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ESP
Across Cultures

Special issue:
Academic English across cultures

Edited by
Marina Bondi
&
Christopher Williams

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ESP Across Cultures

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ESP Across Cultures is a refereed international journal that publishes theoretical, descriptive and applied studies on varieties of English pertaining to a wide range of specialized fields of knowledge, such as agriculture, art and humanities, commerce, economics, education and vocational training, environmental studies, finance, information technology, law, media studies, medicine, politics, religion, science, the social sciences, sports, technology and engineering, tourism, and transport. The journal addresses a readership composed of academics, professionals, and students interested in English for special purposes particularly from a cross-cultural perspective. The aim of the journal is to bring together scholars, practitioners, and young researchers working in different specialized language domains and in different disciplines with a view to developing an interdisciplinary and cross-cultural approach to the study of ESP.

ESP Across Cultures is covered in *Linguistics & Language Behaviour Abstracts*, *MLA International Bibliography*, *Translation Studies Abstracts* and *Bibliography of Translation Studies*.

Foreword

Volume 10 of *ESP Across Cultures* is the second issue in the history of the journal to be devoted to a specific theme within the world of English for Specific Purposes, following on from volume 7 of *ESP Across Cultures* where the theme was 'legal English across cultures'. This time the theme is 'academic English across cultures'.

Academic discourse certainly constitutes a 'growth area' within the sphere of ESP studies, and several of the papers that have appeared in previous issues of *ESP Across Cultures* have dealt with the topic. But it was felt that there was room to dedicate an entire issue to the theme, also because the cross-cultural element when applied to academic discourse can offer new, and sometimes unexpected, insights into what has rapidly become a major source of interest over the last two or three decades to linguists, the vast majority of whom work in academia and hence have a 'vested interest' in understanding the phenomenon of academic discourse.

The ten papers constituting this special issue represent a rich mixture of approaches to academic discourse across cultures, some focusing on comparisons between the academic English used by native speakers as opposed to that of non-native speakers, while others are more concerned with finding effective ways of teaching ESP in an academic context and of assessing learners' needs.

The paper by Siân Alsop, Emma Moreton and Hilary Nesi Mari examines the Engineering Lecture Corpus, comparing English-medium lectures from Malaysia, New Zealand and the UK. The authors argue that even if a common language may be used to present the same kind of syllabus for the same broad purpose, engineering lectures tend to remain both context- and culture-specific. Their analysis looks at the purposes of storytelling in Engineering lectures, and the ways in which various types of stories are realized linguistically.

Marie-Lise Assier investigates how *Fiction à substrat professionnel* (specialized fiction) can be beneficial in terms of language teaching and learning objectives and in motivating students in an ESP context, taking as an example the medical novel *Transplanted Man* by Sanjay Nigam. She suggests that including FASP in a language class helps to give students "more self-confidence in oral participation and a willingness to learn in an open, dynamic and long-term perspective" and can be used to trigger new multicultural awareness.

In their paper Mahmood Reza Atai and Seyyed Asadollah Asadi argue that "needs analysis should lay the foundation for English for Specific Purposes (ESP) programs". The authors adopt a triangulated approach involving observations, interviews, questionnaires, and course book analysis involving students of Railway Engineering at Iran University of Science and Technology, Teheran, their instructors, language teachers, authorities and graduate railway engineers at the workplace. The results highlight the pressing need to renew the ESP programs and increase the accountability of ESP instruction in higher education.

Shahabaddin Behtary and Mehran Davaribina report on a research project which tries to discover what the effect of genre variation is on reading comprehension for non-native speakers. A reading comprehension test was developed which consisted of two types of texts, a medical English textbook and a general English textbook, and the performance of 93 Iranian medical students was compared. The findings reveal that the participants were more proficient in comprehending general English texts compared to ESP texts. The authors then hypothesize the reasons for the difference in performance.

Donna Bain Butler, Yalun Zhou and Michael Wei analyse writing knowledge in the context of academic culture by exploring graduate student perceptions of academic English writing in China and Thailand. A student-centred approach to teaching and learning English for Specific (and Academic) Purposes emerges from the data that reveal global issues in writing across academic cultures. Particular attention is paid to the issues of native academic culture, academic English writing, strategies for academic English writing, composing for academic purposes, and student metaphors for academic English writing.

In her paper Oana Carciu looks at the biomedical discourse community to examine the different textual responses of L1 English and L2 English (Spanish) scholars publishing research in international English-medium journals, analysing the linguistic expression of disciplinary identity. The results suggest that the research article is "a negotiated intercultural space which promotes a shared disciplinary identity across cultures to provide a temporarily stable ground for further social action". However, it would appear that the linguistic expression of identity throughout the different rhetorical sections of a research article "does not completely erase cultural identities".

Shirley Carter-Thomas and Elizabeth Rowley-Jolivet investigate the citation practices of French researchers publishing in English, using a corpus of the uncorrected pre-publication final versions of their articles in science and linguistics, and two comparable corpora of published RAs in English and French. The analysis highlights the problems of hybrid citing styles, referential ambiguity and the use of reporting structures, and concludes that the writer's native language and culture affect the management of citation, and that ambiguous inter- and intra-textual reference and the underuse of reporting verbs and nouns "can appreciably diminish the efficacy of citation in the French researchers' articles written in English".

Carmel Heah and Sujata S. Kathpalia look at metaphor in the language of economics, especially the way changes and movements in the financial markets are presented in the Singapore press and local forum discussions. The authors suggest ways of improving students' metaphoric awareness by drawing their attention to the figurative expressions they encounter when reading economics and business texts as well as through classroom activities that promote their metaphorical competence. They argue that understanding the significance of metaphor not only enhances ESL/EFL students' understanding of economics discourse but also improves "their ability to read critically through a deeper understanding of how metaphors can be used to shape perceptions of financial trends".

In her paper Maria Grazia Sindoni addresses the question of whether English for Linguistics is a domain of interest for EAP, whether the metalanguage for linguistics is sufficiently taught at university level, and which strategies are most appropriate when developing presentation skills with regard to language competence in the field of linguistics. The author argues that peer-assessment procedures "would seem to be particularly effective at postgraduate level when integrating syllabus content and language skills to negotiate and reflect critically on this aspect of EAP", illustrating a pilot project carried out at the University of Messina, the ultimate aim of which was to develop students' reflective, linguistic, metalinguistic and presentation skills.

The papers briefly outlined above were specially chosen out of the many proposals we received, our aim being to provide a varied account of how academic English can be investigated from a cross-cultural perspective. We hope readers will enjoy this selection of contributions. Finally, we wish to express our gratitude to all those scholars who have kindly acted as referees. They will be acknowledged in the next issue of *ESP Across Cultures*.

The Editors of this special issue

Marina Bondi
Christopher Williams

THE USES OF STORYTELLING IN UNIVERSITY ENGINEERING LECTURES

Siân Alsop, Emma Moreton & Hilary Nesi
(*Coventry University, UK*)

Abstract

The Engineering Lecture Corpus (ELC) is a growing corpus of English-medium lectures from across the world, currently including transcripts from Malaysia, New Zealand and the UK (www.coventry.ac.uk/elc). Unusually, the ELC encodes functions that recur across large numbers of transcripts, using what we call 'pragmatic annotation'. Recurrent functions in ELC transcripts have been found to include 'storytelling', 'housekeeping', 'summarizing' and 'defining'. Sub-categories have been assigned to some of these functions; for example storytelling is marked as either an 'anecdote', 'exemplum', 'narrative' or 'recount' (cf. Martin 2008). The paper argues that although engineering lecturers around the world may use a common language to deliver the same kind of syllabus for the same broad purpose, engineering lectures are likely to remain both context- and culture-specific. Lectures of all kinds often include story elements, to entertain, instruct, and make key information more memorable. The way stories are presented varies from place to place, however, and regional differences may represent a challenge both to those who attend lectures and to those who deliver them. Such variation should be taken into account when designing ESP and staff development programmes. The analysis looks at the purposes of storytelling in Engineering lectures, and the ways in which various types of stories are realized linguistically. The discussion draws on Labov & Waletzky's (1967) structural model for oral narratives of personal experience, and Martin's (2008) four categories of 'story'.

1. Introduction

The structure and purpose of stories have long been topics of sociolinguistic discussion, often with reference to models of narrative structure. The often-cited Labovian model divides 'narratives of personal experience' into the following six stages: 1) abstract, 2) orientation, 3) complication, 4) evaluation, 5) resolution, and 6) coda. According to this model the 'abstract' is a summary of the events and the 'orientation' functions "to orient the listener in respect to person, place, time, and behavioural situation". The 'complication' stage describes the series of events that comprise the complicating action, possibly over a number of cycles (Labov & Waletzky 1967: 93), and the 'resolution' concludes the narrative. The floating 'evaluation' stage can come before or after the 'resolution' or coincide with it, and is regarded as "the significance or the point" of the narrative (*ibid.*: 94). These three stages are obligatory. An optional 'coda' acts as "a functional device for returning the verbal perspective to the present moment" (*ibid.*: 100). Figure 1 illustrates these stages in an excerpt from our Engineering Lecture Corpus.

<orientation>
once there was a really great story
it happened in my in this class in the first year
a student said to me
well I said to the students
I said
I was talking about DC motors
and I said you can't make a DC motor which doesn't have a commutator
it has to have segments to make it work
we'll see about that in the second semester
</orientation>
<complication>
and a student said
well he came to me the next week
and he said I don't think that's true what you said last week
and he um showed me a diagram
and I said oh that will never work
that's no good
the next week he turns up
and he's built one
and he says look
and um take it into the lab
</complication>
<evaluation>
and sure enough he was right
I was wrong
and it was a completely new idea that he'd thought of
</evaluation>
<resolution>
and it turned over
it worked
</resolution>
<coda>
and if he'd get a patent on it that's an amazing story
</coda>

Figure 1. An example of a Labovian narrative (NZ 3010)

Martin (2008) has developed Labov & Waletzky's notion of the narrative, identifying a network of possible pathways through the events to differentiate four possible story genres, as shown in Figure 2.

In Martin's system only the 'narrative' genre is associated with disturbed and restored equilibrium, as described in the Labovian model. 'Recounts' narrate unproblematic events, and 'anecdotes' and 'exempla' narrate problematic events which are not resolved. Table 1 illustrates Martin's (*ibid.* 2008: 43) model of the different story genres, and his claim that "the structure and function of the different stories derives from the relations between events and feelings".

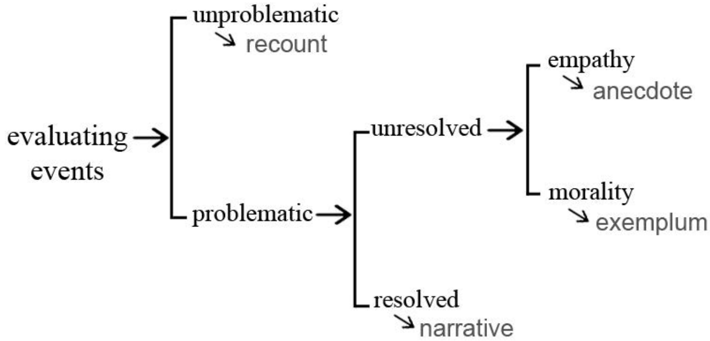

Figure 2. Comparing story genres – a choice network (Martin 2008: 45)

Genre	Events	Reaction
recount	unproblematic	running commentary
anecdote	unexpected disruption	emotional empathy
exemplum	noteworthy incident	moral judgement
narrative	complication resolved	build and release tension

Table 1. Martin's table of events and feelings in four story genres (2008: 44)

This model suggests that storytelling might realize a variety of pedagogical purposes, and indeed a number of researchers have identified the story as an important pedagogical feature in spoken academic discourse (Dyer & Keller-Cohen 2000; Simpson-Vlach & Leicher 2006; Maynard & Leicher 2007; Deroey & Taverniers 2011). Neither the British Academic Spoken English (BASE) corpus nor the Michigan Corpus of Academic Spoken English (MICASE) has been systematically annotated for textual functions, but attempts have been made to isolate and define story elements in small samples taken from both these corpora; Deroey & Taverniers (2011) consider 'recounts' in their functional analysis of 12 BASE lectures, for example, and Maynard & Leicher (2007) include 'narrative' as a pedagogically interesting pragmatic feature to encode in the header metadata for a small selection of MICASE speech events.

According to Labov & Waletzky (1967: 81, 84) strict temporal sequence is "the defining feature of narrative", because it can "recapitulate past experience in the same order as the original events". Temporal sequence is thus often used as a formal means of identifying story elements within larger units of discourse such as the lecture. Simpson-Vlach & Leicher (2006: 69) define 'narrative' in MICASE as a "story of two or more sequential clauses using the past tense or the historical present", and Deroey & Taverniers (2011: 6) class as 'recounts' those sections of the lecture where, often using past tenses and time indications, "the lecturer presents information about past actions, events or situations". Stories can also be described in terms of the speaker's role. Story elements in the lectures analysed by Dyer & Keller-Cohen (2000), for example, are defined not only as reports of events in the past, but also as reports of events in which the lecturer (the first person narrator) partook. Dyer & Keller-Cohen describe such narratives as a means by which lecturers position themselves as experts, and distance themselves from non-expert 'other' characters.

This paper describes our attempts to identify, categorize and analyse story elements in an international Engineering Lecture Corpus (the ELC), drawing on the prior studies of narrative in academic and non-academic contexts.

2. Methodology

So far the ELC contains videos and transcripts of English-medium lectures from the UK, New Zealand, Malaysia and Italy[1]; most of these are in the fields of civil, mechanical and electrical engineering, and similar topics are often covered in the different cultural contexts. The transcripts have been annotated to identify functions of lecture discourse that we consider to be important but which may be difficult for corpus linguists to interpret, especially within the reduced context of the standard concordance line. Following the use of the term by MICASE researchers, we have called this 'pragmatic' annotation.

Our starting point for pragmatic annotation was a list of 14 pragmatic categories, including 'personal narrative', compiled by Nesi, Ahmad & Ibrahim (2009). The list did not attempt to cover *all* pragmatic possibilities, but was compiled in accordance with four selection criteria: the categories could not be realized by a single predictable form, and had to shed light on the specific nature of lecture discourse, identify features which were not easily recoverable from context, and occur more than once in the corpus (Nesi & Ahmed 2009). These rules continue to underpin the current 2011 working list outlined in Table 2. Some possible pragmatic categories such as 'evaluation' are not on this working list because in our corpus they occur as stages within broader categories such as 'story' (in the judgement stage of the 'exemplum', for example). However it is likely that as the corpus grows more pragmatic categories will be added, in response to the analysis of other engineering lectures delivered in other contexts.

explaining	where lecturers define, demonstrate or translate concepts or terms
housekeeping	where lecturers talk about academic commitments and events external to the lecture
humour	where lecturers use irony, mock threats, teasing, sarcasm, self-denigration, word play, or bawdy, black or playful humour
prayer	self-explanatory (only occurs in the Malaysian component of the corpus)
story	where lecturers tell personal or work-related stories in the form of anecdotes, exempla, narratives or recounts
summary	where lecturers preview the content of current and future lectures, or review the content of current and past lectures

Table 2. A working list of pragmatic categories in the ELC

[1] The discussion in this paper does not include the Italian component of the ELC, which was compiled at Università degli Studi di Napoli 'Federico II'.

