during/over] the period of	183	optimal leverage ratio	198
a better understanding of	178	(be) excluded from	197
in an attempt to	178	[an/the] extension of	197
it is assumed that	177	as reported [in/by]	197

the vast majority of	174	in this sense	197
despite the fact that	173	in the workplace	197
on the impact of	173	~ [propose/proposed] that	197
in the first place	170	in excess of	196
as a source of	169	the evaluation of	196
a small number of	168	in this database	196
a wide variety of	168	in case of	195
can be viewed as	164	the factor(s) that	194
in the same way	164	the solution to	194
play a role in	164	shed light on	192
the manner in which	164	the stability of	192
it is argued that	163	be interested in	191
it is interesting to	163	the robustness of	190
in the light of	162	(be) embedded in	189
may be due to	162	the sign of	189
if and only if	161	the elasticity of	188
one of the first	161	the predictability of	188
as a consequence of	160	the reliance on	188
(be) made up of	159	as noted above	187
(be) thought of as	158	in comparison to	187
in the public sector	158	the status of	187
the condition(s) under which	158	the valuation of	187
can be written as	157	(be) generated by	185
the present value of	157	the willingness to	185
(be) taken into account	156	~ [note/noted] that	185
[the/an] optimal leverage ratio	156	the argument that	184
it is reasonable to	156	the tendency to	184
it is shown that	156	in connection with	183
(be) structured as follows	155	the intensity of	183
a broad range of	155	the limitation(s) of	182

can be expected to	155	(be) combined with	181
in a position to	155	(be) equivalent to	181
[can/may] be explained by	154	a survey of	181
after the adoption of	154	the allocation of	181
for the sake of	154	the belief that	181
the positive effect of	153	the determination of	181
[can/may] be applied to	151	~degree(s) of	181
as the sum of	151	the composition of	180
see table # for	151	in more detail	179
with the aim of	151	the estimates of	179
be of interest to	150	the gap between	179
have an incentive to	149	the operation of	178
an integral part of	148	(be) motivated by	177
as pointed out by	148	a vector of	177
[can/may] be attributed to	147	~ [observe/observed] that	177
as a control variable	147	be going to	176
at a time when	147	the issuance of	176
as a way to	146	the order of	176
with the help of	146	when compared with	176
as the [dependent/independent] variable	145	(be) calculated as	175
in the management of	145	(be) created by	174
the early stages of	145	a couple of	174
the expected return on	145	the product of	174
the growth rate of	145	the reason why	174
there is evidence that	145	give rise to	173
an important determinant of	143	the sale of	173
it is expected that	143	the threat of	172
the explanatory power of	143	the challenge of	171
in a manner that	142	the flow of	171
the expected value of	142	the recognition of	171

a situation in which	141	as indicated by	170
as a way of	141	be capable of	170
in the [opposite/right/wrong] direction	141	by and large	170
the process by which	141	no evidence of	170
it is unlikely that	140	regardless of whether	170
little is known about	140	the task of	170
there [appears/seems] to be	140	a portfolio of	169
play an important role	128	the option to	169
it has demonstrated that	121	the utility of	169
the data show that	119	the parameters of	168
as described previously in	118	the search for	168
the opportunity cost of	117	time to maturity	168
(be) significantly different from	115	(be) significant for	167
from the viewpoint of	115	the bulk of	167
pay the price of	114	(be) written as	166
the aim [is/was] to	114	the acquisition of	166
to the best of	114	the calculation of	166
5-word sequences			
have a [positive/negative/significant] [effect/impact] on	1128	the domain of	166
~ studies have [shown/demonstrated] that	727	the key to	166
range from ~ to ~	678	the regulation of	166
as shown in [table/figure] #	663	the essence of	165
significant at the # level	655	demand and supply	164
the [aim/purpose] of [the/this] [paper/research/study]	599	we hypothesize that	164
~ [result(s)/finding(s)] [is/are] consistent with	580	make use of	163
as in the case(s) of	401	as described in	162
		in exchange for	162
		the disclosure of	162
		the method of	162
		in different ways	160
		the specification of	160

(be) shown in [table/figure] #	378	(be) analyzed using	159
due to the fact that	337	(be) discussed in	159
as reported in table #	329	an attempt to	159
(be) presented in [table/figure] #	310	in comparison with	159
the price elasticity of demand	306	the conduct of	159
play [an/a] [important/significant] role in	302	a sequence of	158
the [rest/remainder] of the paper	282	no more than	158
it can be seen that	244	as noted by	157
based on the assumption that	242	first of all	157
to examine the [effect(s)/impact(s)] of	241	the finding that	157
in the [first/second] half of	231	the exchange of	156
it has been argued that	197	(be) structured as	155
(be) reported in table #	191	(be) composed of	153
it should be noted that	191	~pair(s) of	153
(be) summarized in table #	190	the outsourcing of	152
it can be argued that	188	the realization of	151
it has been suggested that	188	an indication of	150
the market price of risk	174	as compared with	150
the result(s) in table #	173	in this context	150
in such a way that	167	(be) devoted to	149
it is worth [noting/mentioning] that	266	take part in	148
the results of [this/the] study	166	~per cent	148
there was no difference in	161	(be) comparable to	147
the average share of market	142	may have been	147
as follows in section #	141	~million(s) of	146
over the [past/last] # years	138	(be) removed from	145
the costs and benefits of	133	(be) treated as	145
the market value of equity	133	economy of scale	145
in a number of ways	132	(be) acquired [by/from]	144
it has been shown that	132	to determine whether	143

the risk free rate of	132	(be) conducted by	142
with a high level of	131	(be) employed in	142
as illustrated in figure #	128	(be) committed to	141
there are a number of	128	(be) sufficient to	141
it is not surprising that	123	(be) placed in	140
it [may/would] be interesting to	122	~mode(s) of	139
(be) given in table #	120	(be) crucial [for/to]	138
as can be seen in	118	the production of	138
the group as a whole	118	(be) inconsistent with	137
it has been assumed that	116	(be) adopted by	136
(be) illustrated in figure #	114	(be) attached to	136
we are more concerned with	114	(be) central to	136
<hr/>			
6-word sequences			
there [was/were] [a/no] significant	497	(be) contained in	136
difference(s) between		(be) faced with	135
the period from ~ to ~	299	(be) known to	135
it is [important/interesting] to note that	294	(be) computed as	134
the difference between ~ and ~	288	the cause of	134
the relationship between ~ and ~	212	(be) sensitive to	133
[the/this] paper is organized as follows	181	(be) summarized in	133
an increase in the number of	177	(be) thought to	133
beyond the scope of [the/this]	134	the process of	132
[paper/research/study]		when compared to	131
the book value of total assets	123	(be) collected from	130
from the point of view of	118	analysis of variance	129
the reader may be interested [in/to]	116	(be) eligible for	128
		(be) comprised of	126
		(be) faced by	126
		(be) taken from	126
		the addition of	126
		(be) appropriate for	125

(be) essential to	125
the activity of	124
(be) dominated by	123
(be) open to	122
(be) reluctant to	122
initial public offering	121
(be) attributable to	120
(be) produced by	119
(be) tied to	119
(be) indicated by	118
the administration of	118
the threshold of	118
for [this/the] study	118
~ kind(s) of	118
(be) taken by	117
(be) free from	116
(be) adapted from	115
the position of	115
(be) exposed to	114
a host of	114
in agreement with	114
(be) accompanied by	114
lost opportunity cost	114



The Use of Hedges in the Discussion Section of Qualitative and Quantitative Research Articles

Leila Dobakhti

Tabriz Islamic Art University, Iran

Bio data

Leila Dobakhti (Ph.D.) is an Assistant Professor at Tabriz Islamic Art University. She has co-authored the textbook: *Active Reading Comprehension*. She has also edited the textbook: *Reading English in Action*. Her areas of interest are Genre Analysis, Academic Writing, Material Evaluation and Teaching Reading Skills.

Abstract

While the ultimate purpose of a research article is to persuade the audience to accept the new knowledge claims, interacting with audience is an essential element in achieving this aim. Hedges are one of the rhetorical strategies that writers use to interact with their readers. Drawing on a corpus of 200 research articles in Applied Linguistics, this study compares the use of hedging words in the Discussion sections of qualitative and quantitative research articles in Applied Linguistics. The focus is on the frequency, and main functions of hedges in these two sets of articles. The analysis of data shows, interestingly, a considerably higher distribution of hedging words in the quantitative articles. A detailed analysis of hedges in various Moves and Steps (Swales, 1990) of selected data suggests that the variation can be attributed to the prevalence of specific Moves in each set of articles.

Keywords

Hedging, Interaction, Qualitative Research Article, Quantitative Research Article, Applied Linguistics

1. Introduction

Over the last decade or so, a great deal of research has challenged the belief that writing in professional academic discourse is presenting informational content objectively and has argued that writing is a socially situated practice (Candlin, 2000; Hüttner, Smit, & Mehlmauer-Larcher, 2009) by which writers interact with their audience. This interaction can help writers to achieve persuasion which is the ultimate aim of any academic writing. Hedges are one of the elements that Hyland (1999, 2008) includes in his taxonomy of interaction under stance features.

Though the use of Hedge as a linguistic term goes back to Lakoff (1972) who defined it as words that “make things fuzzier or less fuzzy” (p. 195), the concept “has moved far from its origins” (Markkanen & Schröder, 1997, p. 4). Many studies have approached the concept as a pragmatic phenomenon and have identified various functions and uses for it. Prince, Frader and Bosk (1982) and Skelton (1988) state that hedges distance a speaker from what is being said. Vande Kopple (1985) categorized hedges as the elements which reflect lack of full commitment to a statement. Channell (1994) and **Dubois (1987)** treat hedge as a means of signaling purposive vagueness. Addressing hedging in the writings of American and Finish university students, Crismore et al. (1993) treat hedging as a form of metadiscourse. Salager-Meyer (1994) links hedges to purposive vagueness and associates them with signaling writers’ modesty and politeness. Hyland (1996; 1998) whose work has been one of the outstanding studies in this area treats hedges mostly as realization of interaction strategy. He (1998) defines hedges as a means of expressing “a lack of complete commitment to the truth value of an accompanying proposition” or “a desire not to express that commitment categorically” (p.1).

As writing is constructed socially, there is always a possibility that readers refute the presented propositions. This possibility of objection of propositions indicates the readers’ active role in the

process of communication and the need for ratification of statements by them. Hedges allow writers to present their arguments as an opinion rather than an absolute fact. This can help the writers to gain acceptability for their statements by leaving room for readers' involvement and negotiation in the status of knowledge which is presented (Hyland, 1998).

Hedges have been the object of analysis in conversation analysis and written discourse especially academic and scientific discourse. However, most of these studies deal generally with science and medical academic writing rather than the humanities (Rizomilioti, 2006). Consequently, the literature involves a large number of studies on hedging in various science disciplines, including biology (Hyland, 1996, 2005b; Myers, 1985), economics (Bloor & Bloor, 1993), engineering (Hyland, 2005b), and medicine (Salager-Meyer, 1994). Also, a number of studies have investigated the cross-cultural aspects of hedging, for instance, in Bulgarian (Vassileva, 2001), Chinese (Y. Yang, 2003), Finish (Crismore et al., 1993), German (Clyne, 1991), and Russian (Namsaraev, 1997) languages. Another trend in studying hedges has investigated their uses by expert and novice writers. For instance, Koutsantoni (2006) investigated the use of hedges in RAs and thesis and found out that student researchers hedged more than RA authors.

Surprisingly, to our knowledge, no study has compared the use of hedges in qualitative and quantitative research articles (henceforth RAs) in the field of Applied Linguistics. While in some disciplines research might be equal to experimental research, in Applied Linguistics the problem or question can be investigated by gathering qualitative and/or quantitative data which are analyzed and interpreted qualitatively and/or quantitatively. As we know, qualitative and quantitative designs are different in the knowledge claim that they make, the main purpose that they follow, the research questions that they impose, the data that they collect, and the methods that they use to analyze data (Creswell, 2003; McKay, 2006).

Quantitative research is based on the supposition that the world is governed by rules and knowledge is created when researchers "examine causes that influence outcomes" (Creswell, 2003, p. 5) to verify or refute these rules. It asserts that reality is out there and it needs to be found by objective methods. Thus, the reality is broken down into variables, and questions or

hypotheses are formed. On the other hand, qualitative research is based on the supposition that reality is multiple and can be studies holistically. Instead of “narrowing meanings into a few categories or ideas”, the researcher’s aim is to “interpret” the multiple meanings that “others have about the world” (Creswell, 2003, pp. 8-9). In other words, qualitative research “refers to the meanings, concepts, definitions, characteristics, metaphors, symbols and description of things” (Berg, 2001, p. 2).

Considering these differences, it is not unreasonable to assume that writers use various rhetorical strategies and stance features in writing qualitative and quantitative research articles. In fact, these research designs have “rhetorical effects which are reflected in preferred patterns of persuasion” (Hyland, 1999, p. 81). Hyland’s study on soft and hard disciplines has shown that the differences in epistemology and how these disciplines see the world and what they consider as knowledge influences the way the academics write in these disciplines. While quantitative research is more close to the hard side of the continuum and qualitative research to the soft side, this study aims to find out whether the distinctions in these two types of research designs are reflected in the writers’ preferred stance taking. It focuses on Discussion sections of these two types of RAs in the field of Applied Linguistics. The discussion section is selected as it enjoys a crucial role in any academic writing. This section is important because “results and interpretations need to be presented in ways that readers are likely to find persuasive” (Hyland, 2005b, p. 176). As in this section the writers present and argue their own points of view about their findings, it can be expected that they take stance more explicitly in this section. Also, previous studies (e.g. Salager-Meyer, 1994; Varttala, 2001; Vassileva, 2001) have shown that due to the nature of this section hedges are more prevalent in this section than other sections of articles. Besides, it is the section that students find the most problematic to write and understand (Bitchener & Basturkmen, 2006; Dudley-Evans, 1994).

2. Corpus and Method

The corpus of the study consists of 100 qualitative and 100 quantitative RAs’ Discussion sections selected from five high impact journals in the field of Applied Linguistics based on the

Journal Citation Reports (Social Sciences Edition) 2008. The list included the journals in Linguistics which covered journals in both pure Linguistics and Applied Linguistics. For the purpose of the study the journals devoted to pure Linguistics were excluded from the list. After examining the remaining journals, the five selected journals were: Applied Linguistics, English for Specific Purposes, Journal of Pragmatics, Language Teaching Research, and TESOL Quarterly.

The articles were selected from the issues published from 2002-2009. The first criterion considered in selecting the articles was that they have a separate Discussion section. As the focus of the study is on the Discussion section and previous genre studies (e.g., Y. Yang, 2003) have shown the ending sections of RAs might have different communicative purposes, the articles that had combined the Discussion section with Findings, Analysis, Conclusion, Implication, or Limitations were excluded. The remaining articles were categorized as qualitative and quantitative, and mixed method articles were excluded. In categorizing the articles as qualitative or quantitative, the priority was given to the article writers' own explicit statement about the design they had used. If they had not mentioned the method explicitly, which mostly had not, the abstracts and the methodology sections were examined in detail. According to Perry (2005), the characteristic of quantitative research is "the use of numbers to represent its data", and the characteristic of qualitative research is "verbal descriptions as its data" (p. 75). Those articles that were experimental or completely dealt with statistics were categorized as quantitative and those articles that used qualitative methods and relied mainly on verbal description were classified as qualitative. Problematic cases were discussed with another researcher in the field and decisions were made by consensus. It should be noted that categorizing the articles as qualitative or quantitative was done based on their methods of data collection and data analysis rather than attempting to identify their underlying philosophy and purpose. Benson, Chik, Gao, Huang, and Wang (2009, p.80) differentiate between the studies that *use a specific type of design* (qualitative and quantitative) and those that *represent a specific type of design* (qualitative and quantitative). The focus of this study was to identify the articles that *used* qualitative or quantitative research methods.

After categorizing the articles in two groups of qualitative and quantitative, they were double checked to ensure that each article was set in the right category. Then, 100 qualitative and 100 quantitative RAs were selected randomly and two specialized machine readable sub-corpus were complied. The qualitative sub-corpus consisted of approximately 132,000 words and the quantitative sub-corpus comprised around 139,000 words (see appendix A for more particulars of the corpus). In the next stage, a list of 202 potentially productive hedges was selected based on previous lists and researches in literature, especially Biber (2006), Biber et al. (1999), Hyland (1998, 2000, 2005a), Precht (2000), and Varttala (2001) (see appendix B for a list of the words).

These items were searched in each sub-corpus separately using WordPilot 2002, a text analysis, and concordance program. The output included frequency lists, concordance lines, summary, and collocations. After each item was searched, a careful analysis of the co-text and context of the cases was carried out several times to ensure that they were representative of hedging. During this stage several cases were deemed irrelevant for the purpose of this study and excluded from the initial results. For instance, in one case “Little” was used as proper name and in another case “about” meant “concerning” rather than “approximately” which would indicate hedging. The number of remaining occurrences were written down for each item and aggregated to have the total number of hedges in each sub-corpus. The frequency counts were normalized at 1,000 words and compared in the two sub-corpora.

In the next stage of the study, in order to account for the findings from the corpus analysis, 15 qualitative and 15 quantitative RAs were selected randomly from among these 200 RAs to be studied in detail for the use of hedges in various moves and steps of these RAs in order to identify in which moves this stance feature was clustered mainly. First these 30 RAs were analyzed in terms of generic structure. To this end, first the selected Discussions were analyzed in terms of moves and steps (Swales, 1990). Then, the 202 hedging items used in the first part was searched in each move of these two sets of articles using Find function of Microsoft Word. After identifying the cases, all of them were examined and double checked carefully to ensure that they all represented hedging feature. In the next stage, the overall frequency of hedges in each move was counted manually and was normalized at 1,000 words.

3. Results and Discussion

3.1 The Overall Distribution of Hedges in the 200 RAs

The analysis of 100 qualitative and 100 quantitative RAs' Discussion sections using WordPilot 2002 shows that hedging is an important element in both types of RAs. The overall distribution of hedges in both sub-corpora is shown in Table 1. As can be seen in the table, the frequency of hedges per 1,000 words is higher in the quantitative (30.5 words) compared to the qualitative RAs (25.5 words). As it is assumed that quantitative research is based on rigorous, objective, and straightforward procedures and qualitative research is more subjective and interpretative, one might expect to find qualitative RAs more cautious and tentative than quantitative RAs. However, the findings do not confirm this expectation.

Table 1: Overall Distribution of Hedges in 100 Qualitative and 100 Quantitative RAs' Discussion Sections

Sub-corpus	Total No of Hedges	Hedges Items Per 1,000 Words
Qualitative 132,271 words	3,375	25.5
Quantitative 139,377 words	4,254	30.5

Attempts were made to account for the difference between the difference in hedging frequency between the quantitative and the qualitative sub-corpora. It is speculated that the types of discussion that are carried out in the two groups of texts may be responsible for the difference in the frequency counts. To examine if it is the case, a move analysis was performed on the discussion sections of 30 articles randomly chosen from the two sub-corpora (with 15 from each). The moves identified were then counted and an inter-move comparison of hedge counts was then carried out. Below will report the two-step analysis performed and the results generated.

3.2 *The Move Analysis*

The move analysis drew on previous studies (e.g., Dudley-Evans, 1994; R. Yang, 2001; Swales 1990) for its move categorization framework. It should also be noted that while the move categories were developed using primarily those established by previous scholars, (Dudley-Evans (1994), R. Yang (2001), and Swales (1990), some adaption has been done in the treatment of the categories. For example, Reference to Literature reported in Swales (1990) and Dudley-Evan's (1994) work was not identified as one move. It was found that reference to previous research was used by writers for various communicative purposes. For instance, they were used to compare findings with literature, to support the comments on findings, and to support the deduction/suggestions. Therefore, instead of labeling any reference to literature as Reference to Previous Research, it was tried to identify the communicative purpose of referring to literature and to find out whether it was used to compare findings or provide support for findings or comments.

Furthermore, R. Yang (2001) included Comparing of Results with Literature as a step under Commenting on Findings. However, these two seem to carry two different communicative purposes. While in Commenting on Findings authors present their own comments on findings and try to make new knowledge claims, in Comparing Findings with Literature they compare and/or contrast findings with those in literature in order to connect their own study to current research in the field. Therefore, in this study Comparing Findings with Literature is considered as a separate move rather than a step of Commenting on Findings.

Some modifications have also been done to two of the moves reported in R. Yang's (2001) study. One was the move Deduction which R. Yang further differentiated into three strategies: Making Suggestion, Recommending Further Research, and Drawing Pedagogic Implications. The last step (Drawing Pedagogic Implications) was not identified in this study. Moreover, Making Suggestions for Practice and Recommending Further Research were classified as two steps under Making Recommendations. It might seem that there are overlaps between Making Suggestions for Practice and Making Deductions, as suggestions are based on the findings of the

study. However, the communicative purpose of Making Suggestions for Practice seems more to make a recommendation rather than to deduce from study. Moreover, Making Deductions was found as a separate move where the writers tried to make logical conclusions based on the arguments they had presented previously in the Discussion section. Therefore, it was decided to include Making Suggestions for Practice as a step under Making Recommendation rather than Making Deductions.

The analysis yielded 11 moves in the qualitative sub-corpus and 10 moves in the quantitative sub-corpus were identified. In most cases, the writers used more than one strategy to capture the communicative purpose of a specific move. Table 2 summarizes the moves and their specific strategies.

Table 2: The Generic Structure of Discussion Section of Qualitative and Quantitative RAs

Moves	Strategies	Qualitative	Quantitative
Providing Background Information	-	√	√
Stating Findings	1- Reporting Findings	√	√
Providing Evidence for Findings	1- Referring to Data	√	✗
Commenting on Findings	1- Explaining 2- Interpreting 3- Evaluating	√	√
Supporting Comments on Findings	1- Referring to Data 2- Referring to Literature	√	✗
Comparing Findings with Literature	1- Indicating Consistency of Findings with Literature 2- Indicating Inconsistency of Findings with Literature	√	√
Explaining Inconsistency of Findings with Literature	-	✗	√
Making Recommendations	1- Making Suggestions for Practice 2- Recommending Further Research	√	√

Making Deductions	-	√	√
Supporting Deductions/Suggestions	1- Referring to Data 2- Referring to Literature	√	√
Evaluating the Study	1- Stating Significance of the Study 2- Stating Limitations of the Study	√	√
Summarizing the Study	-	√	√

The findings showed that many moves were common in both types of research articles. Their distribution is shown in Table 3. As shown in the table, nine of the identified moves were common in both sub-corpora. While one move (Explaining Inconsistency of Findings with Literature) was in the quantitative sub-corpus mainly, two (Providing Evidence for Finding and Supporting Comments on Findings) were present mainly in the qualitative sub-corpus.

The move, Providing Evidence for Findings, was realized by one step only: Referring to Data. The writers presented their. The writers presented their findings and referred to their data to support and back up those findings. The other move was Supporting the Comments on Findings. After commenting on findings, in some cases, the writers supported those comments by two steps of Referring to Data and/or Referring to Literature. It was also noticed that one step occurred only in the qualitative sub-corpus. The step was Referring to Data which was used to realize three moves of Providing Evidence for Findings, Supporting Comments on Findings, and Supporting Deductions/Suggestions. In the move of Providing Evidence for Findings (it appeared only in the qualitative sub-corpus), the writers referred to their data as a warrant to back up their arguments and demonstrate that their findings, explanations, interpretations, and deductions are based on and grounded in their data.

It seems that the arguments that qualitative and quantitative research writers make to persuade their audience to accept the new knowledge they have made is different. In qualitative research, the results are accepted mostly based on the use of standardized methods. The concepts of reliability, validity, and generalizability are important concepts in this method and writers can gain the acceptance for their findings by showing that these issues have been taken care of. In

qualitative research, on the contrary, the outcomes are dependent on the researcher and more than one interpretation can be made of a piece of data. As a result, the outcomes are more open to question, and there is always a high possibility that the findings get refuted by the audience. Subjectivity, thus, is one of the issues that the qualitative researchers need to deal with. While the validity and reliability of the research cannot be illustrated by the means that are used in quantitative research, qualitative researchers employ other strategies to persuade their audience of the legitimacy of their study. One of these strategies is referring to their data and bringing back first-hand evidence to support their arguments. That is, the writers of qualitative research try to justify and validate their findings, comments on findings, conclusions, and suggestions by frequent reference to their data. Therefore, in Discussion section they refer back to their data as an evidence to show that they made a valid analysis and interpretation of their data and that their findings and conclusions are generated from and grounded in their data (Mackey & Gass, 2005; White et al., 2003). Writers gain credibility for their research by showing sound evidence for each claim in their arguments. They, thus, need to back up arguments by using the strongest evidence that they have and by using first-hand evidence which is stronger than evidences that are second-hand (Rubin & Rubin, 2005). By including sufficient raw data and demonstrating the bases of interpretations and conclusions, the writer shows the available evidence to support them and this enables readers to evaluate the findings, interpretations, and conclusions (Mackey & Gass, 2005; White et al., 2003) and “see the basis for the subjective decisions the researcher made in moving through the research process” (Potter, 1996, p. 162).

3.3 *The Distribution of Hedges in Various Moves*

The move analysis was followed by an analysis of hedge counts per move. Table 3 illustrates the overall frequency of hedges and their occurrences per 1,000 words in each move of the 30 RAs' Discussion sections. As seen, the results generated from the counts are consistent with those obtained from analyzing 200 RAs in that hedges are more frequent in the quantitative than qualitative RAs.

Table 3: Frequency and Percentage of Hedges in Each Move of 15 Qualitative and 15 Quantitative RAs' Discussion Sections

Moves	Qualitative: 9,290 words				Quantitative: 11,184 words			
	Text Size		Hedges		Text Size		Hedges	
	# of Words	% in the Whole Sub-corpus	Frequency & Percentage	Per 1000 Words	# of Words	% in the Whole Sub-corpus	Frequency & Percentage	Per 1000 Words
Providing Background Information	418	4.50	7 (3.41%)	16.74	589	5.27	13 (4.36%)	22
Stating Findings	1979	21.30	30 (14.63%)	15.15	2139	19.12	25 (8.38%)	11.6
Providing Evidence for Findings	1180	12.70	18 (8.78%)	15.25	***			
Commenting on Findings	1895	20.39	54 (26.35%)	28.49	5077	45.40	181 (60%)	35.6
Supporting Comments on Findings	712	7.66	16 (7.80%)	22.47	***			
Comparing Findings with Literature	809	8.71	20 (9.75%)	24.72	1115	9.97	25 (8.38%)	22.4
Explaining Inconsistency of Findings with Literature	***				152	1.36	3 (1%)	19.8
Making Recommendations	607	6.53	15 (7.33%)	24.71	581	5.19	7 (2.34%)	13.8
Making Deductions	642	6.92	22 (10.74%)	34.27	555	4.96	23 (7.7%)	39.7
Supporting Deductions/ Suggestions	63	0.68	1 (0.48%)	15.87	229	2.05	5 (1.67%)	21.8
Evaluating the Study	725	7.80	19 (9.27%)	26.20	576	5.15	13 (4.36%)	22.6
Summarizing the Study	260	2.80	3 (1.46%)	11.54	171	1.53	3 (1%)	17.6
Total	9,290	100	205 (100%)	22.07	11,184	100	298 (100%)	26.6

Note: *** indicates that the move is not available in the sub-corpus

As the table shows hedges are found throughout all of the moves in both sub-corpora and are not constrained to particular moves. As it can be seen in Table 2, although the overall frequency of hedges is higher in the quantitative RAs, hedges are more frequent in the qualitative RAs in three moves of Stating Findings, Making Recommendations and Evaluating the Study. Presenting

findings with more tentative language in qualitative language is not unexpected considering its nature and outcome. While quantitative research relies on ‘standard’ and accepted methods to make objective inferences about a natural phenomenon, qualitative research is a thick description of the phenomenon under study where the researcher is the primary source of data collection, analysis, and interpretation. The analytical outcome of quantitative research is a series of statistics and graphs and the outcomes are assumed to have been obtained objectively and independent of who has conducted the study. Meanwhile, qualitative research’s outcome is a thick description of a phenomenon where the researcher has been involved subjectively. The use of hedges by the qualitative RA writers in presenting their findings might be a strategy to protect their findings from the possible refutations and to gain acceptance for them.

The other move that was more hedged in the qualitative sub-corpus than quantitative sub-corpus was Making Recommendations. The move was identified 20 times in the qualitative sub-corpus. The first step (Making Suggestions for Practice), with 14 occurrences, was more frequent than the second step (Recommending Further Research), with six occurrences. Examining the hedging cases in this move, it was found that 14 out of the 20 hedged appeared in the prevalent step (Making Suggestions for Practice). On the other hand, the move was identified 13 times in the quantitative sub-corpus and the second step (Recommending Further Research), with 11 occurrences was more frequent than the first step (Making Suggestions for Practice). Out of the seven instances of hedges identified in this move of the sub-corpus two was found in the first step and five in the second step. The findings suggest that most hedges appeared in the move of Making Recommendation were used when the recommendation was for practice than for further research. The number of suggestions made for practice was more frequent in the qualitative research than quantitative RAs and that can explain why hedges were more frequent in this move in the qualitative sub-corpus than the qualitative sub-corpus.

The third move that was more hedged in the qualitative sub-corpus than quantitative one was Evaluating the Study. As it is presented in Table 2, the move is realized by two steps: Stating the Significance of the Study and Stating the Limitations of the Study. The analysis of hedges in the move showed that in both sub-corpora hedges were mostly used when the move was realized by

the second step. To be specific, 11 out of 19 hedges in the qualitative RAs and 8 out of 13 hedges in the quantitative RAs were identified in the step of Stating the Limitations of the Study. The writers used hedges in this step to indicate what actions would possibly have been taken or how these limitations would have affected the findings. Furthermore, in the qualitative RAs, this step was identified four times and the first step was identified two times. In the quantitative RAs, in contrary, the first step (with seven occurrences) was more frequent than the second step which appeared only four times. In other words, the move was realized more frequently by the first step in the quantitative sub-corpus and the second step in the qualitative sub-corpus. Furthermore, hedges were used more often in the second step in both sub-corpora. This can explain why the overall frequency of hedges in this move is higher in the qualitative sub-corpus than quantitative one.

Meanwhile, two moves were most heavily hedged in both qualitative and quantitative RAs: Making Deductions and Commenting on Findings. The finding is expected, as in these two moves writers make speculation and conclusions about their findings and present new knowledge claims. As Hyland (1996, p. 443) states, “greater generalization and interpretation requires a greater degree of hedging”.

Making Deductions which was identified in most of the RAs (11 Quantitative and 9 Qualitative RAs) was utilized to present the main points of the studies and to make inferences and logical conclusions based on the findings and arguments that the writers had presented previously in the Discussion section. By using hedges, writers distanced themselves from the propositions and claims that they made and tried to protect themselves from possible refutations. The lexical means that were used to hedge deductions were mostly modals and verbs. The most frequent hedging verbs in both sub-corpora were *suggest*, *point to*, *propose*, *appear* and *seem*. The following examples illustrate the use of hedges in Making Deductions:

- 1) The findings **point to** the need for assessment tasks to be designed to reduce communicative stress and ensure that students do not feel forced to prioritize form and accuracy over fluency and meaning. (Quali)

- 2) In summary, this study **suggests** that motivation and proficiency operate on pragmalinguistic awareness independently rather than jointly, and... (Quanti)

In Commenting on Findings, the second most hedged move in both sub-corpora, the writers went beyond the “objective” presentation of findings and offered their own understanding of them. While in Results or Findings section writers present the findings from their analysis without stating their own interpretation of the results, when commenting on their findings they present their own interpretation of them. As it can be seen in Table 2, the writers used three strategies of Explaining, Interpreting, and Evaluating to realize this move. By Explaining, the writers tried to account for why the findings were obtained and Interpreting was used to provide a speculation about what the findings meant trying to make sense of the findings based on the writers’ own perspectives and understanding. The comment that the writers provided on findings by Evaluating was an evaluation of them.

The investigation of hedges in the 30 RAs showed that, regardless of the type of strategy that the writers chose to comment on their findings, they used hedges to avoid possible refutation for their explanation of their findings and protect themselves from possible errors in their interpretation of findings. Hedges were used to distance writer from proposition and “to shield ... [him/herself] from the consequences of opposition by limiting personal commitment” (Hyland, 1996, p. 443). In other words, writers foregrounded the findings and moved themselves away from a proposition in order to protect themselves against any probable falsification of the proposition.

Overall, the most common category of hedges used in both sets of RAs in this move was modals, especially *may*. Apart from modal verbs, adverbs such as *likely*, *probably*, *perhaps*, *frequently*, *normally*, *relatively*; adjectives such as *probable*, *possible* and *plausible*, *most* and *few* were used to hedge the comments. It was also observed that *suggest*, *indicate*, *imply*, *assume*, *seem* and *appear* were the most commonly used verbs. The following examples illustrate how the writers used hedges when commenting on their findings:

- 3) This result **may** be explained by the differences between Japanese speakers and English speakers... (Quali)
- 4) It is **probable** that other salient features of the content-linked ESL program, such as learning communities, counseling, and tutoring, also played an influential role. (Quanti)
- 5) The marked difference in the number of reformulations and instances of solicited/unsolicited language assistance **suggests** that regardless of the parameters and communicative goals of a task, in the language classroom, Soon Yi and Ivan focused on language. (Quali)
- 6) This **may indicate** that, although the Koreans' referential choices in their English narratives diverged from the Korean narratives ... This result, combined with the analysis of referential choices for the boy, **suggests** that... (Quanti)

3.4. Interaction between Frequencies of Individual Moves and Overall Hedges Frequency

The difference in the overall hedge frequencies between the two corpora can be explained by the uneven distribution of moves in the two sub-corpora. As it was already discussed, Commenting on Findings is one of the heavily hedged moves in both sets of articles. Yet, as it can be seen in Table 3, this move occurred in a larger percentage of the Discussion sections in the quantitative RAs (45.40%) than in the qualitative RAs (19.41%). This alone may contribute quite significantly to the higher overall frequency of hedges in the quantitative discussion sections. On the other hand, the move occurred most in the qualitative sub-corpus was Stating Findings. Yet, the counts of the hedges found in the move were among the lowest in the corpus and the lowest in the quantitative sub-corpus. This adds to the discrepancy in the counts of hedges in the two sub-corpora.

Meanwhile, almost one third of the whole qualitative RAs consisted of Stating Findings and Providing Evidence for Findings which were among the least hedged moves in the sub-corpus. Most of the other moves in both sub-corpora were hedged with more or less the same frequency.

There were some differences in the occurrences of hedges in a few moves such as Making Recommendations and Summarizing the Study and also some moves were only present in one of the sub-corpora such as Explaining Inconsistency of Findings with Literature and Providing Evidence for Findings. However, since these moves generally comprised a very small part of the corpus and were not the widespread moves and were not identified in all the RAs, they would not cause any noticeable differences in the overall frequency of the hedges.

Investigating the occurrences of hedges in various moves of the 30 RAs showed that while both groups of writers used hedges in various moves in the Discussion section, two moves of Making Deductions and Commenting on Findings were heavily hedged in both types of articles. Further analysis showed that Commenting on Finding appeared with more frequency in the quantitative sub-corpus and comprised around 45% of the whole Discussion sections. Meanwhile, only 20% of the qualitative articles' Discussion sections consisted of this move. Therefore, it can be concluded that the fact that Commenting on Findings is one of the heavily hedged moves in the corpus which is more common in the quantitative sub-corpus and comprises higher portion of the discussion section in this sub-corpus (45% compared to 20% in qualitative sub-corpus) can be the main reason that hedges occurred more frequently in the quantitative sub-corpus than in the qualitative one.

Based on the findings it can be concluded that the occurrence of hedges is shaped by the context in which they were used, namely the move they were in (i.e., the types of discussion that were done), and since the distribution of moves (the types of discussion) varies across the quantitative and the qualitative sub-corpora, there was also difference in the hedge counts between the two groups of texts, which supports the earlier argument, stated in the introduction, that the types of research may shape hedging behavior in writing.

4. Conclusion

Overall, reinforcing other studies, this research shows that RAs are not an objective report of a research process but writers use various strategies, including hedges, to negotiate with their

audience and gain acceptability for their findings. Discussion sections are arguably the most important section of a RA as they have a crucial role in establishing the importance of research and persuading readers. In order to communicate effectively with their discourse community and persuade their audience that a study is worthy of attention, writers need to get familiar with the norms and conventions of their discipline and the ways of negotiating with their readers. Hedges are one of these conventions that writers need to master using them. They allow writers to present their new knowledge claims with accuracy, degree of commitment, and responsibility that they intend to acknowledge. As Hyland (2005b) states, hedges “balance objective information, subjective evaluation and interpersonal negotiation and this can be a powerful factor in gaining acceptance for claims” (p. 180).

The analysis illustrated that hedging is a common feature which is distributed in both types of RAs. The findings also showed that, unexpectedly, the quantitative article writers used more hedges than their qualitative counterparts. Investigating the occurrences of hedges in various Moves of 30 RAs showed that the difference of the frequency of hedges can be related to the generic structures of these two types of articles and the prevalence of specific moves in each of these two sets of articles, particularly the move of Commenting on Findings. The move was a highly hedged move in both types of RAs and comprised a high portion of the quantitative articles. The study of generic structures of these two types of RAs revealed some other interesting finding. Hedges are strategies that writers use to protect themselves from possible criticisms, show their tentativeness toward a proposition either to avoid full commitment or to show their uncertainty about a proposition, and leave room for further interpretations. They help writers in their arguments and assist them to achieve acceptability for their findings and claims. Meanwhile, the qualitative RA writers used another strategy to gain acceptance for their findings and claims. They referred frequently to their data in order to justify findings and persuade readers of ‘truthfulness’ of them. By doing this, the writers tried to persuade readers that the findings they have presented are connected and based on their observation and data, and they have made a valid analysis of what the data mean. In reporting every piece of research, there is always a possibility that the reader refutes the writers’ claims as he/she does not find them convincing. Thus, the main aim of a research article is to persuade the reader to accept the

findings and claims of the writer so that “the article becomes an integrated part of a particular field’s literature and thus of the field’s deliberation” (Fløttum, 2007, p. 5). It seems that both types of RA writers use various strategies to achieve this aim.

It should be noted that this study has only focused on hedges that were expressed through lexical items and has not considered hedging strategies. Strategic hedges such as “reference to limiting conditions, reference to a modal, theory and method, and admission to a lack of knowledge” (Hyland, 1998, p. 104) are used to “acknowledge limitations of various types, which authors are the first to point out before they are pointed out by others” (Koutsantoni, 2006, p. 25). However, various studies investigating strategic hedges (e.g. Hyland, 1998; Koutsantoni, 2006) have shown that “scientific hedging is principally a lexical phenomenon” (Hyland, 1998, p.104). For instance, Koutsantoni (2006) studying RAs in Electronic and Electrical Engineering and Chemical Engineering found that these types of hedges comprised only 14% of the whole hedges in the corpus. Thus, it still can be concluded from the findings of the present study that quantitative RAs’ Discussion sections are more hedged than the qualitative RAs. This study has also been limited to examining qualitative and quantitative research articles and excluded mixed method designs. With increasing number of mixed method research, it might be interesting to investigate the use of hedges in this type of research.

One of the strengths of this study is that it combines both corpus and genre analysis. While corpus analysis gave general information about the overall frequency of hedges in the qualitative and quantitative sub-corpora, it was unable to provide information about where these features were clustered and account for more frequent use of hedges in the quantitative RAs compared to the qualitative. Conducting genre analysis and studying hedging elements in each move provided extra insights about the use of hedges in these two types of RAs and helped to explain the results obtained from the corpus analysis.

The findings of the study have potential implication for the teaching of EAP (English for Academic Purposes). Genre analysis has become one of the most influential approaches to the teaching and learning of language for specific purposes (Bhatia, 1997). According to Dudley-

Evans (1994, p. 228), “the strongest argument for genre research is that it provides input for important and popular courses on academic writing”. The study identified the conventions of RAs in Applied Linguistics both in terms of generic structure and use of hedges. The ultimate aim of article writers is to persuade their audience to accept their knowledge claims. To achieve that aim the writers need to present their findings in a way that to be in line with their audience’s expectations (Hyland, 2005a; Koutsantoni, 2006). In other words, the writers need to be aware of the norms and conventions of their discourse community and employ this knowledge in their writings. While senior members of the community have “implicit knowledge” which they have gained by probably over years of interacting with their community, newcomers to the community lack such knowledge and experience. A large number of books are available in the market that provide some general guidelines on how to write a research article or thesis. These books usually give some general tips on the organization of the whole research article in IMRD (Introduction-Method-Results-Discussion) and points that need to be covered in each section without considering the conventions of each discourse community.

The findings of this study and other genre studies can help the novice members by providing more detailed insights and making explicit the norms and conventions of the community which are normally implicit. However, it should be noted that the findings of this study and similar studies are not prescriptive but introduce the available patterns and options which can facilitate the novice writers’ participation in their discourse community. This in turn can lead to successful academic writing. As Hyland (2007, p. 152) states, “by ensuring these options are available to students, we give them the opportunity to make such choices, and for many L2 learners this awareness of regularity and structure is not only facilitating, but also reassuring”.

This knowledge not only can be translated into the development of teaching sources which can help teachers in teaching academic writing to students, but can also help students in critical reading and interpreting the findings of other researchers and evaluating them. On the whole, this explicit knowledge on how these sub-genres are structured and written and why they are written the way they are, can facilitate the entry of newcomers to Applied Linguistics.