The current working list emerged gradually, during the process of annotation[2]. Throughout this process NVivo was used to organize the transcripts and accompanying video files. Facial expressions and phonological features could be accessed in the video component, and sometimes helped us to construe pragmatic meaning. Initially, the process involved identifying features in a selection of files, checking the resulting long list of features against our four rules, and collapsing the list to remove instances of inefficient and overlapping description. Where it was felt that a feature was important and interesting but not frequent enough to warrant a distinct category, sub-categories (or attributes) were created. 'Teasing', 'self-deprecation' and 'black humour', for example, were subsumed as attributes under the umbrella element 'humour'. The original category 'personal narrative', on the other hand, was found to be too specific and was expanded so that the category of 'story' could include both personal and professional narratives.

The 'story' category was revised again when narrative extracts from across the entire corpus were compared and it became clear that a level of annotation had been missed. Martin's (2008) story genres were then added to our descriptive system.

The TEI-compliant structural markup and pragmatic annotation of the ELC files was performed using the XML editor Oxygen[3]. We annotated chunks of text that performed a storytelling function, taking a liberal approach to annotation. As far as possible opening and closing tags were encoded according to the following principles:

1. enough contextual data should be captured so that the story makes sense as a standalone chunk
2. summative and evaluative sections that enclose the core should be included
3. when in doubt, more rather than less of the transcript should be included within the annotation.

The first phase of coding was performed by language experts with markup experience and knowledge of the culture of the relevant component. General practices and unclear examples were discussed in project workshops. A single coder reviewed the entire corpus to ensure the accuracy of the transcriptions, the validity of the TEI-compliant markup, and the consistency of annotation.

As with any corpus of spoken discourse, however, we continue to spot errors and make adjustments to our files, particularly in relation to category boundaries and attributed types. This is especially true of the ELC for two reasons. Firstly, the subjective nature of pragmatic category identification means that inter-coder reliability checking continues to result in minor revisions. Secondly, in order to increase representativeness, the ELC is constantly growing, and the addition of new cultural components may introduce new categories for inclusion, or shift the balance between

[2] In recognition of the subjective nature of pragmatic categories, we will use the term 'annotation' in reference to their identification, as distinguished from the TEI-compliant 'markup' of the stable structural components of the document. The use of 'annotation' assumes that markup is pre-existing.

[3] http://www.oxygenxml.com/. The pragmatic annotation is not currently TEI-compliant as the XML tags often overlap both each other and different utterances. We are exploring options for converting all pragmatic annotation into stand-off form, which is stored in a separate file.

the existing elements and attributes. The tagset therefore remains dynamic and adjustable to account for any further unpredictable data features or changes in our approach.

For this study 78 lectures were analysed: 30 from the United Kingdom (UK, ID series 1, approximately 252,000 words), 20 from Malaysia (MS, ID series 2, approximately 127,000 words) and 28 from New Zealand (NZ, ID series 3, approximately 169,000 words). To extract all chunks of text identified as 'story' for the purposes of comparison, a Python script was used to loop through a directory of all the annotated files, identify the text contained within the XML 'story' tags, append the original filename to each chunk for identification purposes, and write out the results to a new file. Once identified, each instance of 'story' was manually broken into sections according to Labovian rules, as exemplified in Figure 3.

<orientation>
    it's not as embarrassing as the one I saw on YouTube
    where some guy I presume it was a guy drove his little Ford Fiesta into the harbour off a quayside
    that's not the funny bit
    that's just sad
</orientation>
<complication>
    some guy brings along a crane like this
    tries to lift the car out
    doesn't think about the fact
    that if the car doors are shut the car will be heavier
    because it's carrying water
    so the crane topples into the harbour
</complication>
<resolution>
    so they then have to bring another crane in to get the first crane and the car out
    that they actually didn't make the same mistake twice
<evaluation >
    have a look on YouTube
    see if you can find the video
    it's a hoot
    so things should be in moment equilibrium
    if they don't nasty things start to happen
</evaluation>
<coda>
    and this is okay a little bit of a joke
    and think yeah only a small crane
    but it's unfortunately very common

Figure 3. Segmentation of a 'story' (UK 1001)

As noted previously, however, the traditional Labovian model did not map comfortably onto every instance of 'story' we identified. For example, although the extract in Figure 4 feels like a 'story', it lacks a resolution stage.

Although the event in Figure 4 is problematized (as the crane falls into the water), it is not resolved. This is in contrast to the example in Figure 3, where the crane is retrieved. The chunk cannot therefore be classified as a Labovian narrative. It does,

<abstract>
this video sh- show the crane accidents
</abstract>
<orientation>
you notice this crane
err actually the workers were doing some lifting
I think there's a bit okay
</orientation>
<complication>
as what you can see here
start to tilt and splash into the water
</complication>
<evaluation>
okay so because of overloading that mean the the crane is not in equilibrium
that is why you have to know your free body diagram before you do anything
</evaluation>

Figure 4. Segmentation of a 'story' (MS 2010)

however, accord with Martin's (2008) exemplum pathway, highlighted in Figure 5. The intended reaction to the event is judgement, rather than empathy, as emphasis is put on the need to "know your free body diagram before you do anything".

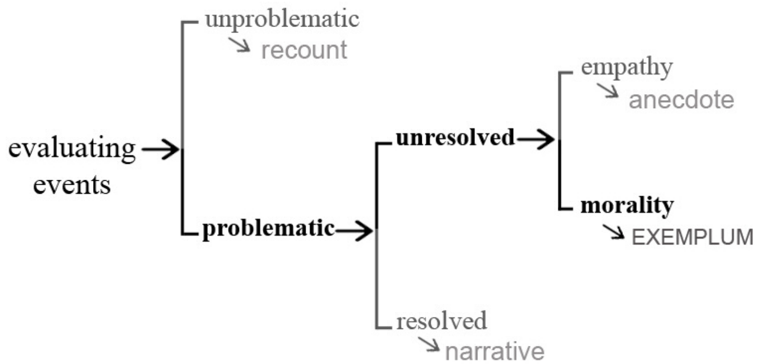

Figure 5. Choice network (Martin 2008) showing the path of an exemplum in bold type

As the stories in the ELC are often used to illustrate an engineering principle rather than a 'moral', we have adjusted Martin's definition of exempla to refer, in our analysis, to a reaction of scientific judgement.

4. Results

We identified 170 instances of 'story'. Table 3 shows both the raw occurrence and normalised occurrence (per lecture) of story genres in each cultural component.

In Figure 6 the normalized information has been translated into graphic form to show the breakdown of story genres across the ELC.

	UK		MS		NZ		total	
	raw	normalized	raw	normalized	raw	normalized	raw	normalized
anecdote	25	0.83	2	0.10	10	0.36	37	0.47
exemplum	19	0.63	14	0.70	3	0.11	36	0.46
narrative	19	0.63	11	0.55	16	0.57	46	0.59
recount	22	0.73	12	0.60	17	0.61	51	0.65
total	85	2.83	39	1.95	46	1.64	170	2.18

Table 3. Normalized occurrence of story genres per lecture in three cultural components of the ELC

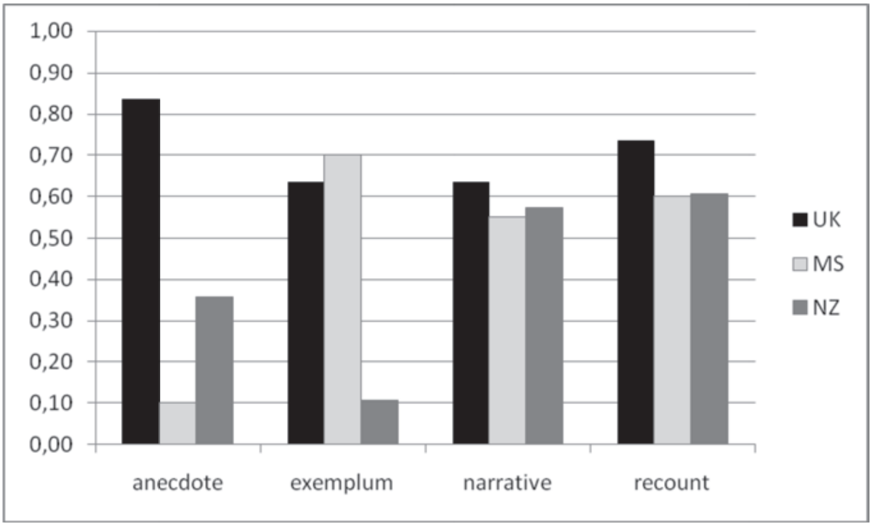

Figure 6. Normalized breakdown of story genres across three components of the ELC

Table 4 shows the average token length of each instance of the four genres of storytelling identified in the ELC. Recounts tend to be the shortest of the story genres and narratives are uniformly the longest, reflecting the number of stages they typically contain. Narratives must include a 'complication' and a 'resolution' stage and can optionally include evaluation, recounts are unproblematized and therefore the story events are not resolved or evaluated.

	UK	MS	NZ
anecdote	118	91	59
exemplum	159	131	82
narrative	170	154	112
recount	87	112	81

Table 4. Average token length of storytelling chunks in the ELC

According to Martin, both anecdotes and exempla are stories that contain an event (or events) that is problematized, but not resolved. The distinction is made at the level of reaction: anecdotes elicit emotional empathy, whereas exempla elicit a "moral judgment" (Martin 2008: 44). According to our broader definition of the exemplum, which extends judgement to matters which are scientific, there is approximately the same number of anecdotes as exempla in the corpus (36:37). However, anecdotes occur significantly more frequently in the UK subcorpus, with a probability of occurrence in 0.83 lectures compared to 0.1 in the Malaysian subcorpus. A closer look at the themes of the two genre types reveals that the anecdotes do not report very serious negative consequences: a lump of concrete exploding and destroying a microwave (UK 1014), for example, or the use of light switches to create visual effects (NZ 3014). The exempla, however, often have markedly negative consequences; the stories in a lecture on health and safety, MS 1010, for example, draw on scenarios such as a fatal fall from a lift shaft, severe burns from a pot of boiling dalca, and an accident with a forklift truck (see Figure 6).

<orientation>
so from the video you can see
</orientation>
<complication>
that the the girl was hit by the forklift
</complication>
<evaluation>
because because of very very simple reason
she did not hear anything
because of her i-Tune normally when you use i-Tune you listen the music very very loud
so it will cut you off anything from outside
so even though the forklift driver he use the horn or whatever
so the the the girl in this video yeah even though it's acting she did not hear anything
and hence she was hit by the forklift
</evaluation>
<coda>
this type of accident actually occur sometimes
</coda>

Figure 7. An exemplum from a Health and Safety lecture (MS 2010)

In their sample of lectures from the BASE corpus Deroey & Taverniers (2011: 6) describe a "stark contrast" in the use of story genres between the disciplines. They report that there were few recounts in the physical sciences, but numerous instances in the arts and humanities. As indicated in Figure 6, recounts are used most uniformly across the ELC. Deroey & Tavernier (*ibid.*) broadly define recounting as a subfunction of informing. Although all of the recounts identified in the ELC seem to fit this definition, there were some differences noted between the recounts across subcorpora. Recounts in the lectures from New Zealand are mainly used to explain how something was carried out or achieved. In only two out of 17 instances is the recount based on personal experience; in most instances it describes or explains a process typically used in a specific industry, for example the steel industry (NZ 3019), or the shipping industry (NZ 3021). Recounts in the Malaysian lectures, on the other hand, often accompany a visual aid and provide further contextual information relating to the situation depicted in the image (for example, Legoland in MS 2005; an accident report in MS 2010; and an assembly line in MS 2010). As with the New Zealand lectures,

<complication>
I hate to admit to this one
but one site I was on we had cube failures
and the reason was that
when I'd been sending the cubes off
I'd been having to break the ice on the top of the tank
before I could get them out
and um the tank had a heater in
we just hadn't bothered to get the spark to wire it in
</complication>
<resolution>
and ah fairly obviously by the time the area manager appeared to ah come and have a look and s
what had gone wrong
it was all wired in and working fine
and we said oh no problem with that
would we do a thing like that
</resolution>
<evaluation>
and ah but okay sort of nevertheless it caused endless hassle
the fact that we'd had these cube failures
</evaluation>
<coda>
if you keep them too cold they'll go down a low strength
</coda>

Figure 8. A narrative of personal experience from the UK (1012)

these recounts are not expressing personal experience. Even where the lecturer is referring to pictures he has personally taken at Legoland (MS 2005), the purpose of the recount is not to talk about the visit itself or what happened there, but to describe the layout of the place and its various structures. More of the UK recounts are based on relating personal experience (nine out of 22 instances). The relation of 'personal' experience in these examples, however, predominantly describes first-hand experience of the behaviour of students and colleagues – what they do and say – in the immediate context of engineering lectures (UK 1016, 1028, 1029, 1030).

Whereas recounts tend to be more explanatory and descriptive in nature, typically referring to a situation from which the speaker is personally removed, narratives tend to be more personal and involved/involving. Thirteen out of the nineteen UK narratives, for example, refer to first-hand experiences – typically events that took place on a site visit or during testing or more mundane events that took place at the university (see Table 5). Referring back to Martin's genre pathway (see Figure 2), we see that narratives are in a sense the most 'complete' genre of story as events are problematized and then resolved. In terms of average token length (see Table 4), narrative storytelling is markedly longer than other types in each of the cultural subcomponents.

narrative type	UK		MS		NZ	
	raw	%	raw	%	raw	%
personal experience	13	68	1	9.09	8	50
experience of others	6	32	10	90.91	8	50

Table 5. Types of experience within the narrative story genre

<orientation>
this accident occur in Port Dickson in Negeri Sembilan
so the house is located very close to the T N B transmission line
and during this time some of the workers were installing the high tension cable
</orientation>
<complication>
and perhaps the cable that is holding this pulley it was broken
and hit one of the houses
</complication>
<resolution>
er luckily nobody got injured in this incident
</resolution>

Figure 9. A narrative about the experience of others from MS (2010)

It was mentioned earlier that a valuable, but not critical, distinction can be made between narratives based on ‘personal experience’, such as UK 1012 (Figure 8), and narratives about the experience of others, such as MS 2010 (Figure 9).

Table 5 shows a clear distinction between the UK and Malaysian narratives, as the former rely heavily on personal experience, whilst the latter largely concern the experience of others. In the New Zealand subcorpus, the inspiration for narrative storytelling is split equally between personal experience and the experience of others.

5. Discussion

Stories in lectures offer students something they are unlikely to find in their written course materials: a vicarious experience of real-world engineering problems. The findings indicate that anecdotes and exempla are on average the least common storytelling genres in engineering lectures, but also subject to the most culture-specific variation. Exempla are used more heavily in the Malaysian lectures, and are notably lacking in the New Zealand component. Anecdotes are far more common in the UK component. Differences may possibly be due to differing concepts of the role of lectures. Exempla illustrate points of information, so are more likely to be used when the lecture has a primarily informing role. Anecdotes perform a more entertaining function and appeal to the emotions; they may serve as a means of modelling attitudes towards incidents that are likely to occur in the professional life of an engineer. In the UK there may be a greater emphasis on student autonomy, and if students are expected to discover key information for themselves, the purpose of the lecture changes; there is more space for the expression of thoughts and opinions more loosely related to the programme of study.

There is no significant difference in the probability that narratives, or recounts, will occur in any particular component. Personal narratives allow the lecturer the opportunity to model the role of an expert engineer, in the manner described by Dyer & Keller-Cohen (2000). It was noted that UK narratives rely heavily on personal experience, whereas Malaysian narratives rely heavily on the experiences of others.

One possible explanation for this, suggested by a Malaysian colleague, is the different career trajectories of lecturers in the two countries. Engineering lecturers in the UK have often spent several years in industry before entering academia, whilst their Malaysian counterparts tend to enter academia at an earlier stage, pre-experience.