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Appendix A

Summary of Corpus Used in Examining the Hedges Using WordPilot 2002

Journals	Qualitative		Quantitative	
	# of texts	Size of texts (in words)	# of texts	Size of texts (in words)
Applied Linguistics	13	16,188	14	21,750
English for Specific Purposes	19	22,148	7	7,435
Language Teaching Research	10	11,324	32	39,875
Journal of Pragmatics	33	54,509	17	30,732
TESOL Quarterly	25	28,102	30	39,585
Total	100	132,271	100	139,377

Note: size of texts do not include footnotes, figures, tables and direct quotations

Appendix B

Some of the Hedges Identified in the Corpus and Their Frequencies

About	(22, -)
A certain x	(15, 12)
According to	(23, 18)
Almost	(25, 15)
Apparent	(20, -)
Apparently	(18, 11)
Appear	(70, 79)
Argue	(61, 60)
Argument	(11, 25)
Assume	(37, 29)
Assumption(s)	(30, 22)
Belief	(16, 9)
Believe	(29, 22)
Can	(132, 89)
Claim	(29, 46)
Closely	(14, 16)
Commonly	(17, 11)
Could	(211, 141)
Few	(26, 36)
Frequently	(43, 33)
Generally	(35, 28)

Indicate	(141, 68)
Indication	(16, 9)
In general	(28, 25)
Interpret	(15, 14)
Interpretation(s)	(47, 42)
Largely	(15, 18)
Likely (adj.)	(104, 57)
Little	(30, 33)
Mainly	(22, 19)
May	(668, 430)
Maybe	(4, 4)
Might	(154, 116)
Most (pronoun)	(24, 25)
Most (adj.)	(14, 27)
Mostly	(18, 8)
Normally	(13, 6)
Not always	(9, 15)
Not necessarily	(23, 12)
Often	(76, 126)
Partly	(8, 11)
Partially	(5, 10)
Perceive	(31, 29)
Perhaps	(35, 38)
Plausible	(15, 7)
Point to	(6, 10)
Posit	(2, 2)
Possible	(150, 86)
Possibly(ies)	(37, 24)
Possibility	(28, 16)
Potentially	(13, 1)
Prediction	(12, 1)
Probably	(28, 24)
Quite	(14, 13)
Rare	(6, 8)
Rarely	(13, 9)
Rather x	(13, 11)
Relatively	(60, 26)
Seen as	(16, 28)
Seem	(183, 130)
Several (pronoun)	(63, 29)
Should	(175, 133)
Should not	(18, 15)
Slightly	(21, 4)
Some	(33, 34)
Somewhat	(22, 17)

Sometimes	(13, 32)
Speculate	(12, 5)
Suggest	(222, 169)
Tend to	(39, 59)
Tendency	(15, 12)
Typical	(14, 17)
Typically	(9, 20)
Unlikely	(14, 8)
Usually	(21, 19)
Would	(277, 237)
Would not	(19, 11)

*The first number in front of each item represents its occurrence in the quantitative corpus and the second one the qualitative corpus.

**The frequency of the verb forms with the same stem (tend, tends, tended) are combined.



The Discourse Structure and Linguistic Features of Research Article Abstracts in English by Indonesian Academics

Safnil Arsyad

Bengkulu University of Indonesia

Bio data

Safnil Arsyad is a lecturer at the English Education Study Program of Languages and Arts Department of Teacher Training and Education Faculty of Bengkulu University, Indonesia. He has published in several international journals, such as in Guidelines, the Australian Review of Applied Linguistics, Asia-Pacific Education Researcher, Journal of English as a Foreign Language, International Journal of Linguistics and Journal of Multicultural Discourses. His area of research interest includes discourse analysis of research articles and other academic discourses and English teaching and learning material design and use.

Abstract

To effectively teach university students or apprentice writers to write a good research article (RA) abstract to publish in international journals, instructors need to know the present characteristics of abstracts written by the students or apprentice writers. This study examines the discourse structure and linguistic features of RA abstracts written in English by Indonesian academics published in national journals. The corpus for this study consists of 30 selected RA abstracts published mainly in university-based journals in Indonesia in social science and

humanity disciplines (i.e. education, economy and management, and humanity). Analyses were conducted using genre-based procedures with a clause or a simple sentence as the smallest unit of analysis. The results show that 1) unlike the common discourse structure of English abstracts found in RAs published in international journals, the majority English RA abstracts written by Indonesian speakers have only three moves (i.e. purpose, method and results); 2) the abstracts are mostly written in active sentence using present tense except for Move 3 (methods) in which a half of them are written in past tense and *that*-complement sentences are mostly found in Move 4 (results or findings); and 3) the use of interactional metadiscourse devices are dominated by hedges found in Move 4 while the use of attitudinal stance markers of the writers and self-reference words are very rarely found in the abstracts.

Keywords: research article abstracts, discourse structure, communicative unit, linguistic features, moves and steps.

1. Introduction

The abstract is an important part of any research article (RA) because it determines whether or not readers will go on reading the article. Although writers may write it last, the abstract is the first part of an academic writing, such as RAs, theses, research reports and so on to be read by potential readers after the title; this is simply because the abstract is located just after the title and if the writers do not write it appropriately and interestingly, readers may not continue reading the text after reading the abstract (Belcher, 2009 and Starfield, 2009). In addition, for academics from places where availability of literature is limited, abstracts may be the only part of RAs that are available for them (Cargill and O'Connor, 2009 and Fartousi and Dumanig, 2012). This is because, according to Thyer (2008:40), abstract is often reprinted by ‘abstracting and indexing services connected with the journal in order to tell people what you did.’ In other words, the quality of abstract in academic texts is very important to consider if they are to be read by potential readers.

The main purpose of an abstract in an RA is to tell as well as convince readers that the research which has been completed and is being reported in the article is interesting, important, valuable, valid and reliable, and therefore deserves further reading by the readers. According to Bathia (1993, p.78), an abstract "... is a description or factual summary of the much longer report, and is meant to give the reader an exact and concise knowledge of the full article." Bathia further suggests that an abstract should consist of four aspects of the research, namely a) the purpose, b) the method, c) the results, and d) the conclusions. Hence, through the abstract RA writers try to 'sell' their research findings to readers in order that readers read the article and if the marketing is successful readers will read the whole article.

In the Indonesian context, almost all academic texts written based on a research project such as theses, research reports, research articles, seminar or conference papers, and so on must have an English abstract (Saukah, 2003) although the rest of the text is written in Indonesian. This is done in order to have a wider scope of readership or audience when published in journals, books, research reports or uploaded into an online media for readers from in and outside Indonesia. Thus, Indonesian academics must be able to write abstracts in English well for several practical reasons. First, the majority of Indonesian journal editors will never publish an article without an English abstract included in the article. Second, the Indonesian academics, especially university lecturers, are encouraged by the government not only to publish in Indonesian; they are strongly requested to publish especially RAs in international journals where the language is mostly English. Finally, Indonesian academics are also strongly encouraged to participate as a speaker in international seminars or conferences in which the papers including the abstracts must be written in English (Ariwibowo, 2008 and Wahid, 2011). Hence, English abstracts by Indonesian academics must be written in the proper way as readers of international journals expect them to be.

Writing an abstract for an RA is not only difficult for university students; it is also hard for lecturers and novice writers. Suharno (2001) found that the majority of his students in an English for Academic Purpose or EAP class found writing an RA abstract very problematic although they were already familiar with writing such an academic text when they wrote a thesis, research

reports, seminar or conference papers and so on which also have an abstract. One of the reasons, according to Suharno, was because the EAP class participants came from various different disciplines in which the standard format of abstracts is different from one discipline to the others. Another possible reason for the problem is that the students and/or lectures are not familiar with writing RA abstracts. Thus, according to Suharno the students and lecturers must be familiar with the rhetorical style of RA abstracts acceptable for journal readers in a particular discipline either for local, national or international readers.

The rhetorical style and linguistic features of RA abstracts published in international journals although written in the same language may be different from those of RAs published in local or national research journals because of different academic and research environments and practices. Publishing an RA for a reputable international journal is certainly far more difficult than one for a local or national journal because publishing in an international journal is much more competitive than publishing in a local or national journal. Therefore, according to Belcher (2009), in order to win the competition for an international journal publication, RA writers must argue convincingly on the importance of their research project so that readers are interested in and willing to read their RAs and the argument must have been presented from very early in the article i.e., in the abstract of the article.

The use of English as a means of international communication particularly in an academic context has become wider and more frequent. Nowadays, more and more people in the world use English as a second or foreign language for various reasons including for academic purposes (Mukminatien, 2012). Nunn and Deveci (2014, p. 1) state:

Competence in English as an international language is a rapidly developing construct, but it is already clear that it is not defineable as one standard for all local contexts. There is no one center to define a universal standard of English competence.

In other words, since English has been used widely as a language for international communication it is very likely that English used by and for a local community, such as in a particular country, has developed some kinds of differences from the one used by and for the international community. The differences must be studied, known and taught to English students so that they do not hinder international communication using English especially for academic purposes as the most frequent use of English in international communication.

RA abstracts in English published in international journals in a particular discipline must have developed a particular rhetorical style which may be different from those of RAs published in local or national journals in the same discipline. For example, since English has been widely used especially for academic purposes including in writing RAs in Indonesia the local variation of English must have been developed and according to Mete (2011) this can not be ignored. Therefore, the local and international variation of English found in academic texts such as RAs must be studied in order to know the differences and similarities in order to promote successful international academic communication through RAs. If this difference is known, it will be easier to advise the students and/or new writers such as those from Indonesia on how to write good RA abstracts for international journals by showing them the rhetorical and linguistic differences and similarities and how to adjust their abstracts into ones acceptable for international journals.

Literature Review

As with research articles in general, studies on the schematic structure and linguistic features of abstracts may take one of the following designs: a) a descriptive rhetorical and linguistic analysis of abstracts written in one language and of a single discipline; b) a comparative rhetorical and linguistic analysis of abstracts written in one language but in two or more different disciplines; c) a comparative rhetorical and linguistic analysis of abstracts written in two or more different languages of one discipline; and d) a comparative rhetorical and linguistic analysis of abstracts written in two or more different languages and in two or more different disciplines. In other words, studies on research article abstracts more often adopt a comparative method rather than just descriptive and among the possible formats of comparative rhetorical and linguistic study the

one comparing between English abstracts in one or more disciplines and published in international journals is more dominant for the benefits of the teaching of English as a second or foreign language (Connor et.al., 2008). According to Connor et.al. the findings of these contrastive or comparative rhetorical and linguistic studies have greatly influenced the teaching of English academic writing in EFL and ESL contexts.

Although discourse study on abstracts is rarely conducted (Swales, 1990), several studies on research article (RA) abstracts written in English can be found in the literature. Zhang et al. (2012), for example investigated how Vietnamese organized their ideas in their English RA abstracts in the discipline of agriculture. After analyzing twenty RA abstracts in the corpus of their study, Zhang et al. found that, unlike the standard format of abstracts accepted by global academic community, the dominant rhetorical moves found in their abstracts are ‘purpose’, ‘method’ and ‘product’ without having ‘introduction’ and ‘conclusion’ (p:145). According to Zhang et al., the absence of ‘introduction’ and ‘conclusion’ in the majority of abstracts in their corpus has lowered the quality of the abstract itself because through these two segments of abstracts writers can persuasively attract readers to read the whole article. Another finding of Zhang et.al.’s study is the use of correct linguistic features, such as ‘tense’, ‘voice’ and ‘*that*-complement clause’ in addressing the necessary communicative units in the abstracts; however, the most problematic aspects in the abstracts by Vietnamese agricultural academia are the use of incorrect noun forms, inappropriate lexicon, and wrong punctuation (p:145).

Tseng (2011) conducted a rhetorical study on RAs in the discipline of applied linguistics. In this comparative study, Tseng analyzed 90 RA abstracts taken from three different international journals and analyzed on two aspects: communicative unit structure and the use of tenses in each move. Tseng found that a four-move structure (i.e., aim, method, results and conclusion) was more preferred by the majority of RA writers in the corpus of her study and only a few abstracts had a background or introduction move at the beginning of the abstracts. In addition, in terms of the use of tense in each of the five moves Tseng found that present tense is mostly used in background, aim and conclusion moves while past tense is mostly used in method and results moves. Tseng also found distinctions of abstracts in the corpus of her study; one of them is that

the writers wrote their results move in the present tense. This is, according to Tseng, for the purpose of addressing ‘the continuing applicability of their [research] findings’ (p:32).

Fartousi and Dumanig (2012) conducted a rhetorical structure study on English abstracts of conference papers written by Iranian academics in the discipline of higher education. They found that, although there are four possible moves of the abstracts (*problem, aims, method, and results*), only three are considered compulsory (*aims, method and results*) while the problem move is optional. According to them, the rhetorical structure of English conference paper abstracts in higher education is different from the ones in the disciplines of English language and linguistics and communication which may have up to six or seven moves with four compulsory moves and two or three optional ones respectively. Fourtasi and Dumanig claim that their findings confirmed the findings of previous relevant studies in which different disciplines may have different rhetorical structures of abstracts of conference papers.

Another comparative study on abstracts is between RA abstracts and master theses abstracts both written in English conducted by Ren and Li (2011). Ren and Li studied the rhetorical moves of 25 abstracts taken from 5 different popular journals in applied linguistics written by professional applied linguists and 25 abstracts taken from master theses written by postgraduate students of Chinese speakers. By using Hyland’s schematic structure of abstracts as guidelines, Ren and Li found all five moves as suggested by Hyland (i.e., *introduction, purpose, method, product and conclusions*) in the majority of the two groups of abstracts in the corpus of their study; however master theses abstracts tend to be descriptive while RA abstracts are more persuasive and promotional in their style. Another difference between these two groups of abstracts, according to Ren and Li, is that the introduction move (Move 1) in the master theses abstracts tend to be long while the product move (Move 4) tend to be simple and short while in the RA abstracts these two moves tend to be equal in length. Ren and Li’s interpretation of this difference reflects a common attitude of student writers who are normally not confident in addressing, claiming and arguing for their research and tend to write introductions longer as a compensation and to meet the number of words required for an abstract.

Studies on English RA abstracts, such as by Chinese speakers, Vietnamese, Iranian or speakers of other languages where English is a foreign language as in Indonesia may have been a few but a serious study on the ways Indonesian speakers write abstracts in English from schematic structure and linguistic features points of view is hard to find in the literature (Basthom, 2006). According to Basthom, the majority of references on RA abstracts in English available in Indonesia are in the form of guidelines of academic writing, such as of theses and dissertations, essays, laboratory experimental reports, research articles, research reports and so on in which writing a good abstract in English is usually included. However, these kinds of guidelines are often hard for university students and/or novice writers to follow because they are often more theoretical than practical (Swales, 1990). There must be RA writing guidelines designed especially for university students or apprentice writers and these must be written based on comprehensive analyses of similarities and differences between the schematic structure and linguistic features of English RA abstracts published in local or national journals and the one published in international journals.

From a trial study, Basthom (2006) found that Indonesian writers tend to produce a different style of RA abstracts in English especially in the first sentence of the abstracts. For example, according to Basthom, out of 16 English abstracts he analyzed only 3 (18,75%) are written in a direct manner while the rest of them are written in indirect ways. According to Basthom, this implies that the Indonesian writers use their Indonesian rhetorical style when writing an abstract in English and this is not the appropriate way of writing a journal article abstract in English. However, a more extensive study on English abstracts written by Indonesian speakers is necessary in order to see how Indonesians actually write an RA abstract. More rhetorical and linguistic analyses must be done on abstracts written in English by Indonesian speakers and published in Indonesian journals and this is the main motivation of this study; that is to know how Indonesian writers write RA abstracts in English from rhetorical and linguistics points of view. As a guideline for this study, the following research questions are addressed:

- a. What communicative units or moves are mostly found in RA abstracts written by Indonesian academics published in national research journals?

- b. What linguistic features characterize the RA abstracts written by Indonesian academics published in national research journals?

- c. Are there any differences of rhetorical and linguistic features between the English abstracts by Indonesian academics published in national research journals and those published in international research journals?

2. Methods

2.1. The Corpus of the Study

Thirty RA abstracts in three disciplines (i.e., humanity, economics and management, and education) written in English by Indonesian writers were selected for this analysis. The three disciplines were chosen to represent the field of social sciences and humanity and the abstracts were taken from the latest possible volume of the journals to represent the current condition of English abstracts written by Indonesian speakers from rhetorical and linguistic points of view. It is assumed that all RA abstracts published in the journals had gone through a standard editing and reviewing process following the submission guidelines enforced by the journal editorial boards and therefore all abstracts published in the journals had conformed to the guidelines, such as on the content, number of words, linguistic features and text structure or style. The distribution of the RA abstracts as the corpus of this study is given in Table 1.

Table 1: The Distribution of Research Article Abstracts in the Corpus of this Study

No.	Disciplines	Codes	Number of RAs	Percentage
1.	Education	EJ	10	33,33%
2.	Economics and Management	EMJ	10	33,33%
3.	Humanity	HJ	10	33,33%
Total			30	100%

The list of the 30 RAs from three different journal disciplines from which they were taken for the corpus of this study is given in the appendices.

2.2. Genre Analysis Method of Research Article Abstracts

Several authors of academic writing guidelines have rather different suggestions on the content of an abstract. Paltridge and Starfield (2007), for example, suggest that an abstract should address five communicative units or moves of the research project which has been completed: the main aims, specific objectives, reasons, processes and results of the research. However, according to Bathia (1993), an abstract should contain only four moves: the aim, method, findings and conclusions. Yet another slightly different suggestion about RA abstracts is given by Belcher (2009) in which she suggests that an RA abstract should contain six moves: the reason, topic, method, results, conclusions, and recommendations of the study. In addition, according to Swales et.al. (2009) most recent genre analysis studies on RAs reveal that RA abstracts in various languages and in various disciplines have five moves and these moves are as follows:

Move 1: background/introduction/situation which is written to answer the question of what the writer/s know about the research topic;

Move 2: the purpose of research which is meant to explain what the research is about;

Move 3: methods/materials/subjects/procedures which tell readers how the research is conducted;

Move 4: results/findings which address what the researcher/s discover from the research; and

Move 5: discussion/conclusion/significance which are aimed at discussing what the research results mean.

As shown in the above definition and examples of moves in a typical abstract, although the terms for each particular move may vary the content of the move is similar. Particular sets of terminology for each move may be common in a particular discipline while other sets of terminology are more commonly used in other disciplines. In the present study, the above five moves were used as a guideline.

This study used genre analysis method as suggested by Swales (1990) in which the communicative function of each clause or simple sentence (herewith called T-unit). In this study, following Safnil (2000, p.82), a move is defined as:

... a clause or a set of clauses or a paragraph which shows a clear indication of a specific identifiable communicative purpose, signaled by linguistic clues or inferred from specific information in the text. The communicative units or moves in a particular text together develop a set of communicative purposes relevant to the genre of the text.

Thus, the classification of one or more T-units into a particular move was based on several considerations, such as understanding of the T-units, the use of specific lexicon in the T-units, the position of the T-unit/s in the abstract, and so on.

The smallest unit analysis in this study is a clause or a simple sentence because it is unlikely that two or more communicative purposes or moves are addressed in one clause because a clause should have only one topic or subject and one comment or predicate. In addition, the identification of moves in the discussion section of RAs was done by using linguistic and discourse clues; these are formulaic expressions, particular lexical items, cohesive markers, by inferencing from the information contained in the text, and other kinds of discourse clues, such as sub-titles or sub-section titles, paragraph as a unit of ideas, and other possible linguistic and

discourse clues available in Indonesian language which may help chunking the text into moves and identifying the move boundaries.

The linguistic analyses on the research article abstracts focused on several features which significantly characterize English abstracts. Swales (1990) mentions that the use of tenses (i.e., present and past tense) are clear characteristics of abstract written in English; ‘present tense’ is used to refer to the information available in the article and ‘past tense’ is used to stress the importance of the research results or findings. Other linguistic analyses on English RA abstracts (i.e., Pho, 2010 and Hyland and Tse, 2005 quoted in Zhang et. al., 2012) identified more linguistic features characterizing the text type in their study; these include ‘authorial voice including self-reference words’, ‘stance expression’, ‘modal auxiliaries’, ‘semi-modal verbs’, ‘*that*-complement clause’, ‘voice’ and ‘tense’ (p:134). According to Almeida (2012), writer’s stance in academic discourse is a hard concept to define because it involves various interpretations rather than shapes; however, following Biber et.al. (1996) for this study stance is defined as ‘... speakers’ and writers’ personal feelings, attitudes, value judgements, or assessments’ (p.20). In addition, Almeida (by referring to Hyland, 1998) defined ‘hedge’ as ‘... the means by which the writers can present a proposition as an opinion rather than a fact: items are only hedges in their epistemic sense, and only then when they mark uncertainty (p.20)’.

For this study following Zhang et.al. (2012) only six linguistic features were included in the analyses and these six features were grouped into two categories: ‘grammatical’ and ‘interactional metadiscursive’ forms. The grammatical form includes voice (active and passive voices), tense (present and past tenses) and *that*-complement clause and ‘interactional metadiscursive’ form includes hedges, attitudinal stance markers and self-reference words. While the grammatical forms are clear and easily understandable, the interactional metadiscursive forms need clear definition and examples as given below (the definitions and examples are taken from Zhang et.al., 2012):

- a. Hedges are words or phrases which express a notion of imprecision or qualification, such as *can*, *could*, *might*, *probably*, *likely*, etc;

- b. Attitudinal stance markers are words or phrases which show the writer's opinion or evaluation on a statement or an object of their discourse, such as *unfortunately*, *honestly*, *actually*, *frankly*, *no doubt*, etc; and
- c. Self-reference words are first-person pronouns such as *I*, *we*, *my*, *our* and other words referring to the author himself or herself, such as *the author*, *the writer* or *the researcher*.

The rationale for including only six linguistic features of the abstracts was for the practical purpose of discourse analyses. It is assumed that the majority of abstract writers (i.e., the Indonesian academics) are not able to write good RA abstracts using complicated or various linguistic elements as international journal readers expect.