It is also possible that the Malaysian lecturers rely more heavily on pre-prepared course materials, perhaps because they are less confident about their own and their students' knowledge of English, and are therefore less willing to extemporize, or because in the Malaysian context there is a greater expectation that different lecturers delivering the same programme will cover the same ground.

These findings have implications for ESP practitioners. Students from contexts where informing is the prime purpose of lectures may have difficulty adapting to a freer story-telling style, for example, because they may be accustomed to treating all parts of the lecture in the same way, making notes when the lecturer provides key facts, and also when he/she tells a story. Such students may benefit from exposure in the EAP classroom to examples of narratives of personal engineering experience, so that they can become acquainted with this genre and learn to interpret its purpose, relating the lecturers' experiences to their own prior knowledge and their future circumstances. Narratives can be discussed in the EAP classroom within a Situation - Problem - Solution - Evaluation framework (Hoey 1983). This is a text pattern commonly taught on pre-sessional courses in UK universities, because it can be applied to the analysis of many genres of spoken and written academic text. Examples of narratives may be difficult to source from published EAP listening materials, however, as lecture extracts in published materials are often scripted, and lack many of the pragmatic features we have noted in authentic lectures (see, for example, Nesi 2012).

Stories of various types seem to play an important role in lectures across a range of cultural contexts, and it is therefore important not to neglect them when teaching academic listening skills in the EAP/ESP classroom.

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USING MEDICAL FICTION TO MOTIVATE STUDENTS IN PUBLIC HEALTH FIELDS

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Abstract

After defining the meaning of the acronym FASP (specialized fiction), I will consider what it entails in terms of language teaching and learning objectives and outline its motivational benefits in an ESP context, taking the specific example of a medical novel studied in class, *Transplanted Man* by Sanjay Nigam.

Transplanted Man offers contextualized language and metaphorical implications. In addition to linguistic knowledge and abilities, non-verbal communication can be analysed in the context of a holistic approach. Including FASP in class material aims at giving students more self-confidence in oral participation and a willingness to learn in an open, dynamic and long-term perspective.

The pedagogic exploitation of the "hypokinetic man" taken from Nigam's novel allows for a three-dimensional exploration. First of all, it highlights the conscious and unconscious processes at stake in personal and professional skills regarding health matters. Secondly, it reveals individual or collective beliefs and patterns in medical fields. Last but not least, this Indian-American FASP is used to trigger new multicultural awareness.

1. Introduction

Since the Bologna process, many French Master-level students have found themselves facing substantial changes in their disciplinary programmes which have included compulsory English. As a result, there has often been a lack of motivation, since the new rules have led to the introduction of English language training regardless of students' educational backgrounds. Some students have never studied English before; others stopped language training at an early age. Specific levels of skills in various language competences are often required based on the *Common European Framework of Reference for Languages* (CEFR 2001). How can these students reach a B2 or C1 level in two years with only 24 hours of English per year, with increasing class sizes? What I am going to present is one way of creating a diversionary tactic to relieve the pressure put on students by concentrating on the learning process rather than focusing on language acquisition, working upstream before considering downstream work. After defining the fictional genre of FASP and its historical and didactic background, I will consider what its use in class entails in terms of learning objectives and priorities and will then outline its benefits in the ESP context. A specific example of medical FASP studied in class, *Transplanted Man* by Sanjay Nigam, will illustrate the impact of this approach on motivation.

2. FASP: a different way of teaching ESP

The acronym FASP stands for "Fiction à substrat professionnel" (fiction with a professional substratum), a genre defined by Petit (1999); he identified it after analysing the common characteristics of some popular thrillers. The fact that they were written by experts from specific fields studied in ESP was of particular interest to him: they could be used as material for English teaching as well as for research. FASP has since been a subject of study presented in a number of symposia [1]. Isani (2011: 31) has more recently defined it as a "relevant, attractive, motivating pedagogic tool which covers the triple axis of ESP studies as defined in terms of subject-domain knowledge, specialized language and culture". In this particular genre of popular fiction in English, characters evolve in specialized or professional fields such as law, journalism, art, forensics or medicine. Generally speaking, the writers are specialists; in medical stories, they often are "doctors-turned-novelists" (Charpy 2011: 72).

Research in foreign language teaching has developed an interest in this material, which opens up new potential in teaching and learning strategies. In a two-day conference held in Grenoble in 2009, the concept of FASP was extended to include other languages and other literary works less dependent on the thriller genre. A further conference in Caen in 2010 refocused the debate on FASP as a didactic tool in the specialized field of ESP. Considering culture as an "inherent part" of FASP adds a crucial dimension to ESP which is linked to key values.

One of the attractive features of FASP is its adaptability to a learner-centred approach favouring learner motivation. Meeting new and unfamiliar characters through FASP leads to resonances which encourage students to accept complexity at the core of exchanges with foreigners. FASP makes it possible to build bridges which can connect fragmented knowledge lost in generally compartmentalized tuition – "Archipelagos of knowledge" [2] (Abdallah-Pretceille & Porcher 2005: 20).

The novel *Transplanted Man* is one example which allows learners to relate to others by detecting "the strange familiarity of otherness" [3] (*ibid.* 140). This occurs at two levels as the novel deals with different cultures (professional and ethnic) while including different social norms and status. Through their identification with characters, students are positioned as "universal singularities" (*ibid.* 141). My interest in FASP has thus developed as a relevant tool to enrich students' multicultural awareness in addition to better-known and more commonly exploited linguistic fields (such as specific uses of grammar and vocabulary). My project – including FASP as

[1] http://www.langues-vivantes.u-bordeaux2.fr/frsa/pagesperso/michelpetit/fasp.html.

[2] *«les archipels du savoir»* (Author's translation).

[3] *«étrange familiarité de l'altérité»* (Author's translation).

class material – aims at giving students more self-confidence and self-efficacy [4] (Bandura 1997) in oral participation and a willingness to learn in an open, dynamic and long-term perspective. The methods and results are described below along with their pedagogical implications.

2.1. *FASP: a motivating factor*

In the 1980s Dörnyei (2001b: 2) defined the term motivation as being "as useful for theoreticians and researchers as for practitioners because it highlights one basic aspect of the human mind. This aspect is related to what one *wants/desires* (i.e 'conative' functions) in contrast to characteristics related to what one rationally *thinks* (i.e 'cognitive' functions) or *feels* (i.e 'affective' functions)". His position is that when motivated learners want to learn a language "they will be able to master a reasonable working knowledge of it as a minimum, regardless of their language aptitude" (*ibid.*). In the specific context of higher education, motivation is seen by Fenouillet (2011: 29) as being closer in meaning to commitment or getting involved in a process. Motivational research has traditionally differentiated types and sources of motivation. Causes linked with external factors (extrinsic) such as keeping one's job or having a better position at work may be distinguished from motives of self-development such as improving one's abilities (intrinsic). In our Master-level classes both types of motivation exist, but very often extrinsic drive is stronger than intrinsic drive. Students' goal-seeking is made up of vague expectations such as passing their exams at the expense of more active involvement which would allow them to consider their goal in terms of feasibility and efficacy in their own development. Hence, strategies have to be used and maintained in a short-term extrinsic approach but also in a long-term intrinsic perspective. If learners think they are going to fail, they cannot maintain their efforts (Seligman 2007).

For Deci & Ryan, cited in Dörnyei (2001a: 159), there are three basic human needs which are related to "intrinsically motivated behaviour": first, "*autonomy* (i.e experiencing oneself as the origin of one's behaviour)", then "*relatedness* (i.e feeling close to and connected to other individuals)" and finally "*competence* (i.e feeling efficacious and having a sense of accomplishment)". I felt that FASP would help students feel autonomous, relate to each other and improve their self-efficacy through activities in class. For Bandura, it is necessary to master easy experiences in order to overcome intense apprehension. I aimed at making the students feel in control of their learning process through micro-tasks which would help them later in coping with major tasks. Used as a pedagogical tool in class, FASP enables the teacher to use language as a "medium of access" rather than an "object" of learning. O'Neil & Drillings (1994: 85) explain that in their "deep approach", "learners regard the learning material (text, problem, etc.) as the means through which to gain an understanding of the underlying meaning found in the material". "Continuing motivation" is a crucial educational outcome often perverted by external rewards, such as

[4] According to Albert Bandura: "Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (http:www.des.emory.edu/mfp/BanEncy.html, 1).

good grades (Ushioda 1996: 19, 22) and successful communicative attempts in class are shown by this author to generate intrinsic motivation.

Consequently, FASP encourages the practice of speaking a language through the exchange of ideas. As they deal with professional texts, students feel more comfortable and successful. In this collaborative learning, which implies solidarity and shared responsibility, teachers have as much to learn as students. Such classroom exchanges also help students feel involved, which can help them develop study skills. Therefore, FASP is particularly suited to academic courses with a professional orientation.

2.2. Transplanted Man*: FASP in class*

Besides the linguistic material it offers, the novel *Transplanted Man* offers a cultural opening. The author, Nigam, was born in India and grew up in Arizona. As a scientist, he is engaged in research as Professor of Pediatrics, Medicine, Cellular and Molecular Medicine at the University of San Diego in California. He heads a laboratory of 15 researchers whose main work concentrates on kidney development and tissue engineering. The novel was nominated for prestigious literary awards and was chosen as the "Year's Best Book" in 2002 by Publisher's Weekly. The *Washington Post* called it "a work of considerable intellectual and imaginative energy […] a charming, frolicsome book that dares to tackle complex issues" [5]. As it takes place in a hospital, the story provides many interesting features for people working in public health fields. This hospital is located in New York City in the midst of an Indian immigrant community where East meets West. The protagonists are all eccentric expatriates. Sonny Seth is a brilliant but rebellious medical resident whose most demanding patient is known as the "Transplanted Man", a high-level Indian government official whose major organs have been transplanted at least once. Outside the hospital, at the corner of the street, is another main figure of the novel: an endearing, homeless man who becomes the neighbourhood's main tourist attraction. This living statue embodies all contrasts: white among coloured people, motionless amidst chaotic frenzy, he is expressionless and does not speak at all. Referred to as the "hypokinetic man", this catatonic figure is the opposite of ordinary, known and expected models.

His ephemeral apparitions make him a recurrent motive in the novel. He stands as a counterpoint to society, the metaphor of a social syndrome: his resistance to materialistic interests and to the symptomatic, stressful rat race of a diseased society makes him a rebel like Sonny Seth. Frozen in the pose of "The Thinker" by Rodin, this motionless man reaches an almost transcendental dimension at the end of the novel. The other characters in the book, all engaged in some sort of identity quest, stop and stare at him, trying to catch a glimpse of his wisdom. In his emblematic pose, the hypokinetic man makes them ponder the meaning of life.

2.3. *A motionless man who moves others*

Working in the field of neuroscience, Trocmé-Fabre (1995) explains that curiosity is what activates the willingness to learn and controls what motivates it. As a marginal

[5] http://www.powells.com/biblio/2-9780688168193-1.

figure, the hypokinetic man arouses curiosity; the situations, realistic in their occurrences, yet quite odd in the issues they develop, take the reader by surprise. As students observe the patterns of professional practices depicted in the novel, they tend to forget their inhibitions when speaking about their own experiences. They become involved when discussing their own skills in comparison to those described in the book.

In 1998, Schumann wrote *The Neurobiology of Affect in Language* highlighting the role of emotion in all cognition stimulus. He later developed the concept of learning as a form of "mental foraging" (i.e. foraging for knowledge) like the neural systems used when foraging to feed or mate (Dörnyei 2001a: 62). The analysis of the semiotic value of the hypokinetic man leads to a questioning of cultural and social beliefs. It helps students move into the implicit meaning of the novel by analysing the metaphors in it. Behavioural patterns can be studied in class and transferred into role plays.

FASP in language learning class fits the constructs described by Dörnyei (*ibid.*) by gathering motivational constituents in "seven broad dimensions": the *affective/integrative dimension* is found in FASP when students identify with the characters of the novel, "playing the game", getting more easily involved in suggested activities; the *instrumental/pragmatic* dimension imposed by the school system through marks and evaluation is then accepted as merely part of the rules, and is no longer confused with the main objective of the course; the *macro-context-related dimension* can be analysed in the context of the specialized environment of the FASP in comparison with the students' own surroundings; at this stage they must use the lexical tools specific to their own fields and report on their experiences; *the self-concept-related dimension* is therefore strengthened when students feel more confident and are diverted away from their feelings of anxiety when reading FASP and talking about it; the *goal-related dimension* must be defined at different levels with an emphasis put on personal goals; the *educational context-related dimension* must be organized around activities based on FASP which allow for self-autonomy and self-confidence. Finally, the *significant others-related dimension* can be developed in class through information-gap activities where team work is needed to understand the FASP plot, situation or characters' reactions. Working on excerpts from *Transplanted Man* in class allows for specific work on affect.

The very nature of FASP is that, while providing diverse contexts of professional practice with which students can identify, it also appeals to their imagination and creativity through its fictional dimension. As my main focus was on how to stimulate students' motivation, I chose this particular FASP not only for the issues it tackles, for its linguistic qualities and its contextualized language, but also for its metaphorical implications which favour a creative approach.

3. A three-phase application in class

Excerpts from *Transplanted Man* were studied in a Master's programme specializing in Health Service Management. The students were very apprehensive as they considered their English skills to be very weak. In less than 24 hours of class time, they were supposed to reach a minimum level of B2 (independent user) on the *Common*

European Framework of Reference for Languages (2001). Some of them were complete beginners, others were intermediate and very few were advanced. In this particular training course, the 17 students in class were between 22 and 60 years old. Some worked full-time in hospitals or medical care services while others were part-time or full-time students. For most of them the challenge was unrealistic, resulting in a potentially unfavourable context where the required language level was high, learners' competency level was low, motivation was extrinsic and the syllabus was imposed. It seemed, therefore, that the optimal answer lay in counterbalancing negative factors through "cooperative learning". Using FASP favours such a holistic approach as it addresses emotional, sensory, motivational and cognitive abilities. It also favours group dynamics when studied in class.

All excerpts from *Transplanted Man* included the figure of the hypokinetic man as our Ariadne's thread. We divided our sequence into three phases (Dörnyei 2001a: 85): a pre-actional phase, setting goal strategies and formulating intentions; a second phase was an actional phase mainly corresponding to oral participation in class, followed by a a post-actional phase with teacher's feedback and critical retrospection to define new prospects and intentions. Each phase contained anonymous questionnaires which had to be completed in class in less than ten minutes.

In the first session, therefore, the emphasis was put on class atmosphere, on "breaking the ice", leading the students to work together and eventually help each other. Then, in pairs, they had to pose as suggested in this paragraph from *Transplanted Man*: "First, he folded his legs. Then, he placed his left elbow on his left knee, keeping his wrist gently bent, with the fingers partly extended and resting pensively against his cheek. His neck had a slight forward tilt; his lower back was straight" (Nigam 2002: 201). This was done in a limited time. This activity helped the students escape classroom rigidity; they had to move and they had a good laugh. Mobility in class replaced a passive attitude. As it is not the kind of activity they were expecting, they took it as a game. At the end of the activity, when all agreed on the given pose, vocabulary and notions of grammar were checked and students were provided with missing nouns, adjectives and phrasal verbs linked to body movements and perceptions.