2.3. Analyses Procedure

The processes of identifying the communicative units in the RA abstracts went through the following steps. First, the entire article was read carefully to get a rough understanding of the research project. Second, the abstract was reread to better understand it. Third, the abstract was read again to identify the possible communicative units in it. Fourth, the abstract was read again to identify the possible linguistic features found in it. Finally, an acceptable model of discourse structure, which characterizes the English RA abstracts written by Indonesian writers, was developed if possible. These steps were carried out manually since the size of the text was quite manageable to analyse. However, manual analyses of discourse structure and linguistic features of texts might involve subjective judgment or evaluation which could reduce the reliability and validity of analysis results. Crookes (1986) suggests that to ensure the accuracy of text analysis, such as the identification of the communicative units, it can be tested by defining the communicative units in a practical way so that an independent rater/s can identify them and confirm their decisions with a sufficiently high level of agreement. Crookes further suggests that, if the analysis model represents an accurate reflection of a particular text, then it should be

possible to reach a high level of agreement. For this study, the independent rater was a lecturer of an English study program at the same university who graduated from a Master of Arts program in Linguistics from an English speaking country. She was asked to follow the same procedure as described above in order to identify the rhetorical structure and linguistic features of the abstract. When there was a disagreement between us in the analysis results, a discussion was then held to find an agreement.

3. Results and Discussion

3.1. The Frequency and Percentage of Move Appearance

The first result in this study concerns the occurrence frequency of the Moves found in RA abstracts in the corpus of this study as shown in the following table.

Table 2: The Frequency and Percentage of Move Appearance

Moves	Research Article Abstracts				
	HJ	EMJ	EJ	Total	%
	n=10	n=10	n=10	N=30	
Move 1	4	3	1	8	26.6%
Move 2	10	8	9	27	90%
Move 3	9	10	9	28	93.3%
Move 4	10	10	10	30	100%
Move 5	4	1	4	9	30%

As shown in Table 2, the majority of RA abstracts in the corpus of this study have Moves 2, 3 and 4 (*purpose, methods, and results*) but only 8 RAs (26.6%) have Move 1

(*background/introduction/situation*) and 9 RAs (30%) have Move 5 (*discussion/conclusion/significance*). This may indicate that for the Indonesian writers in the disciplines of humanity, economics and management and education, three moves (Moves 2, 3 and 4) are compulsory and Moves 1 and 5 are optional in their English abstracts. The examples of a complete abstract with Moves 2, 3 and 4 in each discipline are given in appendices. This finding is in line with Tseng (2011) in which he found three compulsory moves (*aim, method, and results*) in his English RA abstracts in applied linguistic. However, this is different from Paltridge (2007) in which he suggests that a RA abstract should have five moves (*main aim, specific objective, reasons, processes and results*) and Bathia (1993) four moves (*aim, method, findings and conclusion*). This finding is also not in line with Belcher (2009) who proposes that a RA abstract should have five moves (*the reason, topic, results, conclusion, and recommendation*). According to Indonesian RA guidelines, an abstract should contain only 50-75 words and be written within one paragraph (Ibnu, 2003:78); this may be the reason why the Indonesian RA writers have a shorter abstract containing only three compulsory moves instead of four, five or even six as in the one by RA writers in international journals. In addition, Waseso (2003) claims that every journal in Indonesia has its own in-house style or writing which is based on national RA writing styles, such as of Indonesian Institute of Science or LIPI or of international RA writing styles such as, American Psychological Association (APA); however once a journal management decides to apply a certain writing format and style, the RA writers contributing to the journal must comply with the style consistently.

Move 1 (*Background/introduction/situation*) and Move 5 (*discussion/conclusion/ significance*) seem to be considered unimportant by the majority of Indonesian RA writers considering the rare existence of the two moves in the data of this study. This finding is in line with the finding of Zhang et.al., (2012) from their agriculture RA abstracts. According to Zhang et al., the nonexistence of Move 1 and Move 5 in their agriculture RA abstracts may have been because of abstract writing style in that particular discipline. However, according to Zhang et. al., RA abstracts without Moves 1 and 5 are ineffective to attract potential readers to read the whole article because through Move 1 RA writers could convince readers that the topic of the research

reported in the RA is important or necessary and through Move 5 they could tell readers the immediate practical benefits of the research findings.

The sequence of moves of the RA abstracts in the samples of this study mainly follows the order as suggested by Swales et. al., (2009) as spelled out in the method section of this article. This order follows the guidelines of writing an abstract in Indonesian journal articles as suggested by Ibnu (2003) in which, according to him, RA abstract should contain problem, purpose, method and results. Thus in terms of the order of the move appearance, the English RA abstracts written by Indonesian academics are not problematic when they write RAs to be published in Indonesia. However, the problem in terms of the rhetorical structure is on the absence of Move 1 (*background/introduction/situation*) and Move 5 (*discussion/conclusion/ significance*) in the majority of the abstracts especially when submitting an article to an international journal.

3.2. Linguistic Features on the RA Abstracts

3.2.1. Grammatical Features

The second result of this study is the grammatical feature of the abstract in terms of the use of voice, tense and *that*-construction in the abstract. In this study, only the main verb of every sentence was analyzed while the verbs other than the main verb or of dependent clauses were not included. The rationale for this decision is that every move in the abstract is usually expressed through one sentence (a simple or a complex sentence) and it is the main verb or the verb of the main clause which grammatically characterizes the move. If in a move there was more than one sentence, then only the first sentence was analyzed because the first sentence often determines the type of the move. The result of grammatical analysis is shown in Table 3 below.

Table 3: The Grammatical Feature of Moves

Grammatical Features	Moves					Total
	Move 1 N=8	Move 2 N=27	Move 3 N=28	Move 4 N=30	Move 5 N=9	

Active voice	5	22	18	25	5	75
Passive voice	2	5	10	5	5	27
Present tense	5	18	14	22	9	68
Past tense	2	9	14	8	1	34
<i>That-</i> complement	-	-	-	19	-	19

Notes: N = the number of abstract with the particular move.

As gleamed in Table 3 above, the use of active voice sentences is far more dominant than the use of passive voice sentences in all moves except Move 5 (discussion/conclusion/ significance). This finding is similar to the finding of Zhang et. al., (2012) in which they found the frequency of active voice sentence is twice as many as the frequency of passive voice sentences in their agricultural science RA abstracts. Below are examples of active voice sentences from the data of this study:

1. ... This study has two objectives, the first is to know the influence of the service quality and saving product quality towards the immage of PT. Bank Sinarmas. The second is to know the influence of the service quality, saving product quality and the company immage towards the customer loyalty of PT. Bank Sinarmas.
(Move 2 in EMJ-8)
2. ... The study is qualitative research using phenomenology approach which employs interview, observation, and documentation technique in collecting data.
(Move 3 in EJ-1)
3. ... The study reveals the following findings: 1) linguistic code varieties in the social interaction in ‘pesantren’ includes Arabic, Indonesian and Javanese; 2) the

use of the linguistic codes in the social interaction in ‘pesantern’ depends on social factors of the ‘santri’ studying Islam, the degree of formality and the speaking partner’s characteristics, communication facilities, the intimacy and atmosphere, the speaking partner’s respect, and the influence of the speaking partners and relaxing atmosphere; 3) the contribution of the use of linguistic codes in the social interaction in ‘pesantern’ to the Indonesian language comprises the development of status, corpus and language acquisition. (Move 4 in HJ-8)

It is important to note that, although the use of active voice sentence is far more dominant in Moves 1, 2, 3 and 4, but in Move 5 (*discussion/conclusion/significance*) the use of passive sentence is equally frequent. Below are given examples of passive and active sentences used in Move 5 of the abstracts.

4. ... Consequently, textbooks can be included as texts difficult to understand; this situation may be caused by both language and material presentation deficiencies.
(Move 5 in EJ-4)

5. ... This justifies a conclusion that the experiment proves the hypothesis. In other words, teacher’s comment gives positive effect to the improvement of morphosyntactic accuracy of student’s essays. (Move 5 in HJ-10)

As shown in the above examples, it does not seem to be just a matter of choice of the writers whether to use a passive or active sentence but it is determined by the sub-communicative purpose of Move 5. The passive sentences seem to be used to draw a conclusion from the results while an active sentence is used to discuss the results or to propose a suggestion.

The use of present tense in the abstracts as shown in Tabel 3 is twice as frequent as the use of past tense in all moves except in Move 3 (methods/materials/subjects/procedures). This finding is different from the finding of Zhang et. al., (2012) in which they found that past tense is more frequently used in method and product (results) moves in their agriculture RA abstracts. Zhang

et. al., concludes that the use of tenses (past or present) does not characterize their RA abstracts. In addition, the finding of this study is contradictory to the finding of Graetz (1985) who found that RA abstracts are written mostly using past tense (Graetz quoted in Swales, 1990). However, according to Swales the use of present tense in RA abstracts is also frequent; that is in order to show that ‘the research reported [in the RA] is alive or because it reflects wider knowledge claims (p:181)’. The use of past tense, as Swales further comments, is for the purpose of stressing the findings or the application of the findings of previous relevant studies.

Unlike in other moves, the use of present tense and past tense in Move 3 is equally frequent as shown in Table 3. Below are examples of Move 3 using present tense and past tense from the abstracts:

6. ... It **involved** 180 primary teachers in the municipality of Malang. Multistage cluster technique was employed for the selection of sample. The data analyses **was** conducted using Structural Equation Modelling (Move 3 in EJ-8)
7. ... The population of this research **are** 65 leader and staff of the office of Malikussaleh University Lhokseumawe who usually make budgetary policy. Data analyses **uses** multiple regression model through SPSS version 14. (Move 3 in EMJ-3)

As can be seen in the above examples, Move 3 in EJ-8 is written in past tense while in EMJ-3 it is written in present tense. It may imply that for the Indonesian writers whether to write Move 3 in their abstract in past tense or in present tense is not important. The right way of writing Move 3 of an abstract is actually using a past tense because the writers describe how they conducted the research reported in the RA as found by Tseng (2011) in the abstracts of her applied linguistic RAs published in international journals. However, since in Indonesian language grammar there is no concept of tense, some Indonesian writers may not be aware of the importance of the tense concept in English when writing an abstract. In other words, Indonesian writers may still use their first language competence in writing in a foreign language as far as the tenses concept goes.

Table 3 also shows that the use of *that*-complement is only in Move 4 (results/findings) of the abstracts. Below are examples of *that*-complement in the English abstracts by Indonesian speakers.

8. The study reveals that they are 1) the influence of PBL model ... (Move 4 in EJ-7)

9. The results of the research and hypothesis testing show that : 1) ROI current ratio, DER, EPS and firm size simultaneously cash divident ... (Move 4 in EMJ-5)

10. The results of the research show that 1) the simple lexical incorporation affixes are : the affix incorporation... (Move 4 in HJ-9)

This finding is in line with the finding of Zhang et. al., (2012) in which they found that *that*-complement clauses are mainly found in ‘product’ or result move (Move 4) although this type of clause is also found in other moves in their study. According to Pho (2010 quoted in Zhang et. al., 2012), *that*-complement clause is an important feature of RA abstract functioning to address the results or findings of the research reported in the RA. As shown in Table 3, not all abstract writers use *that*-complement clause to introduce the results or findings of their study; the other types of clause used to introduce Move 4 are as in the followings:

11. The results of the action research **can be briefly stated** as follows. (Move 4 in EJ-3)

12. The result of this research **is** in simultaneous budgetary participation... (Move 4 in EMJ-3)

13. The results of this research **are**... (Move 4 in HJ-3)

14. Implementation of such syntagmatic model **is able** to increase student's cognition... (Move 4 in HJ-5)

15. The study **reveals** the following findings... (Move 4 in HJ-6)

16. The results **indicated** various greetings based on vertical relationships... (Move 4 in HJ-2)

As shown in the above examples, the Indonesian writers use various sentence forms to address their research results other than using *that*-complement, such as passive form, declarative form, or using a modal auxiliary. However, this paper is not intended to evaluate whether or not these grammatical forms are grammatically correct or acceptable in English.

3.2.2. The Use of Interactional Metadiscourse Devises

The next analysis is on the use of interactional metadiscourse devices in the RA abstracts. The analyses results are shown in Table 4 below.

Table 4: Interactional Metadiscourse Devices Found in the RA Abstracts

Metadiscourse Devices	Communicative Units or Moves					Sub- Total
	M 1	M 2	M 3	M 4	M 5	
	N= 8	N=27	N=28	N=30	N=9	
Hedges	1	-	-	10	1	12
Attitudinal Stance Markers	-	-	-	2	-	2
Self-Reference Words	-	1	1	1	-	3
Total	1	1	1	13	1	17

As shown in Table 3, the most dominant use of interactional metadiscourse devices is ‘hedges’ which mostly appears in Move 4. Below are examples of ‘hedges’ found in the RA abstracts in the corpus of this study.

17., it **could** be concluded that... (Move 4 in EJ-9)

18. The subjects **seem** to be aware of using... (Move 4 in HJ-8)

19. The results of this study **indicate** that... (Move 4 in JE-7)

Table 4 also shows that the use of attitudinal stance markers of the RA writers is very rare; only 2 of them are found in Move 4 of the same RA abstracts. The examples of these devices are given below:

20. The spirit of nationalism is **clearly** shown in this novel. (Move 4 in HJ-7)

21. The rebellion taken place in 12 November 1926 and 1927 in the novel indicates this nationalism spirit which is **essentially** desire of a place for self-actualization...
(Move 4 in HJ-7)

The frequency appearance of interactional discourse markers in the data of this study is far from ideal condition; this is probably because the Indonesian writers are worried about the subjective tone of their abstracts and therefore avoid using such discourse markers in order to appear objective. However, Zhang et.al. (2012) claim that the use of interactional meta discourse devices especially ‘hedges’ and ‘attitudinal stance markers’ should be frequent in RA abstracts because this discourse contains subjective evaluation of writers, such as in justifying the choice of research topic, research method, results or findings and conclusion to convince readers that the research is important, interesting, valid and reliable. A similar statement is addressed by Crompton (2013) in which he claims that quality academic discourses in English utilize frequent correct and appropriate use of hedges and this shows the importance of such interactional

metadiscourse device characterizing the academic discourse. From his study, Crompton also found that university students from Middle East countries use hedges less frequently in their RA abstracts compared to the writers of international research journals do.

Self-reference words appear only three times in the RA abstracts using the words ‘writer’ and ‘researcher’ to refer to the author of the RAs. Below are examples of self-reference words found in the data of this study:

22. **The researcher** wants to know the problems faced by teachers in teaching and learning using Tell and Story method. (M 2 in EJ-1)

23. In the analysis, **the writer** applies comparative method using the theory of language change. (M 3 in HJ-4)

24. After examining closely and analysing the data, **the writer** comes to a conclusion that the Arabic language elements ... (M 4 in HJ-4)

According to Zhang et.al. (2012) the frequent use of self-reference words in academic discourse indicates a subjective mode of the discourse and therefore they must be avoided. Zhang et.al. suggests that in order to appear objective RA writers have to avoid using self-reference words such as personal pronoun, the writer, the researcher, the author, and so on. Hence, the rare use of self-reference words in English RA abstracts by Indonesian speakers show their positive attitude or good practice in writing academic discourse in English.

4. Conclusions and Recommendations

Several useful conclusions can be drawn from the findings of this study. First, the majority of RA abstracts written in English by Indonesian academics in the corpus of this study have only three moves (i.e. purpose, method and results). This is different from the discourse structure of

RA abstracts as suggested in academic writing guidelines and from the English abstracts commonly found in international journals in which an abstract should have five moves: Move 1 (background/introduction/situation), Move 2 (the purpose of research), Move 3 (methods/materials/subjects/procedures), Move 4 (results/findings) and Move 5 (discussion/conclusion/significance). Second, the English abstracts found in the data of this study are mostly written in active sentences using present tense except for Move 3 (methods) in which half of them are written in past tense and *that*-complement sentences are mostly found in Move 4 (results or findings). This is in line with the findings from previous studies except for the frequent use of present tense in Move 3 (methods) which should be written using past tense. Finally, the use of interactional metadiscourse devices are very rare and dominated by hedges mostly found in Move 4 while the use of attitudinal stance of the writers and self-reference words are even rarer in the abstracts. This finding although in line with the findings of previous studies does not show the characteristics of good abstracts in terms of the use of interactional metadiscourse markers especially of hedges and attitudinal stance markers of the writers.

Based on the conclusions above, several practical recommendation can be proposed to different people or group of people dealing with the writing of RAs and research journal publication in Indonesia. First, journal editors in Indonesia must study the characteristics of good RA abstracts in English (ie., rhetorically and linguistically) and encourage RA writers submitting their manuscript to publish in the journals to use such characteristics. Second, Indonesian academics must adjust the rhetorical structure and linguistic features of their RA abstracts when writing an abstract in order to be acceptable by international academic community who happen to read them. Finally, the teaching of English academic writing especially in writing RAs must be based on the information from contrastive or comparative study results on the rhetorical structure and linguistics features of RAs written by Indonesian academics published in national research journals and those found in RAs published in international journals in a particular discipline or a group of disciplines.

For future studies it is recommended that the study includes RA abstracts in English from other disciplines in the corpus of the study. It is also necessary to do a direct comparative or

contrastive study which includes a set of RA abstracts in English written by Indonesian academics and the ones written by the RA writers published in international journals in the same discipline or group of disciplines. Finally, since all abstracts published in print or online in Indonesia such as theses, research reports, dissertations, conference or seminar papers, etc. must be in English, a comparative or contrastive study between English abstracts of different academic discourse types seems also very important.

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Appendix1 : List of RAs Included in the Corpus of The Study.

Code Research Articles

EJ.1 Rindaningsih, Ida (2008) ‘Penerapan Metode *Tell Story* Dalam Pembelajaran Anak Usia Dini,’ in Halaqa, vol. 7, no. 2, p: 9.

EJ.2 Ranto, Basuki (2011) ‘Pengaruh Return on Investment of Human Capital

(ROIHC) Efektifitas Terhadap Kinerja Organisasi: Studi Kasus Pada PT TGU Jakarta 2011' in Manajemen Pendidikan, vol.1, no.2 pp: 101-109.

- EJ.3** Zamzani Dkk. (2006) ‘Peningkatan Perkuliahan Bahasa Indonesia untuk Membina Keterampilan Mahasiswa Dalam Menulis karya Ilmiah’ in Cakrawala Pendidikan, vol.25, no.2 pp: 309-325.
- EJ.4** Abdulkarim, Aim (2007) ‘Analisis Isi Buku Teks dan Implikasinya dalam Memberdayakan Keterampilan Berpikir Siswa SMA’, in Forum Kependidikan, vol.26, no.2 pp: 118-132.
- EJ.5** Patmadewi, Ni Nyoman (2010) ‘Model Pengentasan Kemiskinan dalam Upaya Peningkatan Pemerataan Pendidikan’ in Penelitian Inovasi dan Rekayasa Pendidikan, vol.1, no.1 pp: 1-30.
- EJ.6** Setyaningsih, Yuliana (2010) ‘Peningkatan keterampilan Menyimak (Listening) dan Berbicara (Speaking) pada Pelajaran bahasa Inggris Melalui Metode Pair-check’ in Didaktikum, vol. 1, no.3 pp: 288-297.
- EJ.7** Sastrawati, Eka; Rusdi Muhammad and Syamsurizal (2011) ‘Problem-Based Learning, Strategi Meta Kognisi, dan Keterampilan Berpikir Tingkat Tinggi Siswa’ in Tekno-Pedagogi, vol.1, no.2 pp: 1-14.
- EJ.8** Atmoko, Adi (2011) Model Tindakan Guru Menanggapi Perilaku Siswa Dalam Pembelajaran, in Jurnal Ilmu Pendidikan, vol. 17, no. 4, pp: 255-264.
- EJ.9** Kartono; Marwiyanto; Noer Hidayah (2010) ‘Peningkatan Kreatifitas dan Motivasi Blajar IPA Melalui Pembelajaran Kontekstual Siswa Kelas V SD 3 Karang Asem Laweyan Surakarta’ in Didaktika Dwija Indria, vol.1, no.1, pp: 1-21.

- EJ.10** Nurudin (2010) ‘Proses kebijakan Pendidikan Gratis Pasca Pemilihan Kepala Daerah Langsung di Kabupaten Banyuwangi’ in Edukasi, vol.8, no.2 pp: 4057-4073.
- EMJ.1** Widodo, Haryanto (2009) ‘Analisis Kelayakan Investasi Perkebunan Kelapa Sawit PT XYZ’ in Organisasi dan Manajemen, vol.2, no.4 pp: 1-26.
- EMJ.2** Nainggolan, Elfirisma T. Dkk (2011) ‘Kelayakan dan Strategi Pengembangan Usaha Silo Jagung di Gapoktan Ridomanah Kcamatan Nagreg Kabupaten Bandung’ in Manajemen IKM, vol.6, no.1 pp: 1-8.
- EMJ.3** Akhyar, Khairil Dkk. (2010) ‘Pengaruh Partisipasi Anggaran, Gaya Kepemimpinan dan Komitmen Organisasi Terhadap Kinerja Manajerial; Studi Kasus Pada Universitas Malikus Saleh Loksmawe’ in Mepa, vol.5, no.1 pp: 1-14.
- EMJ.4** Suratman, Sasa Syaifulrohman (2012) ‘Hubungan Finansial Disstres dan Konservatisme Akuntansi’ in Gema, vol.4, no.2 pp: 119-131.
- EMJ.5** Foenay, Kristien Corina (2010) ‘Analisa Pengaruh Faktor Internal Terhadap Dividen Tunai pada Emiten Nonkeuangan di Bursa Efek Indonesia’ in Bisnis dan Manajemen, vol.2, no.1 pp: 403-414.
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- EMJ. 7** Sawaji, Jamaludin (2012) ‘Pengambilan Keputusan Mahasiswa dalam Memilih Perguruan Tinggi Swasta,’ in Jurnal Bisnis, Manajemen, dan Informatika, vol. 4, no. 1, pp: 1-20.

- EMJ.8** Hidayat, Cecep and Pritha Putri Warahapsara (2010) ‘Pengaruh Kualitas Pelayanan dan Produk Terhadap Citra Perusahaan dan Loyalitas Nasabah’ in Jurnal Manajemen, vol.1, no.2 pp: 95-102.
- EMJ.9** Hartati, Anny (2009) ‘Peningkatan Pendapatan Petani di Kabupaten Banyumas dengan Cara Memberdayakan Petani Padi Organik melalui Kemitraan’ in Soca, vol.9, no.1 pp: 1-5.
- EMJ.10** Widati, Suryan; Iwan Triyono; Eko Ganis Suharsono (2011) ‘Wujud, Makna dan Akuntabilitas Amal Usaha Sebagai Aset Ekonomi Organisasi Religius Feminis,in Jurnal Akuntasi Multipradigma’, vol.2, no.3, pp: 369-380.
- HJ.1** Arono (2005) ‘Praanggapan dan Implikatur Wacana Dialog Dalam Pembelajaran Bahasa Indonesia’ in Wacana, vol.13, no.2 pp: 169-187.
- HJ.2** Amir, Johar (2011) ‘Sapaan Dalam Bahasa Bugis Dialek Sidrap’ in Linguistik Indonesia, vol.29, no.1 pp: 70-83.
- HJ.3** Umar, Fatmawati AR. (2011) Wacana Tujaqi Pada Prosesi Adat Perkawinan Masyarakat Suwawa Propinsi Gorontalo, in Bahasa dan Seni, vol. 39, no. 1, pp: 27-37.
- HJ.4** Fauziah, Jiah (2011) ‘Fitur-Fitur Fonologis Penggunaan Elemen-Elemen Bahasa Arab Dalam Komunikasi Masyarakat Keturunan Arab Surakarta’ in Adabiyyat, vol.10, no.2 pp: 207-232.
- HJ.5** Mulyani, Mimi (2012) ‘Sintakmatik Pembelajaran Menulis Catatan Harian Berbasis Kearifan Budaya Lokal: Suatu Alternatif Model Pembelajaran Keterampilan Menulis yang Berorientasi Pada Pendidikan Karakter’ in

Metalingua, vol.10, no.1 pp: 27-39.

- HJ.6** Rokhman, Fatur (2004) ‘Kode Bahasa dalam Interaksi Sosial Santri: Kajian Sosiolinguistik di Pesantren Banyumas’ in Litera, vol.3, no.1 pp: 12-26.
- HJ.7** Indica, Channa (2011) ‘Semangat Kebangsaan dalam Roman Drama di Boven Digul Karya Kwee Tekhaai’ in Bahasa dan Sastra, vol.11, no.2 pp: 134-143.
- HJ.8** Putra, I Nyoman Adi Jaya (2008) ‘Pilihan Kode Masyarakat Tutur Muslim Pegayaman, in Jurnal Penlitian dan Pengembangan Sain dan Humaniora,’ vol. 2, no. 1, pp: 1-13.
- HJ.9** Prihadi (2003) ‘Afiks Inkorporasi Leksikal Sederhana Verba dan Fitur Semantinya Dalam Bahasa Indonesia,’ in Diksi, vol. 10, no. 1, pp: 71-83.
- HJ.10** Refnaldi (2003) Komentar Dosen dan Pengaruhnya Terhadap Peningkatan Ketepatan Morfosintaksis Esai Mahasiswa, in Komposisi, vol. 4, no.1, pp: 95-110.

Appendix 2: Samples of RA Abstracts with Five or Complete and with Three or Simple Moves.

A: Abstract with five Moves

Moves	Text (HJ-1)
Move 1	Not all of preposition and implicature have relation each other; the research problems discussed in this article were teachers' presupposition and student's implicature.

Move 2	The aim of this research was to know the teacher's presupposition and student's implicature.
Move 3	This research was qualitative by using content analysis.
Move 4	The result of this research showed that there were cooperation without unsure answer (qualitative context), cooperation using appropriate answer (quality), cooperation depends on questionnaire interpretation (relation), cooperation because of habit (manner).
Move 5	So, presupposition and implicature had based on appropriateness, mutual knowledge, and cooperative principle.

B. Abstract with three Moves

Moves	Text (EMJ-7)
Move 2	The research studied the internal factors (university image, motivation and attitude) and external factors (tariff, reference group, and marketing communication) that influence the decision making process of the students in choosing the private university they have entered.
Move 3	A structural analysis method is applied to the response of the questionnaire received from 250 students.
Move 4	The result shows that all tested relationships among variables are positively significant except the decision of the students. However, two lines of relationships are not found significant, the relationship between marketing, communication and motivation and attitude variables.





Visualization of Textual Structure Based on Move Analysis of Research Papers

Sayako Maswana

Waseda University, Tokyo, Japan

Bio data

Sayako Maswana is an assistant professor at Waseda University, Japan. She is currently conducting research on genre analysis of research articles. She has published in a number of journals such as *The Journal of Asia TEFL* and *Journal of the IATEFL ESP SIG*.

Abstract

Move analysis in ESP research has often been applied to specific sections of research papers in selected disciplines and has provided frequent textual structures. However, frequency-based prototyping tends to limit the range of disciplines and texts to be analyzed and also disregard the diversity in the writings of research papers. This study visualizes all move sequences in an effort to show both the prototypes and the diversity of research papers using a program called Graphviz (2011). The study uses the results of move analysis applied to 13 education research papers and 8 economics research papers. All papers are move-coded manually by the researchers in each discipline. Visualization of the moves enables researchers and teachers to see the pictures of entire research papers with moves that have been discarded in frequency-based analysis. Compared with the traditional descriptions of moves, the visualization made it easier to understand the logical flow of the papers. Findings drawn from the visualization include

interconnectivity across moves and sections and similarities and differences across and within disciplines that have not been shown in previous studies. Using the visualization approach combined with the traditional frequency-based structure description may be a useful tool for both teachers and learners. It is also hoped that visualization techniques can be made available for learners so they can follow their selected models.

Keywords: visualization, genre analysis, education, economics, research papers, move analysis

1. Introduction

The genre-based approach to writing has been presented as one of the major methods in the teaching of English for Specific Purposes (ESP), in particular the writing of research papers. Genre analysis of research papers has often examined specific sections of papers in selected disciplines and identified frequent textural structures and their linguistic characteristics (e.g., Lim, 2006; Samraj, 2002; Yang & Allison, 2003, among many others). A structural pattern is described in a “move,” a structural segment that has a specific communicative function and purpose (e.g., Bhatia, 1993; Swales, 1981, 1990). Most genre research have been motivated by pedagogical interests with the intention of applying the results to the learning and teaching of the target genre. Previous studies showed that the results obtained from move and genre analysis can be directly applied in the classroom and materials development (e.g., Chang & Kuo, 2011; Swales & Feak, 2004).

However, there are some inherent challenges of genre textual analysis. Genre analysis of research papers is typically conducted using a small number of papers in particular disciplines because the rhetorical analysis necessitates a careful reading and understanding of the content. Thus, its results largely depend on the selection of texts. Other difficulties include that, with detailed descriptions of a specific section in a particular discipline, learners gain an in-depth understanding of a limited area, but learners may not “see the forest for the trees.” In other words, learners cannot grasp the broader picture of research papers in general. Also, simply lining up and explaining all the move sequences might not help in understanding the structure for

learners and teachers who are not familiar with genre study. Genre analysis tries to provide a prototype of the genre, but there are quite a few varieties of move sequences in a specific discipline that are discarded in the analysis. As the present study will show, sometimes it is even hard to find a straightforward prototypical pattern. Researchers usually choose representative moves and move sequences based on the number of occurrences within specific sections. Many studies, including the seminal work of Swales (1990), do not mention a clear-cut standard for prototypes. Other studies, such as Kanoksilapatham (2005) and Nwogu (1997), used 60% and 50% of the articles examined as the minimum standard, respectively, although the number inevitably depends on the size of the corpus. Some studies (e.g., Stoller & Robinson, 2013) consulted experts in the field to provide a typical structural pattern, but describing a standard genre model based or not based on the number of occurrence can give the impression that the model shown is the absolute one.

Lastly, there have been few studies that relate the two major aspects of genre analysis: textual structure and linguistic features. This is largely because the approach used for the former is more qualitative analysis of textual description whereas the latter is more quantitative, using corpus techniques to find frequent expressions. Recently, Cortes (2013) connected these two types of genre study by selecting lexical bundles from introduction sections and examining them in terms of isolated move units. This effort was limited in sections and unable to show expressions in relation to move sequences. Despite these inherent challenges of genre analysis, a major ESP approach, there have been few efforts and discussions on how to present prototypical yet diverse genre characteristics, including moves and linguistics choices, in a way that is accessible and easily understandable to a wider audience.

To explore a new method for presenting genre characteristics for pedagogical purposes, the present study used data resulting from genre analysis of research papers in education and economics as case studies. The author, along with two other EAP researchers, worked collaboratively with two education researchers and two economics researchers to analyze

research papers in their respective disciplines according to the move framework¹ (see Table 1), based on the work of Nwogu (1997), Kanoksilapatham (2005), and Swales (1990) (for more information on the move analysis, see Maswana, 2013). In the study, 13 education and 8 economics full-length research papers were entirely coded into moves. Each researcher coded a total of approximately 100 pages, resulting in a different number of papers coded per discipline². In addition to identifying moves, the education and economics researchers tagged expressions they deemed useful when writing papers.

Table 1: Move Framework

Move		Section
a	Abstract	Abstract
1	Presenting background information	
2	Reviewing related research	Introduction
3	Presenting new research conducted by the author(s)	
4	Identifying the source of data and the method adopted in collecting them	
5	Describing experimental procedures	Methods
6	Describing data-analysis procedures	
7	Reporting results	
8	Commenting on results	Results
9	Highlighting overall results and their significance	
b	Explaining specific research outcomes	Discussion
c	Stating research conclusions	(Conclusion)

Note: Sections may vary depending on papers

The results from the coding provided detailed descriptions of move sequences (see Table 2) and useful expressions used in each move. All of this together would provide invaluable comprehensive writing resources, because it is rare, except in some studies (Kanoksilapatham, 2005; Nwogu, 1997; Posteguillo, 1999), that the analysis extends to the whole paper rather than

¹ The data were taken from a project in which researchers analyzed the move structures of research papers across 15 disciplines. For this study, the data from two disciplines—education and economics—were chosen because the number of the participating disciplinary researchers was the same and thus the number of papers analyzed in each field were considered comparable than other disciplines.

² Originally, 10 papers were asked for from each researcher; however, given the large variability in page counts of each paper, it was decided that the number of papers would be based on the total page count (around 100 pages) as a clear and objective workload to read and code into moves.

only to specific sections of the paper. However, the focus of the present paper is to visually present genre characteristics rather than a textual analysis of research papers. The reason is that because the structures seem more diversified than standardized, understanding the common structural patterns of writing within a discipline is not easy for ESP teachers, not to mention for learners. Experimental research papers are considered relatively straightforward in structure, but some experimental education papers in the study contain multiple experiments, making the papers' structures long and complex. Table 2, itself, is a conventional presentation of move sequences in genre analysis in previous studies (e.g., Anthony, 1999; Ozturk, 2007). It seems that some efforts need to be made to facilitate the understanding of genre characteristics.

Table 2: Move Sequences of 13 Education Research Papers

Article	Move sequences
01	a 1 2 3 4 5 6 5 6 7 6 7 8 b 3 4 5 7 6 7 8 b 1 b 2 3 4 5 7 6 7 8 b 3 4 5 7 6 7 8 b 3 4 5 7 6 7 6 7 b 9 b 2 b 2 b 2 c 2 c
02	a 1 2 3 4 5 7 6 7 6 7 6 7 9 b 3 4 5 6 7 6 7 8 6 7 8 9 b 3 4 5 7 6 7 8 7 8 7 6 7 8 6 7 8 6 7 6 7 9 b c b c b c
03	a 1 3 1 2 3 2 3 4 5 6 7 4 7 8 7 8 7 8 7 8 6 7 8 7 9 6 7 6 7 9 b c b c b c b c b c b c 9 c
04	a 1 3 1 2 3 2 3 4 5 6 7 6 7 6 7 6 7 9 b c
05	a 1 2 3 2 3 4 5 6 7 8 9 b 3 4 5 6 7 9 b 9 b c b
06	a 3 2 1 2 3 2 3 4 5 6 7 6 8 7 8 7 6 7 6 7 9 b 1 b c 9 b c
07	a 1 2 6 3 4 5 6 5 6 3 6 7 6 7 8 6 7 9 b c b c
08	a 1 2 3 4 5 6 7 6 7 8 7 b 3 4 5 6 7 b 3 2 4 5 6 7 b c 9 b c b c
09	a 1 2 3 2 3 4 6 4 7 6 7 b c
10	a 1 2 3 4 6 7 4 6 4 5 6 7 6 7 8 7 6 7 6 7 8 6 7 8 7 3 b c b c
11	a 1 2 3 4 6 7 6 7 8 6 7 6 2 b c
12	a 1 2 3 4 5 6 5 6 5 6 7 6 7 8 9 b 9 b c
13	a 1 3 2 3 4 5 6 7 8 7 8 7 8 7 b c

This study used a visualization technique that can represent genre characteristics as they are. Visualization can be an effective means for both learners and teachers to better understand genre characteristics. However, very little attention has been given to how to visualize genre characteristics. Visualization is in fact a broad term; in previous research it existed such as in the forms shown in Tables 1 and 2 and as seen in the seminal work of Swales (1990, p. 141). For example, Stoller and Robinson (2013) reported “visual representations” (p. 48) of their findings, which adapted Swales’ manner of presentation. In these studies, researchers have either

visualized the moves without using the concept of graphs consisting of nodes and edges (see the following section 1.1) or after the selection of moves based on their occurrence as a deterministic structure. In the following section, I will discuss the visualization of genre characteristics, more specifically, moves—textual structure—and word count, vocabulary level, and useful expressions of each move—linguistics features—in education and economics research papers without discarding any data of move sequences to present a model in which systemic choices apply.

1.1 Visualization

Visualization is a tool widely used to help people understand information and it might also provide more information than a list of figures. It has been applied in a wide range of fields, such as railway maps, medical research, and social studies, but has been used very little in ESP research. Visualization is considered an effective way to communicate with a wider audience, which is an important aspect for pedagogically motivated research, such as genre study. It uses graphs that can show intangible information and interconnections, such as social networking, or the moves in this study. As Figure 1 illustrates, a graph is made up of nodes, the circles of a, b, and c in the figure, and edges that connect the nodes and that may be undirected, or directed.

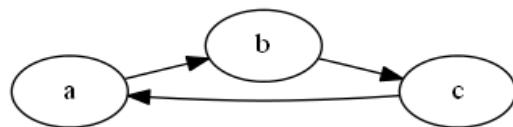


Figure 1: Sample graph

Visualization provides flexible methodological options. In addition, in recent years, free, sophisticated, yet easy-to-use software has become publically available. According to Howard (2009), effective visualization shows both the context and specific details (the forest *and* the trees) and includes features that “pop out”—color, form, and spatial position. It should be simple

and integrate words and images; words are suitable for specific names and abstract concepts, whereas images are useful for spatial information and details.

2. The Study

Although the focus of this study is visualization of genre characteristics, this paper first describes the textual analysis of research papers based on the move framework for a better understanding of the current study of visualization, which uses the data drawn from the textual analysis.

2.1 Textual analysis

Two education researchers and two economics researchers coded the entire papers of their respective disciplines into moves according to the move framework (see Table 1) based primarily on the content with the occasional help of linguistic clues. Although the present paper only uses the unit of moves, the researchers coded texts into units of moves and their smaller segments called *steps* and selected expressions they considered useful when writing research papers. The first example (1) is drawn from education research paper number 06, and the second (2) is taken from education research paper number 11.

Example (1)

<mv:2³> . . . However, although <[this type of research has provided a rigorous test of⁴]> the relationship between input and children's skills, <[it has limitations in terms of]> its applicability to the everyday language experiences of young children. . . . <[In the existing studies,]> the input consisted of a series of unconnected sentences, which is quite different from the input children receive from their caregivers. <[Thus,> <[it remains to be determined]> how children's comprehension and production of a syntactic form may change after different time lags following a concentrated exposure to that form. </mv:2> <mv:3><[In the present article we report the findings of]> an intervention study conducted in a preschool setting. . . . The testing was conducted over several days, and children's performance was analyzed to determine if it varied as a

³ The number is the number of moves in Table 1. <mv: number> indicates the start of the move and </mv: number> indicates the end.

⁴ Expressions between <[and]> have been selected by the researchers as useful.

function of time elapsed since intervention. . . . </mv:3> <mv:2>As [R]⁵ pointed out, the primary function of the passive is to focus attention on the patient of a transitive action and on what happened to that patient. . . . <[There is evidence indicating that]> children acquiring some non-Indo-European languages begin to use passives as early as 2 years of age [R]. . . . <[It has been suggested that]> such variability in the age of acquisition of the passive could be due to certain characteristics of language structure as well as to differences in the frequency of passives in the input children receive [R]. . . . </mv:2> <mv:3> . . . <[Thus we set out to determine whether]> children's skill levels with the passive form could be increased right before they entered the formal schooling system (i.e., before kindergarten).</mv:3> (Education 06)

Example (2)

<mv:6><[To examine whether]> there was a sex difference in children's math performance and whether this difference changed over time, children's performance in math was submitted to a Sex × Grade (fifth and seventh) × Type of Performance (grades and achievement test scores) mixed-model multivariate analysis of variance.</mv:6> <mv:7><[As shown in]> Table 2, and <[consistent with evidence indicating that]> girls outperform boys in math in terms of their grades but not their achievement tests scores. . . .</mv:7><mv:6>. . . . <[To this end]>, we examined their associations concurrently and longitudinally with bivariate correlations within each wave and across waves (see Table 3 and Table 4).</mv:6> <mv:7><[Consistent with prior research]>, heightened mastery over performance goals, positive learning strategies, and feelings of self-efficacy <[were associated with]> better grades and achievement test scores, both concurrently and over time. . . .</mv:7> (Education 11)

In the selected portions of the papers in examples (1) and (2), move sequences are expressed as “moves 2-3-2-3” and “moves 6-7-6-7,” respectively. The text examples give the impression that they come from different sections of the papers. As for expressions, there are those chosen by the researchers that are indicative of a move such as “it has limitations in terms of” (example 1) for Move 2 where the author establishes niches, and “[i]n the present article we report the findings of” (example 1) for Move 3 in which the author presents the new research. Selected expressions also include those that can be used in any move such as “[a]s shown in” (example 2). With the entire text coded into moves, it is possible to classify the selected expressions according to the moves as well as measuring word count and vocabulary level to characterize the linguistic features of a particular move.

⁵ [R] replaced references.

As the examples show, by examining the data obtained from the researchers, it is possible to understand how some parts of a paper are structured; however, it is difficult to understand where the particular move sequences fit into the whole paper. It is even harder to make a comparison between examples (1) and (2) taken from different papers or to present the two examples in one model where multiple move sequences can be presented. In addition, even if we understand the linguistic features of each move, it is difficult to relate linguistic features to move sequences. Considering these difficulties, the present study attempted to visualize all the move sequences and accompanying linguistic features in each discipline.

2.2 Visualization of genre characteristics

To visualize genre characteristics, this study employed Graphviz, an open-source visualization tool provided by AT&T in DOT language. Graphviz was chosen because it is simple and accessible and does not require prior programming knowledge (see Figure 2).

```
digraph sample {
graph [rankdir=LR];
a->b->c->a
}
```

Figure 2: Graphviz script for the sample graph in Figure 1

To use Graphviz, one first organizes and examines data for visualization and then adds attributes to the nodes and edges. For this study the author used the move sequences of 13 research papers in education and 8 in economics, data from Tables 2 and 3. Move sequences listed in Tables 2 and 3 with arrows inserted between numbers and alphabets were directly used as part of the script, for example, “a->b->c->a,” as shown in Figure 2.

Table 3: Move Sequences of 8 Economics Research Papers

Article	Move sequences
1	a 1 3 d 1 3 2 3 d 3 d 3 2 3 5 7 6 7 8 2 8 b
2	a 1 3 1 e 8 1 3 5 b 5 b 1 e 5 b 4 b 1 5 b 5 b 2 b

3	a 2 3 2 1 3 e f 2 3 7 f 7 f 2 3 f b 9
4	a 1 3 2 3 4 6 4 6 4 6 7 8 7 8 9 4 8 b 6 7 8 7 8 7 8 7 8 7 8 b
5	a 1 3 5 6 7 8 7 8 7 8 6 7 8 7 8 6 7 8
6	a 1 2 3 5 6 4 6 8 7 8 9
7	a 3 2 3 2 3 6 4 6 4 6 4 6 4 7 8 c 8
8	a 1 2 3 2 3 5 7 8 5 6 5 7 8 7 8 7 8 7 8 7

Note. Move *d* stands for “presenting theoretical base model for experimental design,” *e* for “describing theoretical model,” and *f* for “describing procedure to verify theoretical model’s prediction.” These moves were observed in economics papers but not in education papers.