In the sentence quoted above, it is unclear who "he" is and what the context is. In fact, in the fiction, two teenagers make fun of the hypokinetic man by trying to make him adopt the pose which, they say, would symbolize the political ideal they call "ism". They believe that this new concept, once embodied, will spread peace all over the world. This warm-up activity in class made students realize that speaking a language entails more than the mere juxtaposition of words. Moreover, it emphasized the fact that context is vital to understanding a situation.

This corresponded to the pre-actional phase allowing teacher and students to discuss objectives and strategies. The teacher's and students' roles were also defined. All the activities of the sequence (10 hours) were presented at the end of the first session along with the timetable (five sessions of two hours in class including one week off) so that the students could organize their reading periods and activities on worksheets. Reading was done out of class with the help of guidelines and grids. In class, the focus was put on oral exchange. Technical questions such as methodology and comprehension problems concerning the novel or the grids (including grammar and vocabulary exercises) were answered by e-mail.

Aiming for short-term success as Bandura suggests, I thought it was better to proceed step by step in the actional phase and insist on progressive management of comprehension for each student. Eight different excerpts taken from the novel were given to separate pairs of students with grids (see examples, Appendices 1 and 2) which they had to complete at home. After collecting information in class from each group's oral presentation, the students had to put together the general plot line and describe the links between the different characters of the story. Each student had to gather clues and find a meaning to given facts, events and attitudes. This jigsaw-like reconstitution stimulated student participation. Following this, four new identical excerpts had to be read by the whole class for the next session. The explicit, descriptive level of the story was then enriched with implicit interpretations for more complex analysis. My approach clearly aimed at motivating students to develop curiosity and problem-solving strategies. The emphasis put on the context made the students aware of the important links between language and culture, body/mind and environmental conditions and social/human interactions. Grids were provided as aids (see example in Appendix 3). Working at the explicit level and then deciphering the implicit markers, made the students use their cognitive abilities in addition to their linguistic competences. Speaking about familiar contexts described in the book helped the students to add new knowledge more easily and to tackle more personal issues (see Appendix 4).

After each session, micro-objectives and strategies were readjusted for the next session when necessary. At the end of the course, a ten-page dossier was given to the students with vocabulary grids, summaries, synthesis tables and references. As it provided a professional environment, FASP was accessible to students. As a work of fiction, it allowed them to drift into imaginary worlds and multiple interpretations.

4. Survey results

In the post-actional phase, students were given grids with a few points to discuss in class about what they had learnt, what they had liked or disliked in the course (see Appendices 5 and 6). As mentioned above, there were 17 students in this Master's group. 64.7% of the students found the work on FASP interesting (see Appendix 5). A little more than half of them reckoned they had participated more in class (58.8%, Appendix 4). Key gains reported (Appendix 5) were: improving vocabulary (88.2%), grammar (94.1%) and cultural awareness (94.1%). Questioning professional practice was found stimulating (94.1%, Appendix 5). Students got involved in analysing social and cultural representations (70.5%, Appendix 4) and it was an opportunity for them to question their own beliefs and habits (82.3 % Appendix 4). In sessions based on FASP excerpts, the students were more aware of their linguistic difficulties as they felt limited when wanting to share their ideas with others (mainly in vocabulary and grammar, Appendix 6). What motivated the students was the possibility of discussing their opinions about the hypokinetic man, a very controversial figure who stimulated dynamic and constructive debate in class. After working on all excerpts studied (actional phase), the students were asked such questions as: “Which character do you feel closer to? Why?”, “What does the hypokinetic man represent to you?” They discovered each other’s ideas and professional skills, which contributed to creating good group dynamics. The general feeling at the end was that of a discovery and new insights into professional stakes, as well as a novel interest, not only in language, but also in literature written in English.

4.1. *A three-dimensional approach*

The didactic exploitation of the hypokinetic man allows for a three-dimensional exploration of the figure. First of all, the analysis of the semiotic value of the hypokinetic man highlights the conscious and unconscious processes at stake in personal and professional skills involved in health matters. Secondly, it reveals individual or collective beliefs and patterns in medical fields. Last but not least, *Transplanted Man* can be used as a motivating tool leading to new multicultural awareness. The hypokinetic man in Nigam’s novel evolves in his own universe with his own rules. If, at first, he seems “inaccessible”, locked in his illness and out of reach, he soon appears to embody a sensorial and cognitive activity we all share when interacting with our environment. We give meaning to the world we live in, and to our position in it, through our bodies, our languages and our stories which are culturally and historically anchored in our worlds.

This “embodied cognition” was described by Varela *et al.* (1993) as “enaction”. In education, it has been developed in teaching students to become “actors”/“actresses” in charge of their own learning behaviours. In Nigam’s novel, the hypokinetic man incarnates “enacting” when he passively resists the social madness all around him. This figure gives way to transpositions and emphasizes the links between behaviour and environment. *Transplanted Man* tackles issues about interaction and enaction. Students quickly engage in discussion, drawn to thinking about scenes and attitudes from within their own experience. While sharing their ideas and interpretations, they get into meaningful learning. They sympathize with the characters and are able to emotionally grasp what the scene entails explicitly and implicitly.

Existential issues are raised in a new light. Morin insists on contextualizing the object of any knowledge for it to be relevant. The question “Who are we?” is necessarily linked to the questions “Where are we?”, “Where do we come from?”, “Where are we going [6]?” (Morin 2000: 49). This “reliance” helps us live together. Goleman, a researcher in “affective neurosciences”, mentions the fact that in the 1990s a dogma collapsed: that of thinking that our central nervous system could not produce new neurons. Thanks to molecular and cellular biology, it has been proved that new cells are produced by the brain and the central nervous system through repeated experience or training (Goleman 2003: 582). This “neuronal plasticity” will change psychology in the future and could lead to new ways of teaching (Goleman 2003: 624). Tackling complexity through the implicit meaning of a text opens up students’ perspectives.

[6] *«Qui sommes-nous ?» est inséparable d’un « où sommes-nous ? » «d’où venons-nous?» «où allons-nous?»* (Author’s translation).

4.2. *Changing perspectives*

The hypokinetic man can be taken as a clinical case at the explicit level and his symptomatology can be established with precise etiology, a possible diagnosis and prognosis and a treatment can be prescribed. Yet, as a metaphorical figure, on an implicit level, he leads the reader to another understanding of what he is. Consequently, symbols need to be decoded in order to fully understand the story. It seems necessary then to deconstruct beliefs and social values. What is the meaning of this allegorical figure in the novel? The man seems to have stopped walking as he could no longer choose a direction. Through internal focus, the author makes us perceive what the hypokinetic man feels. His extreme slowness makes him sense things, smells and sounds very acutely as if they were amplified; the profusion of these disconnected and distorted fragments makes him feel dizzy. The hypokinetic man inspires fear, indifference and empathy and raises ethical issues in the novel as well as in class when discussed.

Exchanges between students revealed attitudes and thoughts directly linked with each student's personal and professional experiences. For some of them, the man should have been put in an institution as potentially dangerous for others as well as for himself. For others, he should have been left on the street, free and accepted in his difference. At this point debates became quite passionate. FASP can contribute to developing critical skills (e.g. discussing the nature of professional cases), as well as adding new motivation. Moreover, it can raise ethical issues. The hypokinetic man challenges beliefs and knowledge about the boundaries between what is "normal" and what is "pathological". He challenges our understanding of body and mind.

Nigam, without taking a position, and yet moving outside and inside his characters, makes us feel the unstable frontier between fantasy and reality, which leads us to accept the uncertainty of truth, receiving and adopting a more tolerant approach.

5. Conclusion

Studying language through FASP can contribute to improving learning motivation in many ways. In this case, using FASP was based on students' "autonomization" (Rivens Mompean & Eisenbeis 2008), from guided reading to autonomy (Grellet 2000). The recreational aspect of the whole sequence did not deprive it of a more serious educational goal. The students were able to read all the excerpts from the novel on their own and share interpretations in class. The main objective must be defined at the beginning of the sequence. Micro-objectives must be planned. Developing curiosity and forging a step-by-step approach gives students more self-confidence, which comes from reassurance (and being guided to find appropriate answers). Moreover, memorizing is easier when anchored in gestures, voices and friendly space.

FASP is a multi-purpose tool. Nigam's novel is so rich in the issues it tackles that it can easily fit into a medical and public health curriculum. In this Master's programme in Health Service Management, we chose samples from *Transplanted Man* which could fit into their coursework, such as how to take care of people in precarious or fragile situations. The students face such questions in their everyday practice which makes them more concerned and involved in discussion and able to forget their own inhibitions and weaknesses.

Even though it was difficult to quantify what the students had really gained, a new enthusiasm was visible throughout the sequence. Their new curiosity, their desire to know more, their participation and their friendliness demonstrated the new direction they were taking. It seemed important for them to feel secure and at ease in the group in order to participate more freely.

However, 24 hours is too short to deepen linguistic knowledge and reach a higher level (B2-C1). Most of the students felt frustrated by the lack of time. Vocabulary and grammar lists were provided whereas ideally they should have been drawn up by the students themselves. A FASP sequence should include role-plays from the scripts taken from the novel and re-arranged scripts written by students. Nevertheless, working on this FASP appeared to raise motivation and the determination to keep on improving. Self-esteem, self-efficacy and solidarity are strong roots for learning. The emphasis put on "process" rather than on "product" was quite successful. Three students in the class bought the novel and some of the others decided to attend English classes in the future to maintain their level. Only one failed her exam at the end of the session (TOEFL type exam).

FASP excerpts, activities and grids can be integrated into a Computer Assisted Learning program complementary to what has been sketched here through online exchange and face-to-face teaching. The time spent in class would then be devoted to more fruitful exchange. The concept of FASP could be enlarged to other types of medical stories including those told by patients. FASP could then be a bridge for introducing complementary, alternative and integrative medicines. Ethical and philosophical exploration of cultural and social differences would improve multicultural awareness and personal mindfulness needed in health matters. As a conclusion, we can quote the novel's epigraph as it proclaims and sums up a life-long approach to learning: "not till we have lost the world, do we begin to find ourselves" [7]

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Appendix 1

After reading the passage	*Expressions you can use* *(non-exhaustive list)*
First impressions conveyed	*It reminds me of – it makes me think of* *It seems to be – it seems that – it looks as if*
First reactions	*What I find the most* + adjective *about / in – is that*
WHs Questions Brief summary	*The story takes place – it deals with* *The different characters depicted/ involved*
Point of view: Who is seeing? Who is talking?	*Interpreting / Alluding to / Imagining / Supposing*
Your own opinion or feelings	*My feeling is that – I find it* *Contrary to what has already been said, I believe* *I personally think this is*
Conclusion	*Very briefly, I would say that* *To conclude*

Example of reading aid

Appendix 2

Characters	Sonny	TM	HM	Dr GIRI	JAY	ATUL	GWEN	ETC
Time								
Place								
Physical features: skin, size, hair, eyes, lips, expressions								
Movements and directions								
Behaviours and attitudes								
Feelings and emotions Moods								
Mind								
Job or occupation								
Relationships								
Style								

Describing characters in their backgrounds. (TM = Transplanted Man – HM = Hypokinetic Man)

Appendix 3
Example of a grid students had to complete at home

Characters	What is explicit	What is tacit
Attitudes and behaviours		
Values and beliefs		
Fears and anxieties		
Relation to work		
Relation to others		
Social position		

Appendix 4
(Total number of students' answers = 17)

Did the work on *Transplanted Man* help you …	YES **%**	NO **%**
better memorize vocabulary?	52.9	47.1
feel more self-confident?	58.9	41.1
participate in class?	58.9	41.1
think about cultural and social representations?	70.5	29.5
question your own beliefs and habits?	82.4	17.6

Appendix 5
(Total number of students' answers = 17)

Extracts from *Transplanted Man*	Not interesting **%**	Interesting **%**	No answer **%**
Chosen passages from *Transplanted Man*	23.5	64.8	11.7
Reading aids	35.3	64.7	
Activities in class	5.8	88.4	5.8
Gains in:			
Vocabulary	11.8	88.2	
Grammar	5.8	94.2	
Cultural awareness	5.8	94.2	
Topics	17.7	82.3	
Questioning professional practice	5.8	94.2	
Food for personal thoughts	41.3	52.9	5.8
FASP used as a tool in class	11.7	82.5	5.8

Appendix 6
Excerpt from a rearranged questionnaire originally elaborated by LAIRDIL [Laboratoire interuniversitaire de recherche en didactique des langues, Université Paul Sabatier, Toulouse 3]

Course material Number of students Date:	Article 12 18/03/10	TOEFL 13 25/03/10	FASP 13 8/04/10	FASP 14 29/04/10
Have you spoken English in this lesson? NO	3	11	2	3
YES, less than 1minute	4		4	4
YES, between 1 and 2 minutes	2		3	3
YES, from 2 to 5 minutes	2		2	1
YES, between 5 and 15 minutes	1		2	4
YES, more than 15minutes				
To whom ? To the teacher?	5	1	4	5
To other students?		1	2	4
To the whole class?	4		10	7
Have you met any difficulties? NO				1
YES. Lack of vocabulary	9	4	9	11
YES. Problems of pronunciation	5	2	4	6
YES. Problems of grammar	4	2	3	10
YES. Lack of ideas		1		1
YES. Problems in understanding others		1		1
YES. Shyness, anxiety, inhibition	5	3	4	3
YES. Lack of motivation Feeling disheartened	1 	 1		

ASSESSING ACADEMIC AND PROFESSIONAL ENGLISH LANGUAGE NEEDS OF IRANIAN RAILWAY ENGINEERING STUDENTS: A TRIANGULATED EVALUATION STUDY

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Abstract

Given the highly accountable nature of current university education, needs analysis should lay the foundation for English for Specific Purposes (ESP) programs. The School of Railway Engineering at Iran University of Science and Technology (IUST), Teheran, is the only school of Railway Engineering (RE) in Iran. However, no needs analysis and evaluation project has ever been conducted. Thus, this study examines the academic and professional English language needs of undergraduate students of RE as well as the graduate students at the workplace. To this end, a triangulated approach was adopted involving observations, interviews, questionnaires, and course book analysis. Participants were a wide range of stakeholders including students of RE, their instructors, language teachers, authorities and graduate railway engineers at the workplace. The results revealed that the ESP programs under study do not meet either railway engineering students' or engineers' needs. The findings may provide some implications for renewing the ESP programs and enhancing accountability of ESP instruction in higher education.

1. Introduction

ESP curriculum planning is conspicuously coupled with needs analysis (Belcher 2006; Dudley-Evans & St John 1998; Hyland 2006). Without needs analysis, all downstream decisions from curriculum design to classroom practice would be biased because of personal beliefs and sometimes misunderstandings. Lack of common ground for policy-making would, in turn, result in scattered components in different layers of an educational system. Such a disappointing situation where all participants involved in each layer of education perform independently from one another was discussed by Atai (2002) in the context of an Iranian English for Academic Purposes (EAP) curriculum at university level.

Similarly, as Belcher (2006) argues, needs analysis works out the route and specifies the goals and objectives that both decision makers and practitioners wish to accomplish. Neglecting needs analysis then creates a gap between students' and teacher's expectations which in turn makes the classroom environment unpleasant for all. Consequently, students gradually form negative impressions and attitudes towards ESP programs, and students fear they would not survive in academic environments because of their inadequate knowledge of English. A second and more serious concomitant of this ignorance is the wide gap between English programs at university and the realities of the graduates' future career.

In spite of the tremendous importance of needs analysis in EAP courses, it is not needs analysis but intuition that moulds EAP programs in Iranian higher education from planning to implementation (Atai 2002). It is argued that the current EAP education is not supported by evaluation evidence. As a result, it is crucial to study the whole program including materials, teaching and learning practice, the assessment scheme and, finally, the relationship between EAP curricula and language requirements in professional contexts. Therefore, this study examines the academic and professional needs of the Iranian students of Railway Engineering (RE) at university and workplace using a triangulated approach. Professional needs in this study are analogous with Hutchinson & Waters' (1987) target needs defined as what graduate students need to carry out at the workplace. Investigating the engineers' target needs is mainly motivated by the current close bond between the school and professional sites of Iranian railway industry.

2. Review of the literature

Beginning in the 1920s, as West (1994) contends, needs analysis has evolved in terms of scope, sources, and methodology. ESP scholars (e.g. Hutchinson & Waters 1987; Robinson 1991) introduced the concept as an umbrella term covering both objective and subjective needs, including present and target situation, learning needs, necessities and wants. Hyland (2006: 73) sums up needs analysis as "techniques for collecting and assessing information relevant to course design; it is the means of establishing the *How* and *What* of a course." Dudley-Evans & St John (1998) had already introduced the notion of rights analysis: Hyland (2006: 79) maintains that rights analysis involves "evaluating the findings of needs analysis, recognizing the challenges that students face and interrogating the results to create more democratic and participatory involvement by students in decision making." In the same vein, Benesch (1996) argues that critical needs analysis holds that the target situation is associated with potential reforms in terms of the hierarchical nature of social institutions and inequality, both inside and outside the institution.

Parallel with theoretical advances, Long (2005) presents a comprehensive list of needs analysis data collection procedures and stresses that researchers should exploit multiple methods. A triangulation approach calls for embracing a variety of methods and sources of data incorporating experts, non-experts, language learners, content and language teachers, materials developers and decision-makers. The rationale behind the significance of triangulation, as Robinson (1991: 7) maintains, is that "needs do not have of themselves an objective reality. What is finally established as a need is a matter for agreement and judgment not discovery."

The aforementioned conceptualizations have been realized by practitioners, manifested in a substantial number of needs analysis projects in the current literature (Cowling 2007; Tarone & Kuehn 2000, to name but a few). Ferris (1998) collected the views of a composite group of college students of business, physical and biological sciences, and engineering and computer sciences in an international university towards their instructors' requirements regarding listening and speaking skills as well as their perceptions concerning the importance of certain academic aural/oral skills or tasks. To elicit both engineers and non-engineers' opinions about the contribution of their former ESL writing course to their academic content courses, Leki & Carson (1994) utilized a survey method. Also, in an attempt to design a course for immigrant students on the basis of needs analysis, Bosher & Smalkoski (2001) assessed the learners' needs through interviews and observations.

Pholsward (1993) examined the language skills computer engineers mostly needed at the workplace in Thailand. Based on the results of a questionnaire and interview, he observed that the professionals urgently needed conversational skills at the advanced level and reading and writing at a lower level. He further reported that there is a fundamental divergence between the EAP program at university and the language requirements at the workplace. While the professional context requires engineers to demonstrate an outstanding speaking ability, the academic curriculum strongly emphasizes grammar, reading and writing.

Using a triangulated approach, Atai & Dashtestani (2013) appraised the stakeholders' attitudes in an EAP reading course towards the Internet in an Iranian context. Data analysis shows that although the majority of EAP instructors, computer engineering instructors and BS students endorse the application of the Internet in the program, the regular classroom activities profoundly suffer from a total absence of Internet-associated activities. A further investigation in the Iranian context was conducted by Atai & Shoja (2011) who analysed the needs of EAP students of computer engineering. The findings indicate that the students may invest more in general English than in EAP, with the results of a proficiency test revealing that they were not competent enough in general language proficiency.

Although these studies scrutinized the fundamental communicative skills in academic settings, the researchers, except in the two latter studies, relied on limited sources of data and instruments. The validity of needs analysis research findings should be enhanced by utilizing complementary instruments, especially, as Hyland (2006: 76) puts it, through observation and analysis of authentic spoken and written texts.

3. This study

English for occupational purposes (EOP) programs are currently developed for professionals at many industries in Iran including tourism, oil companies and energy plants. Also, EAP courses are incorporated in mainstream university curricula for all academic fields (Atai 2000, 2002). There is a pressing need in the EAP system for re-engineering the curricula and gearing the courses to the learners' needs.

Among the many faculties that have been opened in the last decade in Iran is the School of Railway Engineering (SRE), established in 1997 at Iran University of Science and Technology (IUST), Tehran, under the financial support of the Railways of the Islamic Republic of Iran. SRE offers its educational programs in three sub-disciplines: Railway Transportation Engineering, Railway Rolling Stock Engineering, and Railway Track and Structures Engineering. At present there are a total of over 600 graduates and undergraduates. SRE has close scientific collaborations with the leading railway research and educational departments worldwide, including Dresden Technical University in Germany, Sheffield University in the UK, Beijing Jiaotong University in China, Dnepropetrovsky in Ukraine, Berlin Technical University in Germany, and Concordia University in Canada.

A second incentive for the study originated from the observation that SRE stands as the only railway school in the Middle East and it was originally planned to accommodate the students of the region. However, no needs analysis project has been conducted at this education site. Furthermore, the study is driven by the knowledge that although investigation on the language of workplace is rising, it is, according to Hewings (2002) and Swales (2000), far from sufficient in comparison with many other areas of applied linguistics.

Thus, the present study investigates the language needs of the students of RE and the compatibility between the downstream decisions and the students' needs. Three main research questions were then posed:

1. What are the academic language needs of undergraduate students of RE at university?

2. What are the target professional language needs of graduate students of RE?

3. Does the English course designed for undergraduate students of RE satisfy their needs at the workplace?

4. Method

4.1. *Participants*

Three groups of participants including policy makers, course-designers and practitioners took part in the study. More specifically, the sample included 123 undergraduate students of RE, three language teachers with PhD degrees from the Department of Foreign Languages, 15 content teachers (all PhD holders; all males) from the SRE, 42 railway engineers at workplace (all BSc holders; 12 females), the author of the textbook (a PhD holder of English Literature), the educational manager of the university (a PhD holder of RE), the head of the department of Foreign Languages, and the dean of SRE. Graduate railway engineers were selected from two companies: Consultant Engineers for the Development of Iran Railway (METRA) and Islamic Republic of Iran Railway (RAJA). Table 1 displays the demographic profile of the graduate railway engineers and Figure 1 illustrates brief profiles of the participants of the study.

		Sex	No.	Age	Job experience (in years)	Graduated from
Company	METRA	Male	15	25-30	1-7	IUST
		Female	3	24	1-3	IUST
	RAJA	Male	15	26-31	1-10	IUST
		Female	9	24-29	1-7	IUST

Table 1. Profile of participants at the workplace

It is essential to note that although the engineers at the workplace enjoyed a sizeable spectrum of experience, only six engineers were inexperienced. Almost 85 percent of the engineers had been well-socialized into the professional context; so experience does not play a jeopardizing role in the results of the study.

		Educational Level				Total
		1	2	3	4	
Sex	1	15	22	22	26	85
	2	5	8	10	15	38
	Total	20	30	32	41	123
	Age	18	19	20	21	

Educational level: 1 = freshman, 2 = sophomore, 3 = junior, 4 = senior

Table 2. Profile of undergraduate students

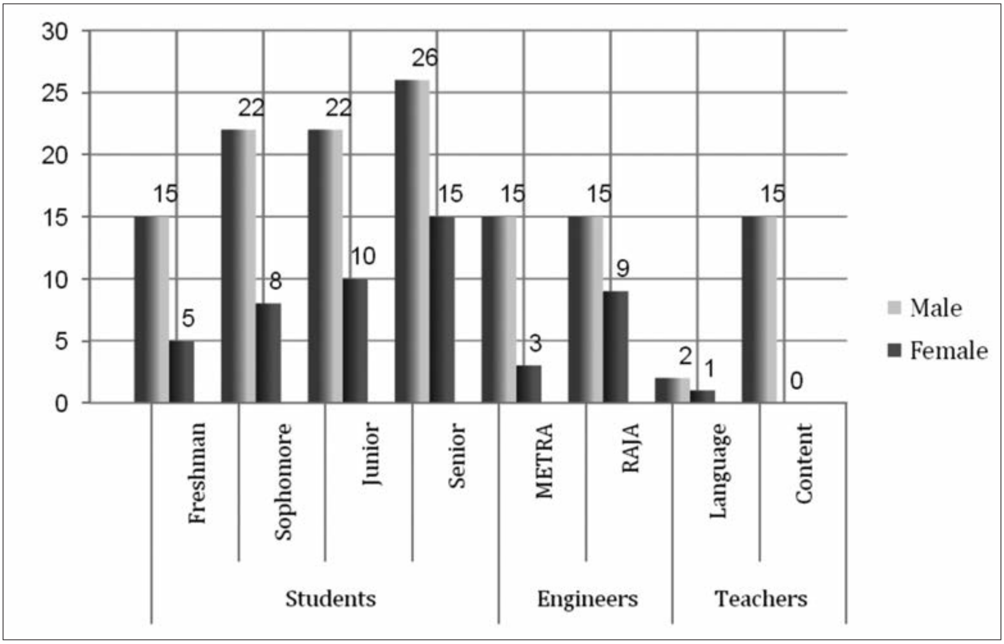


Figure 1. Different groups of participants

It should be pointed out that the purpose of the profiles presented in Tables 1-2 and Figure 1 is not to compare the elicited needs across sex, age, degree, experience or company. Rather, they demonstrate that a representative sample of the population was studied in this research. This is why BSc students from all levels completed the questionnaire.

4.2. *Instrumentation*

A number of instruments including observations, interviews, questionnaires and evaluation checklists were utilized to collect the required data.

In order to develop the questionnaires for each group of participants, we adopted multiple models of needs analysis and considered motivation, perceptions, self-assessment, present situation analysis, target situation analysis as well as lacks and wants (Dudley-Evans & St John 1998; Hutchinson & Waters 1987; Hyland 2006; Jordan 1997; Robinson 1991). The items corresponding to each context were developed on the basis of direct observations of both academic and occupational situations along with the interviews with a sample of the participants. Prior to the study, the instruments were reviewed and commented on by two ESP specialists and consequently revised and refined by the researchers. It is worth noting that the questionnaires were prepared in Persian so as to avoid any possible misinterpretations.

To ensure psychometrics of the instruments, quantitative analyses were completed. Cronbach alpha analyses yielded reliability estimates of .95 and .98 for the questionnaires of undergraduates and graduates, respectively. Also, results of factor analysis verified the components of the questionnaires.

4.3. *Procedure*

The study was carried out in the second semester of the 2008-2009 Iranian academic year. Non-participant observations of the ESP classroom at SRE were completed followed by observations of workplace. During the ESP course, three one-and-a-half-hour sessions were randomly observed by the second researcher. It is worth mentioning that the initial two sessions were neglected intentionally for they were not taken seriously by the students and the course had not settled down. At the workplace, however, the researcher randomly observed the engineers carrying out their routine activities. The observations lasted 8 hours in total. The second researcher observed at least 100 engineers at different administrative positions carrying out a wide range of responsibilities from office work to manual tasks.

The questionnaires were also administered to the students at university and were filled out during their regular class time. The engineers completed questionnaires at the workplace when doing their routine tasks. Both groups were randomly selected from the SRE and different offices of METRA and RAJA.

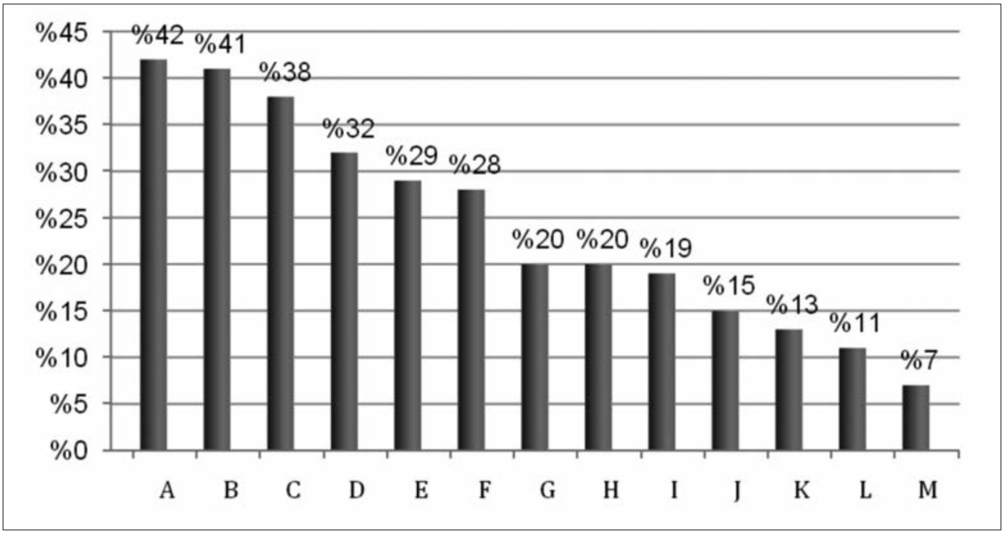
Also, semi-structured interviews were conducted with 10 students who took the ESP course and with the other participants in their own offices. Each interview took 10 to 15 minutes. The researchers analysed both the final exam and the ESP textbook designed for the students of RE. Finally, the data were analysed using both descriptive and inferential statistics.

5. Results

The first research question investigated the present academic language needs of undergraduate students of RE. The results of questionnaires given to different groups of participants are shown below followed by the results of interviews and observations.

5.1. *Academic language needs of undergraduate students of RE*

Figure 2 displays the students' motivation for studying English for general purposes (EGP) and ESP courses at RE university.



Key: (A) To speak English; (B) To succeed in a future job; (C) To keep myself up-to-date; (D) To read specific texts during my education at university; (E) To succeed at my university education; (F) To pass standard tests; (G) To watch and understand English movies and tapes; (H) To translate English into Persian; (I) To travel abroad; (J) To write in English; (K) Only to learn an international language; (L) To work with the computer; (M) To read English stories and magazines.

Figure 2. Students' motivation to learn English

As Figure 2 shows, the students are mainly motivated extrinsically by being concerned about their future jobs and oral communication, especially conversation. The second priority is given to succeeding in their discipline, Railway Engineering. In contrast, students did not express the need for literary skills of writing (15%) and reading (7%).

Students were also asked to express their ideas about their optimal preferred setting for learning English language.

1. Which setting do you prefer to learn English language in?
a. Private language institutes b. Schoolc. Home (self-study) d. University

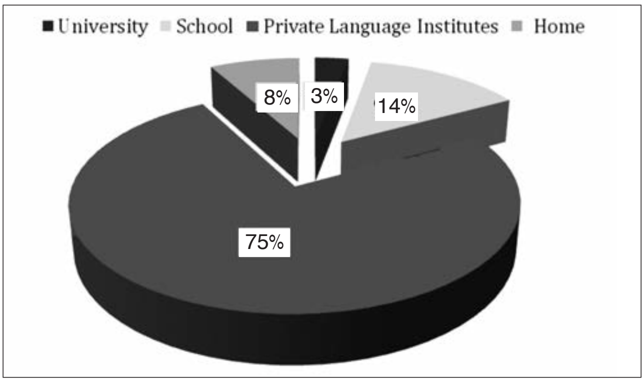


Figure 3. Students' preferred setting for learning English

As Figure 3 reveals, the vast majority of the respondents preferred private English language institutes (75%). University and school are considered as the least preferred language learning environments.