Along with move sequences, the study used word counts, numbers of expressions selected by the discipline researchers, and the level of vocabulary in each move as the linguistic features to represent the genre characteristics in relation to moves. The data for education research papers are summarized in Table 4, below. For the vocabulary level, the first 1,000 words of the General Service List, GSL (West, 1953), and “Vocabulary not in the lists”—words in neither the GSL nor Academic Word List, AWL (Coxhead, 2000)—were chosen as possible indicators for linguistic characteristics of each move because their shares were more variant than the two other vocabulary levels (GSL 1,001–2,000 and AWL). The standard deviations of the first 1,000 GSL words and specialized vocabulary are 2.5 and 2.1 respectively, whereas the numbers are 0.5 and 1.4 for GSL 1,001–2,000 words and AWL words, respectively.

Table 4: Linguistic Features of Each Move, Education Research Papers

Move	Word count	First 1,000 GSL words (%)	Vocabulary not in the lists (%)	Number of expressions (Tokens)
1	5,940	66	17	253
2	15,366	68	15	663
3	7,133	72	11	330
4	7,665	71	13	207
5	15,696	76	10	436
6	9,962	70	11	378
7	18,154	70	13	609
8	2,490	73	10	131
9	2,553	72	11	133
a	1,656	67	12	84
b	22,230	71	12	945

c	5,872	70	12	265
Average	9,560	70	12	370

Similarly, the data for economics papers are summarized in Table 5.

Table 5: Linguistic Features of Each Move, Economics Research Papers

Move	Word count	First 1,000 GSL words (%)	Vocabulary not in the lists (%)	Number of expressions (Tokens)
1	2,352	74	8	44
2	3,249	70	11	82
3	5,007	70	11	183
4	2,631	71	9	73
5	4,108	74	12	100
6	4,659	70	13	132
7	5,196	73	11	107
8	9,057	72	12	254
9	878	72	10	32
a	948	68	11	26
b	4,242	75	9	98
c	1,560	77	9	39
d	783	82	5	19
e	2,250	76	9	32
f	2,935	73	12	33
Average	3,324	73	10	84

In the graphs, which will be provided in the following section 4, nodes represent moves, and the sizes of nodes proportionally correspond to the number of words in the move. The nodes are color-coded to reflect the number of useful expressions, and the shapes of the nodes indicate the vocabulary level. To show the number of expressions selected by the education researchers, gray nodes represent moves containing at least 150 more expressions than the average number of expressions per move, light gray nodes represent moves containing within 150 expressions of the average number, and white nodes represent moves containing at least 150 fewer than the average. For economics papers, because the selected expressions were relatively small, the study used gray to represent moves containing more than twice the average number of selected expressions in the discipline, light gray for more than the average but less than double the average, and white

nodes for no more than the average number.

To indicate vocabulary levels, circular nodes show moves containing more than 70% of First 1,000 GSL and 10% or less than 10% of vocabulary not in the lists, square nodes show moves containing between 65–75% of First 1,000 GSL and more than 10% and less than 15% of vocabulary not in the lists (considered the average range in this case), and pentagonal nodes show moves containing less than 70% of First 1,000 GSL and 15% or more than 15% of vocabulary not in the lists. These criteria were applied to present both education and economics papers. Edges and arrows represent links and directions between moves to show move sequences. Edge line weights proportionally correspond to the number of sequence occurrences. Positions of nodes were adjusted to clearly show the nodes and edges.

3. Results

The resulting graph of education papers is shown in Figure 3.

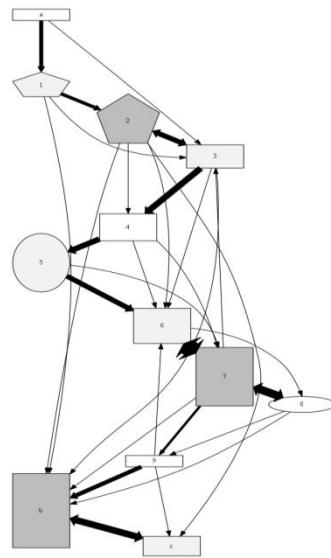


Figure 3: Education research papers

Based on the graph in Figure 3 and referring to the original move list (Table 1), moves are clustered into likely sections in Figure 4. Likely sections are suggestive based on the

conventional sections and the frequency of occurrence between moves.

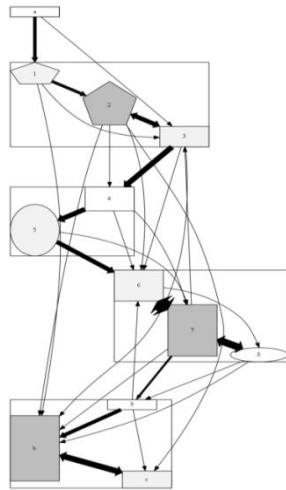


Figure 4: Education research papers clustered into sections

Figure 5 shows the graph resulting from the data for economics papers with clusters of likely sections. Despite that the criteria to draw the graph were the same except for the colors representing the numbers of selected expressions, the two disciplines give different pictures of the structures of research papers.

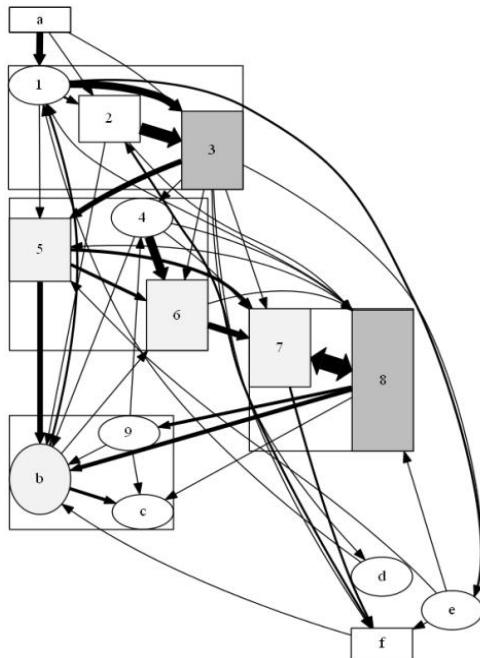


Figure 5: Economics research papers clustered into sections

4. Discussion

We can capture some tendencies by looking at Figures 3, 4, and 5 more easily and quickly than by observing Tables 2, 3, 4, and 5. For example, it is possible to say that education research papers more or less follow the standard model (move sequence “a 1 2 3 4 5 6 7 8 b c” shown in Table 1) with the exception of the sequence of moves “8 9.” Along with the standard pattern, repetitions between moves 2 and 3 and moves b and c as well as divergent move flows are observed. The figures also show strong two-way links between moves 6 and 7 and moves 7 and 8, suggesting that for the results section, the move sequence “7 8” could be grouped as move sequence “6 7 8” in education papers. For economics, some papers follow a standard model and sections but with a greater variety in terms of links and moves.

Figures 3, 4, and 5 provide some pedagogical implications not only for structure of papers but also for their language use. For example, the education researchers selected helpful expressions throughout the paper. The expressions included move-specific expressions as well as general expressions that could serve in any move, such as *appear to*, *it is possible that*, and *in terms of*, as in examples 3–4.

Example (3)

Move 1: Functional knowledge *appears to* have a special status for adults. For example, adults *appear to* recruit knowledge about actions on objects when identifying those objects. (Education 01)

Example (4)

Move 2: In line with previous research, 2-year-old subjects *appear to* fixate on copying the behavioral means used by others to bring about a specific outcome. (Education 08)

It seems obvious that the larger the number of words in a move, the more expressions that were found such as in moves 7 and b. However, there are exceptions that have relatively larger numbers of expressions in smaller moves, such as moves 1, 3, and c. This implies that these moves can be dependent on a set of expressions and that these moves can contain expressions

that seem specific to or signal the move, as in the following (examples 5–7):

Example (5)

Move 1: Considerable attention has been devoted to environments with hidden action, where a party's future choice is not contractible. (Economics 01)

Example (6)

Move 3: In this paper, I focus on matching markets with exogenously specified match payoffs. (Economics 05)

Example (7)

Move c: Our analysis raises questions for future research. One major issue is how macroeconomic aggregates respond to a redistribution shock caused by an inflation episode. (Economics 04)

The figures show that more selected useful expressions and words not in the lists, some of which are considered specialized vocabulary, are used in the introduction (moves 1, 2, and 3) than in the other sections, as indicated by the gray and light gray pentagonal and square nodes. This means that focusing on teaching the writing of introductions, as previous research has demonstrated, may be indeed meaningful, at least in education papers. An example for Move 1 is shown in example 8.

Example (8)

*Inspired⁶ by the family systems principle of *interdependency*, the *spillover* hypothesis postulates that *interparental* conflict has implications for child adjustment by undermining the *childrearing* practices of parents [R].* (Education 09)

On the other hand, economics papers use more general (GSL) vocabulary and few specialized words throughout the papers. Useful expressions are found in all sections in both disciplines but

⁶ The author italicized vocabulary not in the lists.

are observed in different moves depending on discipline.

This study was, to the author's knowledge, the first attempt in genre study to visualize genre characteristics, moves and linguistic features, using graphs. The graphs present both the typical patterns and the diversity of move sequences, integrated with information about language. Using the graphs, learners can understand that presented structures and linguistic features are not absolute but simply one possible analysis drawn from selected target texts. This study suggests a possible approach of visualization of genre characteristics, which is useful with any number of texts and different types of information in the texts. Depending on the purpose, the graphs could focus on a more specific section of research papers by using steps, constitutional segments of moves. The visualization approach would be applicable to other genres as well. The visualization described in this paper is not only flexible and comprehensive in its presentation of genre characteristics but also accessible materially and technically, which is a basic condition of useful tools for both teachers and learners. Visualization would also offer a quick mutual understanding of the textual structure of research papers using the concept of move when ESP researchers collaborate with researchers from specialized fields.

5. Conclusion

It is clear that different attributes lead to different graphs. In future studies, we need to examine graphs with changing node and edge attributes and implement different visualization software tools. In particular, linguistic features, such as the vocabulary level and useful expressions considered in this study, need closer examination for better presentation of the genre based on the purposes and needs of teaching and learning. Visualization appears to make it easier to understand the genre characteristics of research papers, but its effectiveness perceived by learners and teachers should be examined. As visualization has revealed new findings and pedagogical implications for writing research papers in education and economics, interesting information might also come from comparative analyses using graphs for papers in other disciplines. Finally, the visualization approach presented in this paper is only one of the approaches and applications of the results obtained from genre analysis. Visualization has many

more potential applications and genre studies need to devote more attention to how they present results for better understanding to further improve the effectiveness of the genre-based approach.

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The Rhetorical Functions of Lexical Bundles in Computer Science Research Article Introductions

Mei-Hung Lin

Taipei Medical University, Taiwan

Chih-Hua Kuo

National Chiao Tung University, Taiwan

Bio data

Mei-Hung Lin is an assistant professor from the center of General Education at Taipei Medical University, Taiwan. Her research interests include EAP/ESP, Second Language Writing, Discourse Analysis and Corpus-based Studies.

Chih-Hua Kuo is a retired professor from the Graduate Institute of TESOL at National Chiao Tung University, Taiwan. She has published research articles in English for Specific Purposes, IEEE Transactions on Professional Communication, RELC Journal, among others. Her primary research interests include EST/EAP, discourse analysis, and corpus-based analysis.

Abstract

With an increasing demand for writing research articles (RAs) for international publication, both native and non-native academics are eager to learn field-specific writing conventions of this academic genre. A large number of studies have been exploring the rhetorical structure or

linguistic features of RAs. Little information, however, is available about how the rhetorical structure could possibly be realized through specific lexical bundles and vocabulary. This study examines vocabulary use, particularly lexical bundles, in the introductions of computer science RAs in relation to the rhetorical functions, or the moves, of this section, taking a genre-based, corpus-informed approach. With both self-developed and freely accessible computer software, we found field-specific major/optional moves and five-word, four-word, and three-word lexical bundles that reflect the specific rhetorical functions of RA introductions. Furthermore, based on the sub-corpora of the major moves, move-signaling words and meaningful lexical bundles were identified. Pedagogically, the corpus-based approach to the study of field-specific move structures, move-signaling words, and lexical bundles in RAs provide valuable information for course design and materials development in academic writing through which learners are able to acquire generic vocabulary knowledge and appropriate phraseology.

Keywords: genre analysis, move analysis, corpus-based studies, lexical bundles, EAP, research articles, introductions, computer science

Introduction

Research articles (RAs), among various genres in academic discourse, have drawn the most attention over the last 20 years since the rapid development of English for Academic Purposes (EAP). With high frequency and wide distribution, RAs not only become a key genre in academic discourse, but also stand out as a field of interest for many researchers, who have devoted a great deal to the study of this genre in their books Bhatia, 1993; Bhatia, 2004; Hyland, 2000; Swales, 1990; Swales, 2004).

The significance of RAs can be further revealed from their promotional nature as the number of RAs successfully published in internationally prestigious journals usually serves as an index of research achievement and a part of faculty evaluation in highly competitive academic environments. As a result, EAP researchers have been exploring the writing conventions of RAs, with a particular focus on two lines of research: linguistic features and rhetorical structures. Various linguistic features of RAs have been explored, such as tense, modals,

hedging, personal pronouns, and reporting verbs (e.g., Hyland, 1996; Kuo, 1999; Salager-Meyer, 1992; Tarone, Dwyer, Gillette, & Icke, 1998; Thompson & Ye, 1991). On the other hand, a great deal of research has focused on the macrostructure, namely, the information structure or rhetorical functions of different sections of RAs (e.g., Brett, 1994; Holmes, 1997; Hopkins & Dudley-Evans, 1988; Swales, 1981, 1990; Williams, 1999; Yang & Allison, 2003). In these studies, RA introductions are the most studied section.

RA introductions have been posing great challenges for both native and non-native writers as this is a section in which writers are expected to achieve many complicated rhetorical purposes that require both professional knowledge and academic writing competence. Research on RA introductions has gained momentum ever since Swales (1990) proposed the Create-A-Research-Space (CARS) model. There has been considerable interest in examining the applicability of the CARS model across different disciplines as the CARS model was once suggested to account for the rhetorical structure of RA introductions irrespective of disciplines. Results of the studies examining RA introductions of various disciplines have revealed that the structure of RA introductions may vary significantly across disciplines. Anthony (1999), for instance, finds that the CARS model cannot account for some moves in the introduction of software engineering, such as term definitions or evaluation of research.

Further research has also demonstrated that deviations from the CARS model are observed not only across different disciplines, but between related fields or even between sub-disciplines of a particular field. For example, Samraj (2002) analyzes rhetorical structures of RA introductions in two related fields of environmental science, Wildlife Behavior and Conservation Biology, using the CARS model, and derives two sets of outcomes different from those of the CARS model. Similar to the results of Samraj, Ozturk (2007) observes different types of predominant move structure employed in the RA introductions in two subdisciplines of applied linguistics, second language acquisition and second language writing research, explaining the differences from the perspective of “established” field and “emerging” field. Swales (2004) himself, in response to the limitations of the CARS model mentioned by other researchers, does acknowledge discipline variations and proposes a revised model that contains obligatory,

optional, and even “PISF (probable in some fields)” steps. With so many studies that have investigated the rhetorical structure of RA introductions using the CARS model, the unprecedented significance of the model can be considered as a starting point for recognizing and examining discipline variations of the move structure of RA introductions.

Despite the large body of research on the rhetorical structures and linguistic features of RAs, there is a dearth of information addressing the relationship between rhetorical structures and linguistic features, particularly how individual moves or steps are realized in lexical or syntactic choices. Such information is pedagogically valuable as it provides EAP learners or novice writers useful writing guidance. However, only a small number of studies have exploratively investigated this aspect of RAs. Lim (2006), motivated by the pedagogical applicability of genre analysis, investigates not only moves of the Method sections of management RAs, but qualitatively explores how salient lexical and syntactic features are related to moves and constituent steps of the Method sections. Similarly, Milagros del Saz Rubio (2011) associates linguistic choices with the macro-structure of RA introductions in Agricultural Sciences by examining how the argumentative nature of RA introductions can be realized and balanced through the tacit employment of metadiscoursal features. In addition to targeting syntactic structures and lexical items, Gledhill (2000) relates linguistic choices to communicative functions by extending the analysis from single lexical items to phraseological patterns and collocations. Examining the discourse function of collocations in RA introductions with the use of genre-informed, corpus-based approach, Gledhill reveals that recurrent phraseological patterns of the most frequently occurring grammatical words may represent conventional selections by academic writers to realize certain rhetorical functions, demonstrating that “phraseology is part of the defining characteristics of the discourse community” (p. 131).

“Phraseology” is one of the many terms used to refer to the study of multi-word units. Other terms such as “formulaic language,” “lexical phrases,” “prefabricated patterns,” “fixed expressions,” and “lexical bundles” are also used by researchers employing different methods and criteria to study word co-occurrences and word combinations. Cortes (2004) in her

historical review of studies on word combinations since the beginning of the last century indicates that methodologically word combinations have been examined from two major perspectives: one is from a more impressionistic point of view in which a list of perceptually salient expressions were selected based on subjective reflection while the other line of research relies on a search tool with which high-frequency word combinations of different length are retrieved empirically from real data. In fact, a number of studies (Biber & Barbieri, 2007; Biber & Conrad, 1999; Biber, Conrad, & Cortes 2004; Cortes, 2004; Hyland, 2008) have adopted the latter frequency-driven approach in the exploration of statistically informed recurrent word combinations with the use of a corpus. They aimed mostly to examine whether recurrent word combinations that occur in a register or genre serve specific discourse functions.

The term “lexical bundles” was first used in the *Longman Grammar of Spoken and Written English* (Biber, Johansson, Leech, Conrad, & Finegan, 1999) and was later adopted in many studies which examined recurrent word combinations in given registers taking a corpus-based and frequency-driven approach. A number of studies conducted by Biber and colleagues have revealed that different sets of lexical bundles employed in various registers imply that high-frequency lexical bundles may reflect typical communicative purposes of a register. Biber and Conrad (1999), for instance, observe that most bundles in conversations are clausal while 60% of the bundles in academic prose are phrasal. These results are further compared with Biber, Conrad, and Cortes (2004) in which the use of lexical bundles in two university registers was investigated: classroom teaching and textbooks, with a particular focus on the distinguished discourse functions these bundles play in each register. This study not only unveils the different frequencies and structural types of lexical bundles across registers, but develops three functional taxonomies that help reveal how the use of bundles is related to the communicative purposes of a register. The three primary functions that lexical bundles serve are: (1) stance expressions, (2) discourse organizers, and (3) referential expressions. “Stance bundles express attitudes or assessments of certainty..., discourse organizers reflect relationships between prior and coming discourse and referential bundles make direct reference to physical or abstract entities, or to the textual context itself...” (p. 384). In addition to studies identifying different types of lexical bundles that occur across registers, a few others compare lexical bundles used

in different disciplines (Cortes, 2004; Hyland, 2008). For example, Cortes (2004) identifies the most frequent four-word lexical bundles in published journals in history and biology and finds that although different bundles may be used to perform similar functions in the two disciplines, certain bundles carrying out similar discourse functions are more frequently employed by writers in one discipline than the other; this may result from the discourse conventions of a particular discipline. Similar results are reported in Hyland (2008) in which cross-discipline variations in the use of lexical bundles are observed and attributed to the different social and rhetorical practices of each discipline.

As pointed out by Biber and Barbieri (2007, p.265), “each register employs a distinct set of lexical bundles, associated with the typical communicative purposes of that register.” Within a specific genre, especially a highly conventionalized genre such as RAs, it is likely that its communicative purposes could be realized, at least partially, through the use of certain linguistic features. In view of this, the study hypothesizes that the rhetorical functions of a particular section of RAs, as reflected in their macrostructure or moves, may be realized by using certain vocabulary and lexical bundles. This exploratory study investigates how vocabulary use and lexical bundles may realize the moves in the RA introductions in the particular field of computer science (CS). A genre-based, corpus-informed approach is taken to analyze and identify the moves and lexical bundles, using both self-developed and freely accessible computer software. Specific research questions are posited as follows:

1. What are the major and optional moves in the introductions of CS RAs?
2. What are the meaningful lexical bundles in these RA introductions and within each move?
3. How are these moves realized lexically through move-signaling words?

Method

Corpus compilation

In this study, a field-specific corpus of RAs was compiled in the field of CS. As a part of a large-scope research project which investigated various features of complete RAs, the current study focused on an in-depth analysis of moves, move-signaling words, and lexical bundles in a single

section - the introduction. Therefore, we extracted the introduction section of RAs in the CS corpus and compiled a smaller RA introduction corpus. Three major journals in this field, *IEEE Transactions on Computers*, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, and *Computational Linguistics*, were selected on the basis of the recommendations of the faculty members at the Department of Computer Engineering and Information Science in two prestigious universities where EAP courses have been regularly offered. Twenty RAs were randomly selected from each of the three journals published during 1996-2005. The corpus thus consists of 60 RA introductions, having a total of 74,095 words.