Undergraduate RE students and their content teachers were asked about the importance of English language skills for undergraduate students. As Figure 4 depicts, students believe that they urgently need reading and conversational skills. Their content teachers, however, did not perceive speaking and listening (0.0%) as important language skills for undergraduate students but highlighted that students should develop their reading comprehension skill (86%).

2. Which English language skill(s) is (are) more important for undergraduate students?				
Skill	Speaking	Reading	Listening	Writing

Table 3. Undergraduate students' and content teachers' views on importance of skills

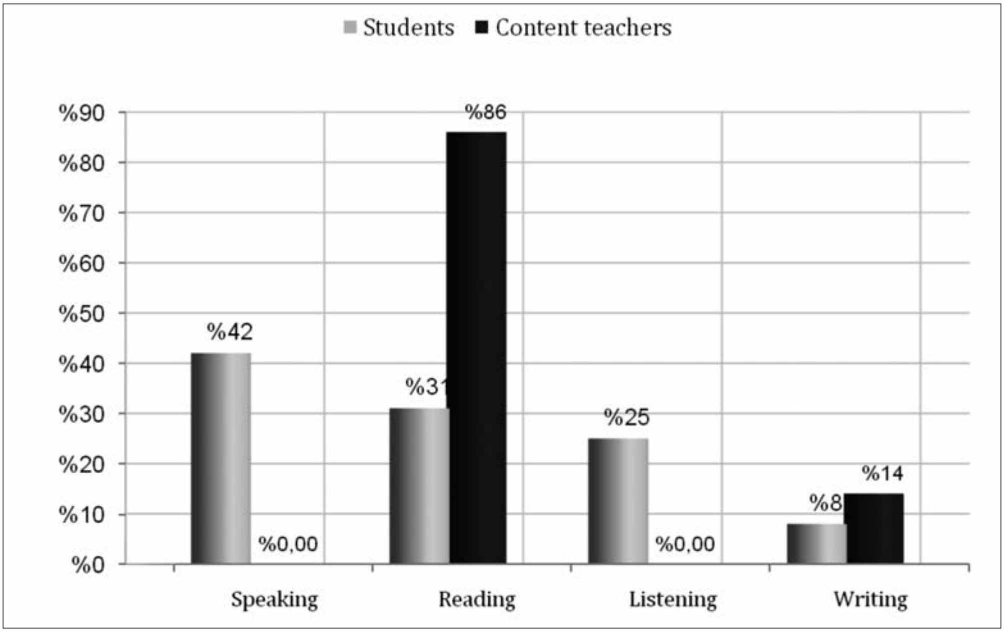


Figure 4. Students' and content teachers' opinions about the importance of different language skills for undergraduate students

In the subsequent questionnaire item, the students prioritized the tasks they need most in academic settings. Reading course books and journals (M=3.58) was considered much more important than reading sources on the Internet (M=3.0). The results of paired samples t-test ($\rho < .05$) verified the significance of the difference in their preferences.

On the basis of the mean ratings for the three writing tasks, i.e. 'projects' (M=3.35), 'papers' (M=3.34), and 'using the Internet' (M=2.51), pairwise comparison was carried out. The results show that writing 'projects' and 'papers', receiving equal importance, are considered significantly more important than 'writing on the Internet'.

The mean rates for the four speaking and listening tasks indicated that 'using the Internet' (M=2.87) is considered less important than the other tasks. The results of one-way repeated measures of ANOVA reveal that 'giving lectures' (M=3.54) and 'using the Internet' stand at two extreme poles of the spectrum, as the most and the least important tasks respectively. While 'listening to lectures and presentations' (M=3.23) along with 'participating in conversations' (M=3.26) are significantly more important than using the Internet (□<.05), giving lectures (M=3.54) is considered significantly more important than the other three tasks. Both 'listening to lectures and presentations' and 'participating in conversations' were assessed important by the undergraduates.

To come up with a more vivid picture of the undergraduate RE students' current language abilities, they were asked to self-assess their language skills and subskills. They assessed themselves as good readers (M=2.47) and users of general vocabulary (M=2.58). Instead, they considered themselves poor writers, listeners and speakers. The results of one-way repeated measure of ANOVA indicated 'using general vocabulary' as the easiest task and 'using technical vocabulary' (M=1.77), 'writing' (M=1.77) and 'speaking' (M=1.75) as the most demanding tasks for the respondents. The mean difference between reading and other skills, except for using general vocabulary, was also significant (□<.05). Students assessed themselves as average listeners (M=1.94) and grammar users (M=1.92).

Figure 5 demonstrates students' preferences for group and pair work. Students' preferences were in sharp contrast with the results of both classroom observations, where all classroom activities were implemented by instructors individually and textbook evaluation, which revealed that all assignments and activities were designed to be conducted individually.

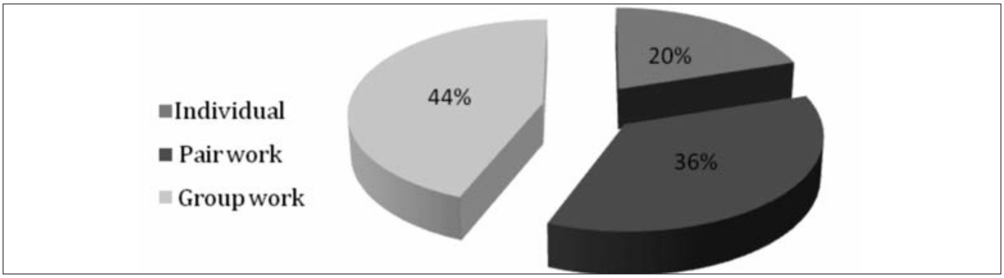


Figure 5. Students' preference for different types of classroom activities

The last item of the questionnaire elicited the students' and the content teachers' perceptions about syllabus, teachers, and the content of ESP courses at RE school. The figures in Table 4 reveal that both groups agreed on the following areas: allocation of more time to English classes, English as the medium of instruction in EAP classes, the importance of English in the university curriculum, the contribution of English to learning content courses, content knowledge of EAP teachers, and their expectations from EAP courses. The two groups of respondents, however, did not agree on the desired teacher for the EAP courses. Like their content teachers, almost half of the students preferred their content teachers to teach EAP programs.

	Content teachers			BSc students		
	TA	FA	D	TA	FA	D
More time should be allocated to English courses	100%	0.0%	0.0%	87%	12%	1%
The teacher should speak English in the class	67%	33%	0.0%	35%	42%	22%
English is the least important course at university	0.0%	0.0%	100%	3%	17%	79%
Learning English contributes to learning content courses	50%	50%	0.0%	60%	28%	12%
The number of sessions in English course is enough (once a week)	0.0%	33%	67%	19%	38%	32%
EAP course is expected to broaden both my English and content knowledge	67%	33%	0.0%	68%	24%	3%
Content teacher should teach English	17%	50%	33%	49%	35%	12%
EAP teacher should be a language teacher and have also content knowledge	50%	33%	17%	50%	40%	9%

Key: TA: Totally Agree FA: Fairly Agree D: Disagree

Table 4. Students' and content teachers' perceptions about syllabus, teacher, and content of ESP course at RE School

5.1.1. *Interviews*

To cross-check questionnaire data, interviews were conducted too. The author of the book believed that the course book was far from appropriate for the students because RE subsumes three sub-disciplines, so for each sub-discipline a separate course book should be developed. He also contended that the course book was developed by heavy reliance on his intuition and in line with the general guidelines set by The Iranian Center for Studying and Compiling University Books in Humanities (SAMT) with an almost exclusive focus on reading comprehension. Because of the wide gap between high school and undergraduate programs in terms of English instruction, the students lack the basic command of English in order to perform successfully in EAP classes; he suggested that the syllabus of English programs in high school mainstream education should be revisited so as to accommodate the students' shortcomings. With respect to the language / content teacher issue, the author also argued on the conflicting view that the language teacher is not responsible for the content; content-related questions should be directed to subject matter instructors. Altogether, he outlined a chaotic situation in the ESP programs under study.

Disagreements emerged between language and subject-matter instructors. Unlike language teachers who strongly believed that they should run the ESP courses, almost all (13 out of 15) content teachers maintained that they are satisfactorily qualified to handle ESP classes for the students of RE. Table 5 sums up language teachers' comments elicited through the interviews.

	Priority: L/ C?	Who should teach EAP?	Course book	Role of CT?	Methodology of GE and ESAP?
T1	Language	LT	Be totally changed	Consultant in developing the course book	No difference
T 2	Language	LT	Be totally changed	Consultant in developing the course book	No difference
T 3	Language	LT	Be totally changed	No role at all	No difference

Key: T: Teacher L/C: language or content GE: General English CT: content teachers LT: language teacher

Table 5. Language teachers' responses to interview questions

In the interviews the students, in agreement with language teachers, believed that the course book is not appropriate, for the content is not geared to their interests and current needs. Nor do classroom activities take the students' needs into account. It was not surprising therefore that they expressed their deep dissatisfaction about the sterility of the mainstream EAP course which resulted in their strong preference for general language classes in private language institutes, verified by their answer to the second question posed in the questionnaire. A consequence of this situation was students' reluctance to follow the course. Regarding special classroom activities, they considered oral presentations as highly effective.

As for the results of interviews with other leading stakeholders, the dean of SRE and the head of department of foreign languages both expressed their discontent about the status of English language instruction in the undergraduate programs. They further pointed to the disappointing fact that the educational council of the university downgraded English language instruction by including it as an optional course in the syllabus of all faculties. But the dean of SRE took an extreme position and pointed to language teachers as the most likely culprit behind such an apparent failure and stated that they are not qualified to teach EAP. Displaying understandable reluctance, the educational manager of the university, a PhD holder of RE, finally participated in a short interview. Paradoxically enough, he pointed out that English is a vital tool for students, at least in their academic career, but he cast doubts about whether undergraduate students even need English or not. Nevertheless, the issue of "who should teach EAP" remained uncertain for the manager.

5.1.2. *Observation and course book evaluation*

Since classroom activities in the observed classes were highly tied up with the course book, the outcome of classroom observation and book evaluation are reported in a nutshell. As Table 6 illustrates, each unit in the course book contains three sections, beginning with a reading passage followed by some true/false, multiple-choice and fill-in-the-blank questions on language and content and, finally, five scrambled sentences to be unscrambled into a coherent paragraph. The book starts with the history of RE followed by passages on topics that the students have already covered in their content courses.

Sections of each unit	Themes	Illustration
1st: reading passage	1st: history of RE	A few black & white photos
2nd: controlled practice	2nd: review of content courses	
3rd: scrambled sentences (cohesion & coherence)		

Table 6. Results of course-book evaluation

In practice, classroom observations indicated that a substantial portion of classroom activities, handled by a language teacher who employed both English and Persian as a medium of instruction, reflect the content of the book with no pair or group work. While disregarding the required reading subskills, the teachers and students focused on translation as the principal technique to foster the students' reading ability. All activities were carried out individually by the students as directed by the teacher. As a different task, students were required to read journal articles and present brief oral summaries. Sometimes students gave lectures followed by short discussions between the lecturer and students/teacher.

5.1.3. *Final exam*

Lastly, the final exam was analysed, as a representative reflection of classroom activities and textbook exercises. It comprised three major sections: a) a reading passage followed by some multiple-choice questions assessing the examinees' knowledge of vocabulary, a cloze test, and scrambled sentences to be reorganized in a coherent paragraph. The exam required more subject-matter knowledge on the side of testees than reading comprehension skills and strategies.

5.2. *Professional language needs of railway engineers at the workplace*

To answer the second question, the results of interview, questionnaire administration, and observation are reported in this section to disentangle target professional language needs of graduate students of RE.

The engineers were asked to rate the importance of the four language skills both at university and workplace. Their perceptions of the importance of different subskills to university education were compared with those for workplace through conducting paired samples t-test on means of ratings.

Four writing tasks were compared: writing projects at university (WProuni) and work (WProwo), writing papers at university (WPauni) and work (WPawo), personal writing at university (PWuni) and work (Pwo), and writing on the Internet at university (Winuni) and work (Winwo). The difference between WProuni (M=3.05) and WProwo (M=3.07) did not reveal a statistically significant value (□<.05). That is to say, for engineers both WProwo and WProwo were equally important. But WPauni (M=3.75) was significantly considered more important than WPawo (M=3.12).

	At university				At work			
	VI	I	LI	NI	VI	I	LI	NI
Reading								
books and handouts	13	17	8	0	3	15	18	1
journals	13	19	6	1	9	16	10	1
on the net	9	15	13	2	17	16	4	0
Listening & speaking								
listening to lectures	8	9	19	3	13	14	9	0
conversations	14	13	10	5	15	11	7	2
giving lectures	10	13	13	2	20	9	6	1
using multimedia	6	18	12	1	10	16	8	1
Writing								
projects	5	25	7	0	11	18	5	1
papers	10	22	5	0	10	20	5	0
personal writing	1	16	15	4	6	13	10	5
on the net	2	13	11	10	4	12	11	7

Key: VI: very important; I: important; LI: less important; NI: not important

Table 7. Graduate engineers' views on the importance of different tasks at university and workplace.

Likewise, the difference between PWuni (M=2.60) and PWo (M=2.78), although they were both graded less important than WProwo and WPauni, showed a significant value. The paired samples t-test also indicates that engineers regarded Winwo (M=2.66) an essential language skill at work. The difference between Winuni (M=2.46) and Winwo was significant (□<.05). This is supported by results of observations of the workplace where all engineers, without exception, worked with computers.

Like writing, 'listening and speaking' was further analysed in terms of four major tasks: listening to lectures at university (LiLuni) and work (LiLwo), participating in conversations at university (PaCuni) and work (PaCwo), giving lectures at university (GiLuni) and work (GiLwo), and using multimedia at university (Muni) and work (Muwo). The results of paired samples t-test confirmed that LiLwo (M=3.14) is of utmost importance for the engineers. Likewise, the respondents felt that what they really need, in comparison with PaCuni (M=2.98), is PaCwo (M=3.24). Again, the difference between GiLuni (M=2.96) and GiLwo (M=3.29) was statistically significant. Muni (M=2.94) also received less importance than Muwo (3.03); the difference was significant at $\rho<.05$.

Three leading reading tasks were specified and included in the questionnaire: reading books and handouts at university (Reboun) and work (Rebowo), reading journals at university (Rejoun) and work (Rejowo), and reading on the Internet at university (Rintuni) and work (Rintwo). While the results show that engineers rated the importance of Reboun (M=3.26) and Rejoun (M=3.23) as significantly higher than Rebowo (M= 2.68) and Rejowo (M=2.03), respectively, they perceived Rintwo (M=3.30) as significantly more important than Rintuni (M=2.94).

The data about the participants' workplace needs were analysed through repeated one-way ANOVA measures in order to examine the importance of different tasks in each skill. The results of pairwise comparisons show that the difference between reading journals (M=3.00) and reading books (M=2.71) is significant at .05. However, reading on the Internet (M=3.32) was perceived as more important than reading journals.

To the engineers, the least important listening and speaking task was using multimedia (M=3.08). Although the other three tasks were perceived as equally important, giving lectures (M=3.30) significantly received the top priority followed by participating in conversation (M=3.25) and listening to lectures (M=3.16).

The first two tasks of writing projects and papers, both with a mean of 3.07 were assessed as significantly more important than personal writing and writing on the Internet (□<.05). But personal writing (M=2.62) was rated as slightly less important than writing on the Internet (M=2.67).

Similarly, the perceptions of engineers at the workplace regarding the syllabus, teachers and content of EAP courses at university were explored. The results are presented in Table 8 below.

What is your idea about the GE and EAP courses offered at the university?				
		TA	FA	D
A	More time should be allocated to English courses	88%	5%	0%
B	ESP textbook should contain materials about my own discipline	76%	14%	2%
C	The teacher should speak English in the class	55%	24%	2%
D	English is the least important course at university	14%	36%	43%
E	Learning English contributes to learning my content courses	76%	14%	0%
F	The number of sessions in English course is enough (once a week)	2%	16%	74%
G	EAP course is expected to broaden both my English and content knowledge	71%	19%	2%
H	Content teacher should teach English	29%	50%	12%
I	EAP teacher should be a language teacher and have also content knowledge	31%	50%	9%

Key: TA: Totally Agree FA: Fairly Agree D: Disagree

Table 8. Engineers' perceptions of syllabus, teachers, and content of EAP course at university

The engineers' appraisal of English courses held at the RE University is in complete agreement with the students' ideas, which confirms the importance of English both in their career and university education. Not surprisingly, a closer look at Table 8 also indicates that the engineers shared the same conceptualization of ESP courses with students and content teachers at university; they think of ESP courses as content-based instruction. In what follows, engineers' responses to questionnaire items are presented.

Which skills do you think may play a significant role in your professional success?

1. Reading 67.5 % 2. Writing 10% 3. Listening 17.5% 4. Speaking 40%

(Note: Since the participants were required to choose more than one skill, the total percentage exceeds 100%)

While suffering from an inadequate command of reading, engineers also noted the importance of speaking as the second important language skill to their job success.

To what extent do you think that ESP classes you took at university satisfy your occupational language needs at work?

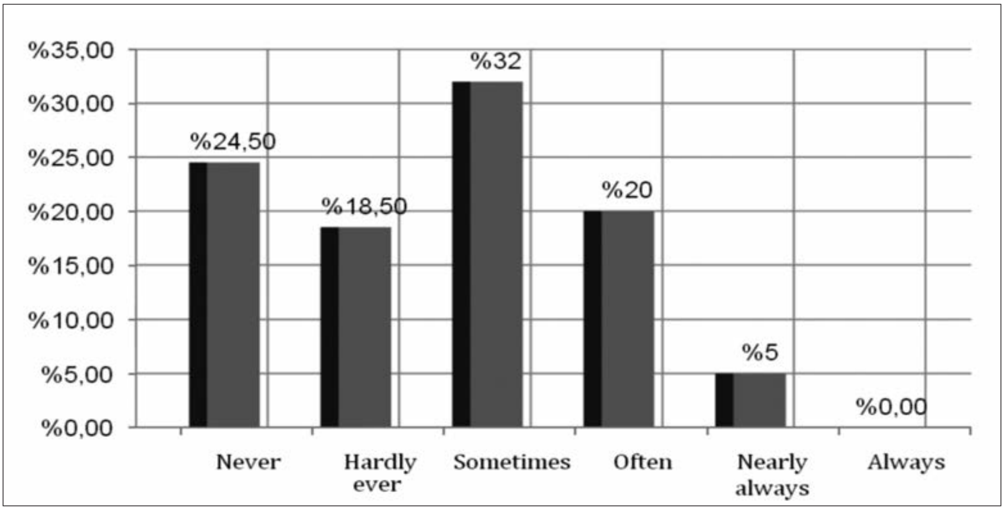


Figure 6. Engineers' perceptions of the effectiveness of EAP courses held at university for the workplace

Engineers cast doubts about the adequacy and efficiency of ESP courses offered at university for the working environment.

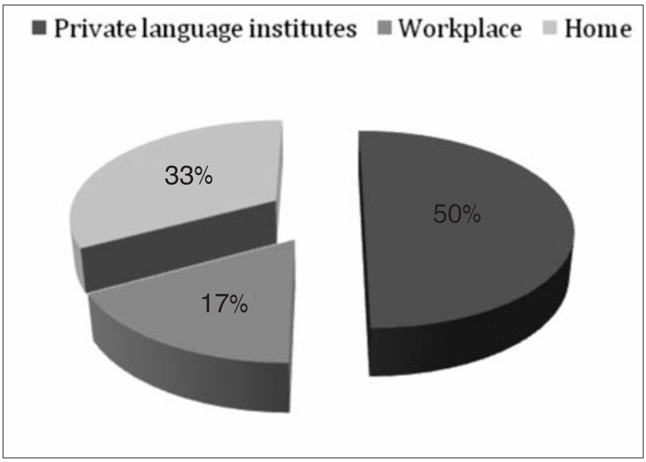


Figure 7. Engineers' preferred setting for learning English

If you find ESP courses at university less than satisfactory, what options and settings do you prefer for meeting your occupational language needs?

Similar to students, most engineers seek different ways to compensate for their poor command of English language, mainly through joining private language institutes. Engineers were also asked, on the basis of their extensive contact with English at the workplace, to identify the problematic areas in language use. Most engineers (75%) perceived serious problems with their oral skills (listening and speaking). They seemed to have overestimated their ability to use general vocabulary, reading and grammar, however.

As for the last question, informed by principles of critical needs analysis, the participants were asked whether they had ever been consulted concerning designing, evaluating and renewing ESP courses at the university. The engineers' unanimous answer was negative.

The results of the interviews with engineers at workplace supported the questionnaire data and confirmed that their immediate needs are reading and writing. They also voiced their major difficulties including their deficient English skill in preparing reports, especially under pressure. Job promotion was reported to be another major concern for the participants, and their inadequate English proficiency posed a serious barrier. All engineers unanimously agreed that the low English language proficiency of engineers, among many other variables, may prove a great hindrance for the development of RE in Iran.

The non-participant observation at the workplace revealed that what posed a serious problem to most engineers was grammar and vocabulary because, while working with computers, most of them were consulting either grammar books or bilingual dictionaries. Further data came from observing some authentic telephone conversations between Iranian engineers and their foreign partners while arranging to sign contracts. Observations supported the need for conversational skills. No Iranian engineer participating in a workshop conducted by a Chinese engineer managed to communicate effectively with the instructor, so their communication was mediated by an English language interpreter.

6. Discussion and conclusion

This triangulated research aimed to provide a comprehensive account of academic English language needs of Iranian undergraduate students of RE along with professional English language needs of graduate engineers at the workplace. While content teachers and the author of the book believed that undergraduate students need only reading as the most important language skill, the students and graduate engineers perceived an urgent need for reading and speaking skills. More specifically, they were more concerned with reading course books and journals, writing projects and papers, and giving lectures. Since Iranian EAP students have considerable contact with audiovisual sources, as Farhady (1996) argues, giving reading the top priority should be revisited through thorough needs analysis research.

The disagreement between the students and their content teachers may be interpreted in the light of the students' educational background. Since these students exit from the traditional reading-based pedagogy in high schools, they lack the required conversational skills to communicate effectively in an academic environment, so they expect EAP programs to compensate for their inadequate communicative ability. This means that, regardless of the content / skill focus of the course, the students are seeking to fulfill their own wants and objectives. The strong link between their educational background and the present needs is manifested more explicitly in the participants' appraisal of their own language ability levels. Both undergraduate and graduate students confidently rated themselves good readers and vocabulary users but poor interlocutors. Hence, as Hutchinson & Waters (1987) argue, language needs should be distinguished from learning needs. Also, learners may need some specific language skills in their target environments (Atai & Nazari 2011).

Moreover, in response to the questions regarding the participants' ideas about general English (GE) and EAP courses at university, all participants, including content teachers, expected these courses to be renewed and geared to the students' needs. They maintained that students' entry behaviour is far from sufficient to survive in EAP programs. Atai & Tahririan (2003) found that the students' entry behaviour and GE level play a facilitative role in undergraduates' performance in EAP programs. Accordingly, wide angle ESP (Widdowson 1983), analogous with Dudley-Evans & St John's (1998) English for General Academic Purposes (EGAP), should lay the foundation for a narrow angle EAP course. It is therefore suggested that further GE or pre-EAP courses may narrow the gap between the undergraduates' high-school exit behaviour and their entry behaviour to university EAP programs. Although compulsory, English is taught in the first year of academic courses. Therefore, as Dudley-Evans & John (1998) argue, students are totally demotivated when they are terminating the program.

Furthermore, the materials, especially the course book and the methodology to handle EAP classes under study, seemed to result in counterproductive outcomes, as verified through observations and interviews. In line with Harwood's (2005) warning to teachers that it is a misconception to assume that ESP books are the product of a careful collaboration between theoreticians and practitioners, in the context under study the textbook for RE students represents the author's intuitions and the strict criteria set by the Iranian textbook compilation organization (SAMT). In addition, given the assumption that an EAP course should engage the learners both in content and language, the textbook for SRE students covered topics that were excessively familiar to the students, and this seems to have rendered the course less stimulating, as reported by some students in the interviews.

With regard to the assets and qualifications of the EAP instructors, the results of interviews indicate that content instructors and language teachers disagree and sometimes contradict each other. While the instructors in the English department think they are qualified to implement the ESP courses, content teachers insist on their higher qualifications to offer the courses. Apparently, this seemingly ever-growing dispute stems from some long-lasting misconceptions and malfunctions. Content teachers seemed to interpret EAP instruction as teaching subject matter in English while the English language teachers found EAP instruction as teaching English through subject matter. This gives clues to the urgency of educating and training English language teachers for teaching EAP courses.

Another facet which warrants close attention finds its roots in the current inferior status of English in the academic curriculum, as discussed by both the authorities and instructors. In fact, the stakeholders did not consider ESP instruction as essential to the students' current and future needs. This incongruity between academic instruction and occupational needs is in line with the previous findings in the Iranian context (Atai & Tahririan 2003) and in the European context (Dominguez & Rokowski 2005). Dudley-Evans & St John (1998) further challenge such inconsistencies by introducing the notion of "delayed needs" which appear in future work. Engineers at workplace complained about their impaired competence in listening and speaking.

Another illuminating insight gained from the results of this study are the numerous overlapping needs the undergraduates and the engineers share at workplace, mainly for oral communication. The findings verify the results reported by Dominguez & Rokowski (2005) too.

As for the distribution of power relationships and sources of policy-making, the respondents perceived scattered entities in different layers of the system. Regardless of what the students may indeed need, policy-makers and EAP boards operationalize the programs according to the educational documents. Given such drastic misconceptions about the nature of the EAP curriculum, content teachers strongly insisted on their rights to teach English. English language teachers tended to implement the strict methodologies of general English instruction in EAP courses. Undergraduate RE students as well as RE engineers seemed to pursue alternatives to realize their wants and shortcomings through joining private language institutes.

Several direct implications may arise from the findings of this study. As a fundamental and preliminary step, close cooperation and effective collaboration should be established among the different layers of the system, including educational authorities at the university and administrators at the workplace, subject specialists, materials developers, language teachers, and students. This kind of cooperation is an expansion of narrow-sense unity, between language and content teachers and students, as already stressed in the literature (Hyland 2006).

Also, the EAP courses are incorporated in the undergraduate RE curriculum. This implies that they should serve as the launch pad to meet the students' needs both at the workplace and in graduate programs. A thorough change, therefore, should be implemented so as to embrace those skills students encounter at the workplace, especially oral communication skills. Therefore, to prepare students for both higher education and future work, students need more than the current two-credit English course. More stimulating activities can be devised to simulate authentic tasks engineers undertake at the workplace.

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WHEN THE CULTURE OF LEARNING PLAYS A ROLE IN ACADEMIC ENGLISH WRITING

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Abstract

It is commonly assumed that conceptual knowledge can be separated from where learning and using knowledge take place. Brown, Collins & Duguid (1989: 32) argued that "knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used." Without an integral understanding of what knowledge is learned, and how it is learned and used in context, the impact of school and academic culture on students' formation of knowledge may be overlooked. This study investigates writing knowledge within the context of academic culture by exploring graduate student perceptions of academic English writing in China (N=50) and in Thailand (N=50). A student-centred approach to teaching and learning English for Specific (and Academic) Purposes emerges from the data that reveal global issues in writing across academic cultures. Characterizations and comparisons are made for: (a) native academic culture, (b) academic English writing, (c) strategies for academic English writing, (d) composing for academic purposes, and (e) student metaphors for academic English writing.

1. Introduction

In recent decades, thousands of Asian students have been flowing into English-speaking countries to pursue academic degrees. Numerous research findings (e.g. Gu & Schweissfurth 2006; Hu 2001; Mu & Carrington 2007; Spencer-Oatey & Xiong 2006) disclose that international students have been challenged due to their academic English proficiency. Academic language proficiency and content knowledge define academic proficiency (Krashen & Brown 2007), but many western researchers have centred on international students' socialization in host country programs and some on plagiarism after they leave the host country (Pecorari 2010). Researchers have been overlooking academic culture as a factor that contributes to the success or hindrance of international students' academic success (Cheng & Fox 2008) in international graduate programs. Within Asian student populations, for example, nationality and academic culture play crucial roles in language learning and language use (Anugkakul 2011).Where and how multilingual students acquire proficiency (competence) for academic English writing provides context for learning, that is, in the home country situation where non-English-speaking students first learn, develop, and deploy knowledge of academic English writing. Knowledge of academic culture as a backdrop for learning, teaching, and assessing L2 student writers is essential given that "the activity, context, and culture" in which knowledge is developed and used defines the situated nature of cognition for learners (Brown, Collins & Duguid 1989: 32).

The paucity of research investigating L2 writers as learners across academic cultures provides rationale for investigating graduate student writer perceptions of English academic writing in this study. Since both China and Thailand have their own National English Curriculum, setting the tone for and defining the academic culture of English language teaching (Foley 2005; Hu 2003), it is worth investigating whether L2 English students in these countries have similar or different perceptions of their academic English writing processes and strategies. This social view of asking what English learners think about their L2 academic writing and how they go about it is instrumental for understanding student needs in English for Specific Purposes (ESP) and for learning logic and analytical patterns of thought development in the professions. Ramsfield (1997), for example, observed that L2 legal writers' rhetoric and sequence of thought can make US English readers uncomfortable, while Hyland (2003: 47) explained that "the L2 writer is writing from his or her own familiar culture and the L1 reader is reading from another context".

Investigating Asian-trained graduate student writers across disciplines helps advance language learning, academic literacy (Braine 2002), and disciplinary literacy when Asian students choose to study in the West. There is no first-year composition training, disciplinary language education, or writing across the curriculum at the two Asian universities studied; teachers must teach to the National English Curriculum. It is worth noting that in Thailand, institutions and instructors can develop their own syllabi and teaching content, but that is not the case with the Chinese context. This study, therefore, has direct implications for (a) educational policy makers in the East, and (b) international program administrators in the West.

1.1. *Significance*

This research is timely because of trends and changes associated with English as a *lingua franca* in professional and academic communication and the internationalization of higher education worldwide. International students contributed more than $21 billion to the US economy in 2011 alone, for example, with the leading place of origin from China[1]. Both educators and researchers (Connor 1996) have raised questions about how to facilitate improvement in international students' academic English writing. Instructors of (a) English composition at the undergraduate level, and (b) disciplinary writing at the graduate level in the West may focus on 'usage' and remedial issues related to native-speaker grammar, or on plagiarism as an ethical issue, rather than on language 'use' for advanced academic literacy (Braine 2002). Faculty and program administrators may be unaware of international students' contrasting views of writing and the writing processes; as a result, international graduate student learning may be assessed unfairly, inaccurately, or lead to tragic ending (e.g. Hu 2003).

[1] Institute of International Education, Inc. 2011 press release on international student enrollment increase. Retrieved December 19, 2011, from http://www.iie.org/Who-We-Are/News-and-Events/Press-Center/Press Releases/2011/2011-11-14-Open-Doors-International-Students.