Coding scheme and move analysis

To explore the rhetorical structures of RA introductions specific to the field of CS, we first developed a prototypical coding scheme for move analysis, consulting previous genre studies on RA introductions (Bhatia, 1993; Bunton, 2002; Dudley-Evans, 1986; Samraj, 2002; Swales, 1981). A preliminary analysis of 12 text samples, using the prototypical scheme, was then conducted. A few moves, such as “indicating results” and “referring to tables or figures,” were found occurring a number of times only in the samples but not in previous studies and thus added to the scheme to accommodate possible disciplinary variation. After a number of modifications, the empirically tested coding scheme was finalized (see Table 1). This scheme, different from previous studies, has only one level of moves without a second level of steps. The rationale behind this decision is that we aim at exploring linguistic realizations of the rhetorical functions of RA introductions, treating each rhetorical function as a single move or an information unit; for example, “reviewing previous research” is a step under Move 1 of Swales’ CARS model (1990), but it becomes the move of “reviewing literature or referring to other studies” in our scheme; this makes it easier to later build a subcorpus for each move. A step would be a unit too small to have a sufficiently large subcorpus. Furthermore, a move-only model is more flexible for analyzing RAs in CS whose macrostructures seem not so confined by conventions and, being less complicated, more suitable for pedagogical purposes.

Table 1: The Coding Scheme

Move	Rhetorical Function of Move
IL	Reviewing literature or referring to other studies
IM	Indicating methods adopted or theories involved
IP	Indicating purposes or major tasks completed
IB	Providing background information
IG	Indicating a gap or missing information
IO	Indicating local or global organization
IV	Indicating values of the study
IC	Making conclusions or evaluation
IJ	Providing justification or giving reasons
IF	Referring to tables or figures
IR	Indicating results
IQ	Indicating research questions

Four raters, including a CS doctoral student working as the specialist informant, were involved in the move analysis, which started with the clarification and elaboration of the defining criteria of the moves. To ensure better inter-rater reliability of the analysis, all raters first coded the introduction section of three randomly selected samples together and discussed the problems or difficulties encountered in the move identification process. Subsequently, while the four raters coded their own parts of the samples in the corpus respectively, face-to-face discussion was consistently held each week in the same manner. The moves identified were then tagged on the electronic version of all text samples for further analysis using natural language processing (NLP) tools. In this study, all occurrences of each move in the corpus were extracted, using the free software AntConc (version 3.2.1, See Figure 1). The frequency (that is, occurrences) and range (that is, distribution rate) of each move in the 60 RA introductions were also calculated.

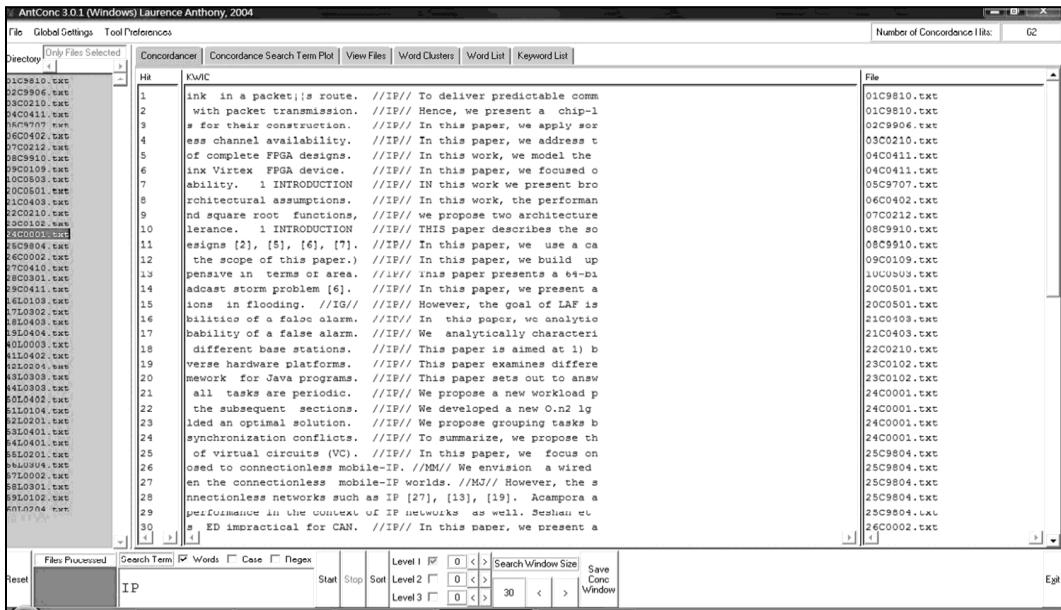


Figure 1: Move Identification with AntConc.

Identification of lexical bundles and salient move signaling words

Previous studies on lexical bundles have been devoted to justifying criteria used in the identification of bundles to ensure their representativeness. Although the criteria employed are somewhat arbitrary, they reflect how lexical bundles are defined, revealing particularly the frequency-driven nature in the search of lexical bundles with the use of computer programs. Lexical bundles are defined as the most frequently occurring sequences of words in a given register which are not idiomatic in meaning and do not have complete structural units. It can be said that “lexical bundles are strictly defined on the basis of frequency, with no consideration of structural or functional criteria” (Biber et al., 2004, p. 399). The cut-off frequency that has been used in the identification of bundles in corpora of different sizes and registers has varied from 20 to 40 times per million words. In addition to frequency, bundles identified need to be distributed in at least three to five different texts to avoid idiosyncrasies from individual writers/speakers (Biber et al., 2004; Biber & Barbieri, 2007; Cortes, 2004).

As mentioned earlier, the current study aimed at exploring the rhetorical functions of RA introductions specific to the field of CS, with a particular focus on unveiling how these rhetorical

functions could be realized linguistically through lexical bundles and move-signaling words. A corpus of 60 RA introductions in CS with a total of 74,905 words was compiled for move analysis and bundle identification. It seems that the size of the corpus may be small in comparison with the many readily-available million-word corpora adopted by studies on lexical bundles (Biber et al., 1999; Biber, Conrad, & Cortes, 2004). However, since those studies aim at investigating the use of bundles in a more umbrella register, such as spoken or written register, irrespective of variations resulting from sub-genres involved or different disciplines, using well-established readily-available large corpora could avoid the tedious process of corpus construction and save a lot of time. Given the specific nature of the research purpose of the current study which explores the use of bundles in relation to the rhetorical functions of a single section of RAs of a particular discipline, the number of RA introductions analyzed and the size of the corpus compiled may be justifiable as the size of corpora used in studies with more specific research purposes, such as examining the use of bundles in different sub-registers, disciplines, or by writers of different backgrounds (Biber & Barbieri, 2007; Chen & Baker, 2010), is usually smaller, because the specific research purposes can constrain the number and types of texts that can be included in a corpus. For instance, the number of RA samples in studies involving manual move analysis of a single section of RAs is usually 30 or smaller (Ozturk, 2007; Samraj, 2002).

As a corpus of smaller size was employed in the study, criteria used to identify bundles become an issue. For instance, since frequency serves as the most important criterion in retrieving bundles, should the same frequency cut-off be applied when we use corpora of different sizes? Biber and Barbieri (2007) in their examination of bundles across sub-corpora of different sizes proposed that a normalized rate of occurrences can be used to identify and compare bundles obtained from corpora of smaller sizes. Although normalization seems to serve as a solution that makes bundles identified from smaller corpora comparable to those from large corpora, applying a normalized rate to identifying bundles in corpora of different sizes is not without criticism. Chen and Baker (2010), for instance, pointed out that using the same normalized rate to identify bundles from corpora of different sizes could be problematic as “a standardized cut-off frequency would inevitably lose its expected impartiality after being converted into raw frequencies corresponding to different corpus sizes” (p.32). They thus proposed that both the raw

cut-off frequency and the corresponding normalized frequency are reported to make the threshold adopted transparent. In fact, the doubt raised by Chen and Baker (2010, p.32) with regard to adopting a standardized cut-off frequency is quite insightful as it helps us reexamine the somewhat arbitrary criteria used to identify bundles. This is not to say that we question the validity and reliability of thresholds that have been set in previous studies. Rather, we acknowledge those empirically-tested criteria, such as frequency, in identifying bundles in different registers and see the value of setting stricter criteria in retrieving representative bundles in a given register because of the frequency-driven nature of lexical bundles. However, in view of the different corpora sizes which may result from different research purposes and problems in constructing corpora, the criteria used to identify bundles may be subject to change in accord with data available and research purposes.

In this study, bundles with a raw frequency of three or more (approximately 40 times per million words) occurring in at least three different texts were identified, using an online tool, N-Gram Phrase Extractor (<http://lextutor.ca/tuples/eng/>) (See Figure 2). In addition, bundles that span punctuation boundaries while meeting the frequency and distribution thresholds are also included. We were aware that previous studies examining lexical bundles often included only uninterrupted sequences of words as pointed out in Biber and Barbieri (2007, p.268). Nevertheless, given that only less than 5 percent of lexical bundles in academic prose have complete structural units (Biber et al., 1999), we might assume that the majority of lexical bundles in academic discourse may not be complete in structure. In view of this, bundles that span a punctuation mark with a significant recurring rate, such as "*In this paper, we +V,*" were considered meaningful and included. We then categorized all identified bundles into two groups based on their discourse functions: 1) bundles that saliently reflect specific rhetorical functions of RA introductions, and 2) bundles that are used for general academic purposes. The discourse functions of the latter group were further categorized into stance expressions, discourse organizers, and referential expression on the basis of the taxonomy proposed by Biber et al. (2004).

As argued earlier, we suspected there are words and phrases which conventionally and frequently perform certain rhetorical functions in a specific genre like RAs. In addition to identifying

lexical bundles in the introduction section, we were interested in examining how moves might be realized through the use of specific words, and whether there are move-signaling words or bundles which can be linked to the rhetorical functions of individual moves. Thus, we extracted all the occurrences of each move and compiled 12 sub-corpora of moves. Frequency analysis of each move sub-corpus was conducted, yielding a frequency list of words in each move. We later examined whether the high-frequency words of each move can be related to the rhetorical functions of the move. We also investigated move-signaling bundles in the sub-corpora of major moves but not those of optional moves as the latter are too small for identifying bundles that meet the frequency threshold.

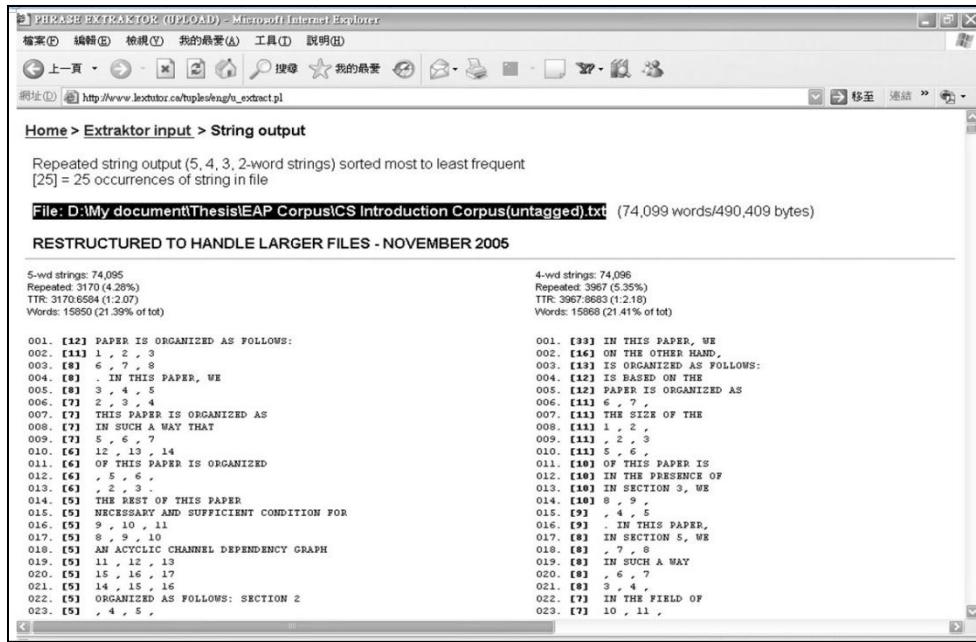


Figure 2: N-Gram Phrase Extractor

Results

Major and Optional Moves in Introductions

Since not all the moves in the coding scheme occur in the introduction section of all RAs, it is pedagogically and practically helpful to identify which moves occur frequently while which are merely optional. Both frequency and range were considered in identifying major and optional

moves because moves with high frequency alone might result from the idiosyncrasy of a single paper.

As shown in Table 2, 714 occurrences of moves were identified. IL (literature review), IM (methods), IP (purposes), IB (background information), IG (gap), and IO (organization) rank 1 to 6 in terms of frequency. These six moves not only have higher frequencies than the other six moves, but they also have a distribution rate, namely, range, of 65% or higher in the corpus of 60 RA introductions. They were thus categorized as major moves. The other six moves with fewer occurrences and distribution rates lower than 50%, namely, IV (values), IC (conclusion), IJ (justification), IF (tables or figures), IR (results), and IQ (research questions), were categorized as optional moves. This categorization suggests that a number of rhetorical functions are essential and occur frequently in CS RA introductions. Pedagogically, RA writers should pay more attention to them. The optional moves do not occur as frequently as the major moves, but they represent rhetorical functions that may occur in specific RA introductions. Therefore, RA writers can be informed of these possible rhetorical functions, particularly in the field of CS.

Table 2 also reveals discipline-specific moves. For example, IM, “indicating methods adopted or theories involved,” does not occur in Swales’ CARS model but has a very high frequency and range in our corpus; this suggests that in computer science, the method or approach adopted in a study is often indicated in the introduction section. Another move IF, “referring to tables or figures,” which has not been identified in previous genre analysis studies on introductions, is also possibly specific to CS, though only an optional move.

Table 2: Frequency and Range of Major Moves and Optional Moves

Move	Frequency		Range		
	Total occurrences	Ranking	Range	%	Ranking
(N=60)					
Major	IL	144	1	54	90.0 4
Moves	IM	143	2	57	95.0 1
	IP	87	3	55	91.7 3
	IB	81	4	56	93.3 2

	IG	71	5	39	65.0	6
	IO	58	6	47	78.3	5
Optional	IV	36	7	27	45.0	7
Moves	IC	25	8	16	26.7	9
	IJ	25	8	19	31.7	8
	IF	22	10	16	26.7	9
	IR	16	11	13	21.7	11
	IQ	6	12	4	6.7	12
	Total	714				

Lexical Bundles in Introductions

According to Cortes (2004), the use of lexical bundles unique to a particular register not only signifies competent language use within that register but also demonstrates familiarity with the conventions of that register. The majority of studies on lexical bundles have focused on examining four-word bundles in particular, as they, according to Hyland (2008, p.8), “are far more common than five-word strings and offer a clearer range of structures and functions than three-word bundles.” We suspected that high-frequency bundles of various length may perform different discourse functions. Thus, in this study, we examined five-word, four-word, and three-word lexical bundles that occur with a raw frequency of three (approximately 40 times per million words) and distributed in at least three different texts in our introduction corpus. The links between bundles and moves in introductions are shown in Tables 3, 4, and 5, respectively, and discussed in the following subsections.

Five-word lexical bundles in introductions

Table 3 shows the list of five-word lexical bundles grouped on the basis of their rhetorical functions. As can be seen in the table, all five-word bundles belong to the group reflecting the specific rhetorical functions of RA introductions. Most of them mainly serve the function of stating the purpose of a study (IP) or outlining local or global organization (IO). Among the

bundles characterizing IP, the most frequent expression is *in this paper, we present/propose/focus* with a variety of verbs to pinpoint the major purpose of a study. For example,

[1] /IP/ *In this paper, we propose* a deterministic matching method for verifying both isomorphism and subgraph isomorphism.

In addition to IP, lexical bundles characterizing the rhetorical function of IO also occur frequently. Two major patterns are identified. One is *(the) paper/(this) paper is organized as (follows)* and the other is *in section X/ in the next section, we present/describe*. In the five-word bundles, the bundle of *(the) paper is organized as follows* has a frequency much higher than the other bundles, suggesting that writers tend to use this conventionalized expression to introduce the organization of a research article. Examples below show the common patterns:

[2] /IO/ *This paper is organized as follows*. Section 2 describes the fundamental of hidden Markov models. Section 3 details the steps of preprocessing, segmentation and feature extraction.

[3] /IO/ *In section 5, we present* experimental results for both performance and area using our modeling approach. *In section 6, we describe* related work and conclude in section 7.

Another five-word bundle that has a frequency higher than three is *the basic idea is to*. It was found that all four instances of this bundle occur in the same move – IM, serving as a general explanation of the concept that lies behind the method used; in other words, it indicates the rationale of the research method. The bundle often occurs at the beginning of IM, following a purpose statement to delineate how the purpose of a study could be accomplished by adopting a specific method, or followed by a literature review of the methods used in previous research. For example,

[4] /IP/ We introduce two new measures of classification complexity called.../IM/ *The basic idea is to* complete these measures cumulatively by partitioning data space at various resolutions where each resolution is defined by the number of partitions per feature.

Table 3: Five-word Lexical Bundles in Introductions

Type	Move	Bundle (Frequency)
Bundles reflecting rhetorical functions of RA introductions	IP	<i>in this paper, we present</i> (5) <i>in this paper, we propose</i> (5) <i>in this paper, we focus</i> (4)
	IO	<i>paper is organized as follows</i> (12) <i>This paper is organized as</i> (7) <i>the paper is organized as</i> (5) <i>of this paper is organized</i> (6) <i>the rest of this paper</i> (5) <i>is organized as follows: section</i> (5) <i>in the next section, we</i> (5) <i>in section 5, we present</i> (3) <i>in section 4, we describe</i> (3) <i>are given in section 5</i> (3)
	IM	<i>the basic idea is to</i> (4)

Four-word lexical bundles in introductions

Table 4 shows all four-word lexical bundles having a frequency higher than three. As can be observed, the total number of the four-word bundles and their frequencies is larger than that of the five-word bundles. This is reasonable as already indicated in previous studies (Hyland, 2008). However, it seems that the nature of the four-word lexical bundles is different from that of the five-word bundles in that their rhetorical functions are not limited to a specific generic move; in fact, a number of the four-word bundles identified are geared towards general academic purposes. The four-word bundles, as a result, were categorized into two groups according to the functions they perform, namely, bundles that reflect rhetorical functions of RA

introductions and bundles for general academic purposes. The latter group of bundles was further divided into stance bundles, discourse organizing bundles, and referential bundles, based on Biber et al. (2004).

Table 4: Four-word Lexical Bundles in Introductions

Type	Move	Bundle (Frequency)
Bundles reflecting rhetorical functions of RA introduction	IO	<i>is organized as follows</i> (13) <i>this paper is organized</i> (7) <i>the paper is organized</i> (6) <i>in section 3, we</i> (10) <i>in section 4, we</i> (7) <i>in section 5, we</i> (8)
s		<i>in the next section</i> (5) <i>in this section, we</i> (4) <i>are given in section</i> (6) <i>are presented in section</i> (4)
	IP	<i>in this paper, we</i> (33)
	IB	<i>in the field of</i> (7)
	IL	<i>have been proposed in</i> (5)
	IF	<i>as shown in Fig.</i> (4)
Bundles for general academic purposes	Stance bundles	<i>can be used to</i> (6) <i>it is possible to</i> (6) <i>plays an important role</i> (4)
	Discourse organizing bundles	<i>on the other hand</i> (16) <i>in the presence of</i> (10)
	Referential bundles	<i>is based on the</i> (12) <i>in the context of</i> (7) <i>on the basis of</i> (6) <i>a small number of</i> (6)

<i>a wide range of</i> (5)
<i>as a sequence of</i> (5)
<i>can be viewed as</i> (5)
<i>a wide variety of</i> (4)
<i>at the expense of</i> (4)
<i>can be found in</i> (4)
<i>is an example of</i> (4)
<i>the performance of the</i> (4)
<i>for the purposes of</i> (4)

Table 4 shows that some four-word bundles can characterize the rhetorical functions of IO, IP, IL/IB, or IF. Again, a number of the lexical bundles, such as *in this paper we* or *in section x we*, are used to indicate the purpose of the study or the organization of the article, suggesting highly conventionalized linguistic realization of these rhetorical functions. In particular, the bundle of *in this paper we* has a frequency as high as 33. Other four-word bundles can be related to the rhetorical functions or moves of IL, IB, or IF. For example, the bundle of *in the field of* serves to refer to a research field or a topic, as shown below. It is thus a bundle that can occur in either IL or IB.

[5] //IL// Recent developments *in the field of* learning in structured domains (e.g., [7], [8]) offer new unexplored and promising research domains, some of which are reviewed in the following.

Another four-word bundle which performs the rhetorical function of reviewing literature is *have been proposed in*. This bundle is frequently preceded by a research topic, domain or method and/or followed by the cited literature. Still another four-word bundle is *as shown in Fig.*, representing the rhetorical function of IF; that is, “referring to a table or figure.”

As also shown in Table 4, of the 18 four-word lexical bundles for general academic purposes, two are discourse organizing bundles, three are stance bundles, and thirteen of them belong to referential bundles. This result is consistent with Biber and Barbieri (2007) which found

referential bundles were dominant particularly in academic writing. The discourse organizing bundle *on the other hand* has the highest frequency. An example of one of the stance bundles, *plays an important role*, which performs the discourse function of claiming centrality (of a research topic), is given below:

[6] As these applications grow in size and complexity, parallel processing *plays an important role* in satisfying the large computational demands.

Two other bundles in the subgroup of referential bundles, *is based on the* and *on the basis of*, are frequently used to support a proposition or argument.

Three-word lexical bundles in introductions

Table 5 demonstrates the three-word lexical bundles with a frequency higher than three. Compared with the five-word and the four-word bundles, a large number of the three-word bundles tend to represent general academic purposes or the genre of RAs as a whole, although some of them may reflect the rhetorical functions specific to RA introductions

Table 5: Three-word Lexical Bundles in Introductions

Type	Move	Bundle (Frequency)
Bundles reflecting rhetorical functions of RA	IP	<i>in this paper</i> (37)
introductions		<i>in the paper</i> (9)
		<i>have been proposed</i> (13)
IO		<i>is organized as</i> (15)
		<i>in section 2/3/4/5</i> (40)
		<i>the next section</i> (5)
		<i>the result of</i> (9)
		<i>an overview of</i> (6)
IF		<i>shown in Fig.</i> (9)
IL		<i>in the literature</i> (6)
IM		<i>is defined as</i> (10)

		<i>our approach is (6)</i>
Bundles for general academic purposes	Stance bundles	<i>be used to (15)</i>
	Discourse organizing bundles	<i>in addition to (11) in contrast to (10) as opposed to (9)</i>
		<i>as a result (7) in spite of (6)</i>
	Referential bundles	<i>is based on (28) in terms of (24) a variety of (15) a sequence of (10) the rest of (9) can be found (6) can be viewed (6) is compared with (5)</i>

Some bundles by themselves do not clearly reveal the rhetorical functions they perform. To properly determine the rhetorical functions of these bundles, we went back to concordance listings to see how they are used in context. For instance, *an overview of* and *is defined as* can be used for general academic purposes but they can also be related to specific moves. Their discourse contexts in the corpus showed that *an overview of* mostly performs the rhetorical function of IO; that is, indicating the part of text where an overview of certain concepts/tasks/systems is given. An example is given below:

[7] //IO// The rest of this paper is organized as follows: Section 2 reviews some related works. Section 3 gives *an overview of* the CSR system. Section 4 introduces the image preprocessing technique.

It is obvious that the bundle of *is defined as* is used to make a definition of a term; examining the concordance lines further reveals that it often occurs in IM to provide an explanation of a

technical term related to the research method, as shown in the example below:

[8] //IM// For the tracing procedure, a junction point *is defined as* a black pixel having at least three black 8-neighbors; therefore,*in addition to* and *in contrast to* are three-word bundles used as discourse organizers. These two bundles not only serve as a transition to maintain the smooth flow of text but also link ideas that precede or follow what is discussed in the context.

To sum up, we can observe that there are much fewer five-word bundles than three- and four-word bundles. In addition, longer bundles are section-specific, more closely related to the rhetorical functions of introductions, such as “indicating purposes” or “indicating organization.” On the other hand, they suggest conventionalized linguistic realizations of specific rhetorical functions, or moves, in RA introductions. In contrast, shorter bundles are usually genre-specific or generally academic, or serve general discourse functions such as signaling a transition.

Move-signaling Words and Lexical Bundles within Moves

In this section, move-related words as well as lexical bundles are reported on the basis of an analysis of our move subcorpora. Move-related vocabulary was identified by examining the word frequency list of each move subcorpus. With regard to move-signaling bundles, we report here only lexical bundles in the major moves; that is, IL, IM, IP, IB, IG, and IO because of the limited size of each subcorpus of the optional moves and the low frequencies of most of the bundles. In addition, it seemed impossible to identify meaningful move-signaling words or lexical bundles in the IM subcorpus, probably due to the fact that the research methodology can be very different even within the single discipline of computer science and thus IM can be realized by a wide variety of words and phrases.

Move IL. Move IL reviews literature or refers to others’ studies. The verbs used when reporting others’ studies are called reporting verbs. Since reporting verbs usually carry the writer’s evaluation or degree of commitment towards the cited study (Thompson and Ye, 1991; Swales, 1990), we were interested to know how RA writers in the field of CS express their stances towards the cited work through examining specifically reporting verbs used in the Move IL.

We first categorized the reporting verbs into evaluative, tentative, and neutral verbs (Hyland, 1996). Evaluative reporting verbs carry a writer's positive or negative evaluation towards the study he/she cited, such as *reduce*, *improve*, or *inspire*. Tentative reporting verbs demonstrate a writer's tentative attitude towards the cited work and are frequently used when a writer makes plausible interpretation towards the cited work. Reporting verbs of this category include *suggest*, *imply*, or *speculate*. Neutral reporting verbs, on the other hand, focus on reporting results and findings of the cited work without carrying the commitment of a writer, such as *present*, *propose*, *report*, etc. Of the 141 occurrences of IL move which contain reporting verbs, 22 are evaluative, 3 are tentative, and 116 are neutral. The results suggest that while reviewing previous studies, writers in CS tend to report the cited studies in a non-evaluative way. Furthermore, high-frequency reporting verbs in the IL move subcorpus are *propose*, *describe*, *consider*, and *obtain*. They all belong neutral reporting verbs.

The examination of five-word, four-word and three-word bundles of IL did not reveal high-frequency bundles specifically associated with the rhetorical function of IL. *The number of*, *is based on*, *have been proposed*, and *the use of* are the top four high-frequency bundles, which are often used while reviewing or referring to work done by others.

Move IP. The rhetorical function of IP is to fill an observed gap by announcing what the study attempts to do. An examination of the top 200 high-frequency words in IP did not reveal any salient vocabulary specifically related to the rhetorical function of this move.

However, results obtained from the lexical bundles of this move are fruitful. Table 6 shows five-word and four-word lexical bundles with a frequency of three or higher. (This is a higher frequency cut-off than that in Biber and Barbieri's (2007), given the small size of the IP subcorpus. In addition, high-frequency three-word bundles are not addressed here since we found they are part of the four-word bundles). Table 7 demonstrates the patterns of two commonly used bundles in this move: *In this paper*, *we+V+N* and *This paper +V+N*. The frequency of the former is especially high. The verbs in these two patterns, as shown in the table, reveal the verbs RA writers often use to introduce or present their own study. N (noun) is usually a specialized term in CS that reflects the research method, system, scheme, model, etc. that a study proposes.

Therefore, the list of verbs in these two proposed patterns or structures can be pedagogically useful, serving as a reference list for student writers of RAs.

Table 6: Five-word and Four-word lexical bundles in IP

5-wd bundle (Frequency)	4-wd bundle (Frequency)
<i>In this paper, we propose</i> (5)	<i>In this paper, we</i> (23)
<i>In this paper, we present</i> (5)	<i>this paper, we present</i> (5)
<i>In this paper, we focus</i> (3)	<i>this paper, we propose</i> (5)
<i>this paper, we propose a</i> (3)	<i>This paper presents a</i> (3)
	<i>paper, we propose a</i> (3)
	<i>of a set of</i> (3)
	<i>In this work, we</i> (3)
	<i>this paper, we focus</i> (3)

Table 7: Two Commonly Used Lexical Bundles in IP

Pattern (Frequency)	V (Frequency)	N
<i>In this paper, we</i> (20)	<i>focus on</i> (5)	<i>method(s)</i>
	<i>present</i> (5)	<i>system(s)</i>
	<i>propose</i> (4)	<i>case study</i>
	<i>address</i> (1)	<i>results</i>
	<i>apply</i> (1)	<i>mechanism</i>
	<i>build on</i> (1)	<i>problem</i>
	<i>employ</i> (1)	<i>scheme</i>
	<i>introduce</i> (1)	<i>framework</i>
	<i>use</i> (1)	<i>approach</i>
		<i>algorithm</i>
		<i>measures</i>
		<i>model</i>
		<i>criterion</i>

<i>This paper</i> (10)	<i>describes</i> (3) <i>presents</i> (3) <i>examines</i> (1) <i>is aimed at</i> (1) <i>proposes</i> (1) <i>sets out</i> (1)	<i>issues</i> <i>questions</i> <i>approach</i> <i>scheme</i>
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Move IB. Examining the top 200 high-frequency word list of the IB move subcorpus revealed that many of the words are nouns that are closely related to the rhetorical function of IB, such as *applications*, *systems*, *networks*, *approach*, *classification*, and *performance*, for they serve to introduce research topics. With the use of these topic-establishing words, research contexts can be created.

With respect to lexical bundles, many of the high-frequency bundles, such as *a large number of* or *in the task of*, are general academic bundles without specifically relating to the rhetorical function of IB. This suggests that providing background information of a research topic needs a wide variety of vocabulary and phraseology. As a result, bundles for general academic purposes seem more common than move-related bundles in this move.

However, we observed that a grammatical structure, *S+ have/has been +V*, is frequently employed to introduce what has been accomplished in a research field, signaling the rhetorical function of IB. Table 8 presents the subjects and verbs we found in the concordance lines containing this structure in the IB subcorpus.

Table 8: Subjects and Verbs Used in S+ have/has been+V

S	(Total occurrences)	V
<i>studies</i>	<i>have been</i> (11)	<i>devoted to</i>
<i>problems</i>		<i>overcome</i>
<i>approaches</i>		<i>used</i>
<i>projects</i>		<i>relying on</i>

<i>tasks</i>	<i>developed</i>
<i>applications</i>	<i>used</i>
<i>features</i>	<i>made</i>
<i>strides</i>	<i>looking for</i>
<i>machines</i>	
<i>rules</i>	
<i>researchers</i>	
S	V
<i>research</i>	<i>has been (9)</i>
	<i>devoted to</i>

Move IG. In Swales' CARS model, the move of “indicating a gap” (IG) is a preparation step for bringing in one’s own study through describing an inadequate aspect of previous studies, pinpointing an unresolved conflict, or raising a new research question. Although IG is one of the major moves in our subcorpus, all of its five-word, four-word and three-word lexical bundles have low frequencies, resulting probably from the small size of the subcorpus and/or numerous possible phrases or structures for gap statements. Thus, no specific lexical bundles were found closely related to the rhetorical function of IG. However, we observed that concessive sentence connectors, such as *however*, *but*, and *although*, have very high frequencies. As shown in Table 9, *however* seems to be the most preferred word which performs the function of signaling a transition from previous research to the writer’s own study.

Although words such as *but* and *although* are semantically similar to *however*, the use of one instead of another may lead to different syntactic structures of IG statements. Following are examples showing the contexts where these three words occur:

[9] However, most of these efforts do not study the influence on the energy consumption of the other system components and even fewer consider the integrated impact of the hardware and software optimizations.

[10] In all cases, significant benefits have been reported, *but* the absolute figures are *not* comparable due to very different architectural assumptions.

[11] It turns out that, *although* domain ontologies are recognized as crucial resources for the semantic web, in practice they are *not* available and when available, they are ready used outside specific research environments.

Comparing the three examples above, we can notice that in Examples [9] and [10], adversative connectors *however* and *but* are mainly used to directly indicate the insufficiency or limitations of previous research. In contrast, the use of *although* in [11] seems to focus on comparison and contrast, indicating what has been accomplished in previous research but stressing what can still be modified, added, or extended. It can also be observed that these three words often co-occur with negative expressions such as *not*, *few*, or *little*.

Move IO. From the top 200 high-frequency word list of the IO (the move of “indicating local or global organization”) subcorpus, we observed that verbs with high frequencies are verbs describing or reporting the content of the various sections following the introduction section, such as *describe*, *present*, *discuss and propose*. Other words closely related to the rhetorical function of IO are *section* and *organize*. Although the size of the IO subcorpus is small, the frequencies of the bundles, compared with those in other moves, are high, suggesting highly conventionalized expressions, as indicated in the previous section on lexical bundles.

The above results reveal that high-frequency words and lexical bundles in the major moves, to some extent, reflect their conventionalized linguistic realizations. These expository findings derived from a corpus-based approach should be pedagogically valuable for novice academic writers who seek to be legitimate members of their discourse communities.

Discussion and Conclusion

The present study takes a genre-based, corpus-informed approach to identifying the major and optional moves in RA introductions, focusing on how this section and its moves can be associated with the use of specific vocabulary and lexical bundles. What mainly distinguishes our study from most genre analysis studies is that we investigate move-signaling words and lexical bundles in both RA introductions and individual moves from a data-driven, computational perspective. The quantitative analysis is facilitated by NLP tools.

In our move analysis, both frequency and range are taken into account. Six major moves and six optional moves are identified. Moves IM (method) and IF (tables and figures) do not occur in the findings of previous studies on RA introductions. This may imply a discipline-specific writing convention of computer science RAs. Pedagogically, thus, writers in this field should be informed of these specific rhetorical functions when writing the introduction section.

The analysis of lexical bundles in introductions identifies two types of meaningful bundles. One is the bundles that signal the rhetorical functions of this section while the other is the bundles that are used for general academic purposes. A majority of the five-word bundles characterize the rhetorical functions of IP and IO, such as *in this paper we present* or *paper is organized as follows*, suggesting that RA writers tend to use conventionalized lexical phrases for these two moves while other moves (such as IB or IL) seem to have more flexible ways of expression. On the other hand, general academic bundles, that is, the second type of bundles, are more common in the form of three- and four-word bundles, among which referential bundles such as *on the basis of* or *can be viewed as* occur most frequently. We may infer that longer lexical bundles tend to be more closely related to the specific rhetorical functions of a section (or move) where they occur whereas most of the shorter bundles are associated with general academic writing.

These results confirm Hyland's (2008) finding that "many of the most frequent bundles in academic writing are extremely common," (p.6) but further suggest that the longer bundle strings, particularly five-word bundles, are more closely related to genre-distinctive and section-

distinctive rhetorical functions. Our results are also consistent with Cortes (2004) who indicates that longer bundles, especially those having high frequencies, often hold shorter bundles in their structure; this may imply that as bundles develop into longer strings to fit different discourse contexts (in this case, research articles and specific sections) and signal specific rhetorical functions, several variants can be derived, with each variant having a lower frequency and obtaining more “context-specific” meaning and function.

As an exploratory study, we investigate move-signaling words and lexical bundles within individual moves. In some moves, move-signaling words can be identified, based on the frequency word list, and linked to the specific rhetorical function of a move. Examining reporting verbs in the subcorpus of IL (literature review) reveals that a great majority of the reporting verbs (82.3%) used are neutral verbs, while evaluative reporting verbs account for only 15.6%. Moreover, concessive sentence-connectors such as *however*, *but*, or *although* have very high frequencies in the subcorpus of IG (gap). On the other hand, the high frequencies of some lexical bundles in move subcorpora such as IP and IO suggest conventionalized expressions in the moves. The corpus-informed analysis of vocabulary use in move subcorpora helps reveal subtle linguistic features hard to be noticed by investigating only RAs or sections.

Pedagogically, the corpus-informed approach to the study of move structures as well as lexical bundles in RAs provides valuable information for course design and materials development in ESP or EAP. In addition, NLP tools such as concordancers offer learners the opportunity to explore language use features on their own so that they are likely to acquire generic vocabulary knowledge inductively and to learn appropriate register and phraseology as well.

However, this study has its limitations. The corpus used for analysis is not large enough to promise representativeness thus the results need to be treated with caution. In particular, the analysis of move-signaling vocabulary and lexical bundles within moves seems to be constrained by the small size of the move subcorpora. Moreover, since our study only focuses on the introduction section of RAs, it is believed that similar analyses of other sections of RAs or a comparison of vocabulary use as well as lexical bundles in the various sections of RAs will be

insightful for a better understanding of the role they can play in RAs as an academic genre.

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Professional English in Use Management

Arthur McKeown and Ros Wright

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Reviewed by Emilia Plăcintar

Babeș-Bolyai University, Cluj-Napoca, Romania

Professional English in Use - Management with Answers is co-authored by Arthur McKeown and Ros Wright and was published in 2011 by Cambridge University Press, as part of its self-study *Professional English in Use* series, which includes key vocabulary in medicine, law, engineering, ICT, and various branches of business management.

The authors' expertise in ESP teaching and materials design is unquestionable. Arthur McKeown is lecturer in Management Development at the Business Institute of the University of ULSTER and an enthusiastic and experienced teacher of management English for MBA students and professionals. Ros Wright specializes in Applied Linguistics and Materials Development and is a passionate teacher-trainer in English for Medical Purposes and a productive writer of materials for various areas of ESP. In 2008, she was awarded the inaugural Besig-David Riley Award for Innovation in ESP.

The concept of the book draws on the principles of the lexical approach and content-based instruction, EFL teaching methodologies that simulate natural language acquisition. It is informed by the Cambridge International Corpus, as well as by a module on Entrepreneurship

and Business Planning taught by Arthur McKeown at the University of Ulster, to ensure that the language taught is up to date and of frequent utility on MBA and other Business programmes.. According to the authors' statement (p.6), the potential beneficiaries of this resource are intermediate to upper-intermediate learners of English 'preparing to start studying for an MBA programme or a master's level course in management' and professionals 'working in a management role who need English for their job'. Although the themes are sequenced from basic management concepts to more specialized terminology, the units are self dependent, so individual users and teachers 'can choose units that relate to learners' particular needs and interests' (p.7), a feature that makes the course book recommendable for both self study and for the classroom.

What is unique about this publication is the density and up-to-datedness of the business content, as well as the realistic view on teaching/learning management English. Through effective page space allocation, the authors have managed to present a considerable number of relevant terms, in the form of words, word families or collocations, in contexts of less than 200 words – not to mention the integration of visual elements for the enhancement of the overall layout. The resource contains forty two-page thematic units that belong to seven management areas commonly studied on MBA courses all over the world: Management in Context, Innovation, Marketing, Operations, People and Human Resources, Finance, and Strategy and Change. The left-hand page of each unit introduces theme-related business terms contextualized through the medium of authentic texts, including brief case studies, while the facing right-hand page provides exercises designed to consolidate and expand users' understanding.

A valuable feature of each unit is the *Over to you* section, which relates the vocabulary to students' own experience or provides them with the opportunity to further study a particular aspect of management. These tasks instruct learners on how to explore and apply the management theories and models according to their business experience or their study and professional interests and needs. Here are a couple of illustrative assignments: *Find out more about Muhammad Yunus and the Grameen Bank. Compare and contrast his ideas with the principles on which private and public sector organizations are run* (Unit 4 Management in

different sectors); *Visit the Institute of Risk Management website at www.theirm.org to find out how the International Standards can help business managers to approach risk management* (Unit 17 Processes). For classroom use, the tasks lend themselves to group discussions, followed by summaries by spokespersons to the whole class and plenary conclusions, or even to written practice, e.g. *Think about your own strengths as a team worker and write a personal statement to add to your CV* (Unit 25 Teams).

The consolidation exercises and the follow-up tasks aim at developing the users' research skills by encouraging them to think analytically and critically in applying their learning to real-life business cases. Since *Professional English in Use – Management* is primarily conceived as self-study support, the book is completed by (1) a generous *Answer Key* with the solutions integrated in whole (con)texts, so that learners are exposed to additional business information and knowledge; (2) an *Index* that facilitates reference and pronunciation by listing the terms and expressions with their corresponding unit numbers and phonetic transcription; and (3) an *Appendix* of British terms and their American equivalents.

The pertinence and substantiality of the content are illustrated in Unit 37 *Strategic Options*. The three texts (A, B and C) selected for the presentation of the business vocabulary have the additional role to familiarize the users with two management tools, i.e. Porter's Five Forces, a model for industry analysis, and Ansoff's matrix applied to identify strategic marketing, and a case study on the world watch industry, respectively. All in all, there are 24 terms highlighted (in bold print) in the three sources, e.g. *competitive position, competitive forces, potential new entrants, supplier/buyer bargaining power, threat of substitute products, generic strategies, product/service differentiation, niche market, market penetration, market leader, shift in consumer demand, core competencies*, etc. The application section recycles these vocabulary items in the following task types: matching words given in two columns to create business collocations from texts A, B and C; completing a case study on the global automobile industry with the terms previously introduced; and applying Porter's five competitive forces to this case study. The *Over to you* task gives users the freedom to apply the same model to a business sector of their own choice in order to identify the forces that affect competition therein: *Choose an*

industry that you are relatively familiar with and conduct a Porter's five-force analysis. For example, suppliers may have a strong bargaining position and be able to set prices, or buyers may have a wide choice and may easily be able to switch between one organization's products and another's.

Other management theories and techniques are briefly presented, including: Mintzberg's managerial roles, organizational structure, SWOT analysis, STEEP analysis, the four/seven Ps of the marketing mix, the stage-gate model and product life-cycle management, Porter's value chain, total quality management, Herzberg's motivation theory, Hackman and Oldham's job characteristics model, customer relationship management, Tuckman's and Belbin's models of team development, Lewin's force field analysis and management by objectives.

With my experience of teaching on the Business Management English Pre-sessional Programme, which prepares international students for the postgraduate degree courses at the Birmingham Business School of the University of Birmingham, I can confirm that these analytical business tools are frequently applied at this institution and in general in business education in the West. *Professional English in Use – Management* ideally serves the students' authentic study needs in that it introduces and consolidates the essential terminology and knowledge pertaining to the business themes in the curriculum, thus laying the foundation on which students can build their business lexicon through extensive readings to be applied in discussions of case studies and related written assignments. This resource has proved equally relevant on my Business Communication course and the preparatory modules for the Cambridge Business English Certificate Higher at the Faculty of Economics and Business Administration of Babeş-Bolyai University.

The unique qualities of *Professional English in Use – Management* detailed above, namely the substantiality and pertinence of the business material selected to introduce the management terms, the practicality and learner-centredness of the teaching/learning concept, together with the user-friendliness of the format, strongly recommend it for both self-directed and guided study.