1.2. *Purpose*

This is a descriptive study exploring how academic writing in English is perceived by graduate students in various disciplines in China (N=50) and in Thailand (N=50). The research purpose is to disclose global issues related to writing and academic literacy (Braine 2002), with a view to advancing writing proficiency as students prepare for disciplinary discourse within and beyond the academy in this age of globalization. Understanding how students are grounded in language and literacy contributes to an empowering curriculum and writing pedagogy that is "process-oriented, autonomous, and experiential" (Canagarajah 2006: 15) for teachers and for students. Five questions related to research purpose guided this study. They are listed as follows.

Research Questions

1. What are graduate writers' perceptions of native academic culture?
2. What are graduate writers' perceptions of academic English writing?
3. What are graduate writers' perceptions of strategies for academic English writing?
4. What are graduate writers' perceptions of composing for academic purposes?
5. What are graduate writers' metaphors for academic English writing?

1.3. *Limitations*

Four limitations apply to this study. First, any type of self-report is subject to the limitations of the individual reporting. Second, Thai students were given a Thai language version of the questionnaire, while Chinese students were given the English version. Our Thai colleague deemed the native language version easier for Thai participants to understand. Third, the China study used a homogeneous group of law majors whereas the Thai study included many majors. This variation could have affected the results but it probably did not severely limit the study given that discipline as a dynamic level of teaching context was not a factor; teachers in these countries do not have the power to influence the national academic curriculum for English – the academic cultural context for our research methodology. Fourth, the relatively small sample size of graduate student participants [N=100] means that generalizations can only be made with caution and not to culture at large.

2. Methodology

2.1. *Design of the study*

Through a quantitative approach, the study explores key issues in writing that influence academic writing literacy for Chinese and Thai graduate students. All participants had to meet the same academic language requirement, that is, an abstract in English for their graduate research. The plan was to collect, analyse and report on questionnaire data by country, and then to compare results. Researchers had direct access to student participants through colleagues in each country.

2.1.1. *Procedure*

The study took place at one sitting lasting approximately 30 minutes. Participants in each country volunteered to complete one questionnaire in their English class or in their leisure time through research colleagues. The *Academic English Writing Questionnaire* allowed graduate student writers to reflect on their academic culture and to identify actions intentionally employed (strategies) for writing academic English assignments and papers. All questionnaire items included definitions, and research colleagues did not interpret questionnaire items or definitions for research participants.

2.2. *Participants*

As previously mentioned, graduate student writers from two academic cultures, in homogeneous and heterogeneous discipline groups from two universities, were recruited through colleagues in China and in Thailand. Chinese participants were law students from East coast China. Thai participants were mixed majors from a national university (not the teacher-training system) in lower northern Thailand. The data provided by participants were grouped for reporting and presentation, and participants' names and universities have not been used.

2.2.1. *Specific characteristics*

The 50 participants from each country are currently engaged in academic English writing. They were all volunteers, their native academic language is not English, and they all have to complete their graduate studies by writing a non-discipline-specific summary (abstract) for their research in L2 academic English. The role of the teacher is to try to have their students pass the graduation requirement for English.

2.3. *Why the selection was made*

Asian graduate students writing L2 academic English in their home countries were chosen because little research has focused on this population to date, especially at advanced levels of academic literacy and language proficiency. This research may eventually support the hypothesis that literacy skills and learning strategies transfer, positively or negatively, across academic cultures and languages. The research population is unique because it allows for comparison across academic cultures of learning, with national English curricula determining cultural context for the study.

2.4. *Research participants (N=100)*

2.4.1. *Description of Thai participants (N=50)*

There are 18 males and 32 females in Thailand for our study. The youngest is 23 years old and the oldest is 52. Their majors as graduate students are Educational Research and Evaluation, Social Development, Communication Management, Curriculum and Instruction, Educational Administration, and Art Education. Master's degree students study for two years and doctoral degree students study for four years. Both have to write abstracts for their theses or dissertations. The term 'abstract' for both the Thai and Chinese student participants means 'summary' of an academic research paper.

2.4.1.1. *National learning/writing context of Thai students*

Similar to China, Thailand has a national curriculum for English language teaching. English education is viewed as compulsory. Students in higher education are required to take 12 credits for English courses: six in general English and the other six in ESP (Foley 2005). The emphasis on taking ESP courses in Thailand is stronger than that in China, which has only one ESP course that teaches English abstracts for academic papers. It is important to point out that the field of ESP includes English for Academic Purposes (EAP).

The courses that the participants of the current study were required to take at the undergraduate level are Foundations of English I, II, III and Professional English. At the Master's degree level, they were required to take English for Master Level Studies, and at the doctoral level, English for Graduate Studies I, English for Graduate Studies II, English for Graduate Studies III, and Oral Academic Presentation.

2.4.2. *Description of Chinese participants (N=50)*

Twenty males and thirty females in China participated in our study. The youngest is 24 years old and the oldest is 33. The duration of the course for law students is three years. These native Mandarin-speaking participants were in the middle of their programs when the researchers collected the data. Subjects will be graduating in one and a half year's time. Their required English writing centres on abstracts (summaries) of their publications that include journal articles and theses. The requirements for student writing of abstracts mandate that: (a) sentences are properly written; (b) meanings are clearly expressed; (c) technical terms are well worded; (d) the abstract as a whole is standard and well organized; and (e) key words chosen are accurate.

2.4.2.1. *National learning/writing context of Chinese students*

There has been a massive state drive in China since the 1970s to introduce English language teaching to students in grades three and up in elementary schools. In addition to including English as a subject in high school and college entrance examinations, all college students are required to pass the national College English Test (CET) Band 4 for undergraduate graduation and Band 6 for graduate studies admissions. To pass CET Band 4, all college students must take English language courses related to reading, speaking, and listening to the English language for communicative purposes. Writing is not emphasized, but vocabulary learning is. At the graduate studies level, Chinese students are required to be able to write English abstracts for their academic papers in a thesis writing class, that is, an academic writing class for Chinese students in which western-style academic English writing is not the focus. At the undergraduate level, the English course required by the Chinese participants was Intensive Reading I. At the graduate Master's degree level, the required courses were Intensive Reading II, Writing for General Purposes and Academic Purposes, and Translation.

2.5. *Instrumentation*

2.5.1. *Description of the questionnaire*

The *Academic English Writing Questionnaire* is a 50-item survey instrument designed specifically for this study. It is comprised of 48 closed items and two open-ended items. It evolved from a 100-item *Preliminary Writing Strategies Questionnaire* that was adapted for the first author's dissertation research with permission from Mu & Carrington (2007) in Australia. Dissertation results contributed to the selection of items in the current *Academic English Writing Questionnaire* (Appendix A). Items were selected that helped research participants make a shift from writer-centred drafting to reader-centred communication. Through summary, synthesis, paraphrase and analysis, research participants 'composed' by (a) telling and retelling what was in the research literature in the drafting phase, and (b) transforming the rough, learner-centred draft into reader-centred communication in the revising stage – with sentence units forming a unique, cohesive, and coherent language structure – thereby solving the information-transfer problem for both the research writer and for the writer's intended audience (Bereiter & Scardamalia 1987; Grabe & Kaplan 1996).

Both pre-writing questionnaires have been useful tools for discussing global issues in writing and research relevant to ESP and EAP classroom practice in Australia and the US, creating common ground for international student writers studying at the graduate level in these academic English cultures. Such questionnaires perform the function of needs analysis in ESP and EAP by (a) helping linguistically and culturally diverse class members discover what is appropriate and conventional when writing in their native academic language, and (b) disclosing contrasting cultural ideas about academic writing and language use. In sum, the concise, new, reliable questionnaire developed for this study was intended to discern perceptions among graduate student writers across academic cultures in a second academic language, with a view to enhance critical thinking in academic writing and advance language use when writing research from printed and electronic sources.

2.6. *Validity and reliability*

For content validity, we consulted with a variety of teachers, the research literature, and target group members for relevance, representativeness, and exactness of wording. A validity check with our Thai and Chinese colleagues disclosed "no objections" about questions or results (personal communication, 13 December 2011).

After data collection, we used the Statistical Package for the Social Sciences (SPSS) 19.0 to analyse the reliability of the questionnaire. For Thailand, Cronbach's Alpha was .885, indicating that the questionnaire was very reliable. For China, Cronbach's Alpha was .544, indicating that the questionnaire was moderately reliable. The difference between the two is because we used a homogeneous group of Chinese subjects: law majors who used the original English version of the questionnaire in contrast to a heterogeneous group of Thai subjects from a sampling of majors who used a native-language (Thai) translation of the questionnaire.

3. Data analysis and results

3.1. *Graduate writers' perceptions of native academic culture*

The first research question had to do with graduate writers' perceptions of native academic culture. Statements Nos. 1 to 12 from the *Academic English Writing Questionnaire* are used to answer Research Question 1. All students' answers were tallied in a table for each group (Appendix B). Most (50% or higher) student participants chose "Agree" or "Strongly Agree" to the Statements 1-12. These statements describe native academic culture according to participants living and studying in China and in Thailand. Student perceptions of native academic culture provide context for academic writing and instruction in ESP and EAP.

3.1.1. *Topics for discussion: Research Question 1*

Academic writing, from the viewpoints of both groups, involves stating knowledge (knowledge telling) and deepening the level of understanding to include analysis, synthesis, and evaluation of research (knowledge transforming). Furthermore, the idea that academic writers borrow other writers' ideas "randomly", because knowledge is the common property of human beings and not personal intellectual property, is not overwhelmingly supported by either group of participants. Statement 8 may need further exploration as to what students think about textual borrowing and what they do in a specific academic writing task. All (100%) Thai respondents and most (64%) Chinese respondents agree or strongly agree that good academic writers in their native cultures refer to authoritative sources in their writing (Statement 10), but how they use these sources may differ.

Statement 9 suggests variability between the two groups of participants. Percentages show that the Thai academic writers may prefer to let readers infer the meaning of their writing, whereas the Chinese academic writers may prefer to express their meaning more directly or explicitly to let the reader know what they are thinking. Statement 9 may need further exploration to know more about what students think about writer-reader responsibility in a specific academic writing task.

3.2. *Graduate writers' perceptions of academic English writing*

The second research question has to do with graduate writers' perceptions of academic English writing. Statements 13-16 and 44-45 are used to answer Research Question 2. All students' answers were tallied in a table for each group (Appendix C). These statements describe academic English writing by Chinese and by Thai participants. Most (72% or higher) Chinese participants and most (66% or higher) Thai participants agree or strongly agree with all the statements. Because perceptions of academic English writing link academic culture with academic writing instruction, a close comparison was made for each statement.

3.2.1. *Topics for discussion: Research Question 2*

No Thai participants and fewer than 10 per cent of Chinese participants disagree that (a) English is important for their studies, career or profession, or that (b) effective and efficient academic writing in English involves conscious use of strategies: conscious, goal-directed actions academic English writers may take more than once while writing. However, percentages for Statement 16 suggest that not all have learned how to write using authority from printed (and electronic) sources, even though 80-90% of participants agree that academic writing in English involves learning from source text as well as communicating what is learned to highly educated readers (Statement 15).

3.3. *Graduate writers' perceptions of strategies for academic English writing*

The third research question has to do with graduate writers' perceptions of strategies for academic English writing. Statements 17-39 are used to answer Research Question 3. All students' answers were tallied in a table for each group (Appendix D). These statements describe strategies for writing by Thai and Chinese participants that are conscious, goal-directed, and taken more than once while writing.

As in previous responses, the Thai participants were less likely than the Chinese to disagree with any statement. Furthermore, responses to these statements showed more variation between the two groups of participants. Because perceptions of academic English writing associate with strategies for both the Chinese and Thai participant group, comparisons for each statement were made. Also, because of the number of strategies explored, topics for discussion are organized in four thematic groups as follows: (a) Statements 17-23 centre on process, (b) Statements 24-28 centre on social interaction, (c) Statements 29-34 centre on language use, and (d) Statements 35-39 centre on writing from sources.

3.3.1. *Topics for discussion: Research Question 3, Statements 17-23 focusing on process*

Survey responses to Statement 19 suggest that the Chinese participants are less likely than the Thai participants to delay editing. On the other hand, the Chinese participants may be more willing to revise ideas than the Thai participants according to the survey responses for Statement 23. Both revising and editing are viewed in the writing research literature as components of the composing process.

3.3.2. *Topics for discussion: Research Question 3, Statements 24-28 focusing on social interaction*

Survey responses to Statements 24-28 suggest that the Thai academic writers employ social interaction more than the Chinese academic writers do. In addition to what can be seen as a strategy for delaying editing, social strategies are important for Thai student respondents to communicate effectively with professors and classmates and to refine ideas.

3.3.3. *Topics for discussion: Research Question 3, Statements 29-34 focusing on language use*

Students' responses were more or less equally divided across categories for Statements 29-31. These had to do mostly with language use and revising. Close comparison shows that the Thai participants re-use language from source text (Statement 29) more than the Chinese participants, and the Thai participants correct language-related issues (Statement 30) only after revising ideas, in contrast to the Chinese participants. Furthermore, the Chinese participants seem more likely than the Thai participants to take the time needed to have an objective perspective of their own writing (Statement 32).

3.3.4. *Topics for discussion: Research Question 3, Statements 35-39 focusing on writing from sources*

Although the Thai and Chinese participants agree about paraphrase, synthesis, and analysis, the survey responses suggest a more strategic use of summary by Chinese participants. Most (58%) Chinese participants disagree that they summarize information in English simply by reducing the source text, whereas most Thai participants (78%) agree. The Chinese participants seem more likely to summarize information in English in a complex way by selecting and reorganizing the source text (Statement 37). In other words, they may engage in knowledge-transforming more than in knowledge-telling from the source text.

3.4. *Graduate writers' perceptions of composing for academic purposes*

The fourth research question has to do with graduate student writer perceptions of composing for academic purposes. Statements 40-43 are used to answer Research Question 4. All students' answers were tallied in a table for each group (Appendix E). These statements describe composing levels and purposes based on Grabe (2001).

Most (60-68%) Chinese and most (54-86%) Thai student participants chose "Agree" or "Strongly agree" to all statements related to academic English composition and levels of composing. Disagreement was 8% or less among the Thai and 20% or less among the Chinese participants. Comparisons were made to answer Research Question 4.

3.4.1. *Topics for discussion: Research Question 4*

Most (86%) Thai respondents write to understand, remember, summarize simply, or extend notes in English (Statement 41) in contrast to Chinese respondents, 62% of whom agree or strongly agree that they do this, and 20% of whom disagree that they do this. Similarly, 54% of Thai respondents and 62% of Chinese respondents agree or strongly agree that they write to state knowledge in English by listing, repeating, or paraphrasing the source text (Statement 40), whereas 20% of Chinese respondents disagree or strongly disagree that they do this. Paraphrasing may be an academic language skill that needs more attention in the research literature. Both statements relate to knowledge telling when composing for academic purposes.

Statements 42-43 describe higher levels or purposes for academic writing. Both Thai (64%) and Chinese (68%) respondents agree or strongly agree that they write to learn, problem-solve, summarize in a complex way, or synthesize information in English. Similarly, both Thai (56%) and Chinese (60%) respondents agree or strongly agree that they write to critique, persuade, or interpret evidence selectively and appropriately in English. Both statements relate to knowledge transforming, with percentages suggesting that more attention may need to be given to these composing levels and purposes for writing.

3.5. *Graduate writers' metaphors for academic English writing*

Statements from 46-50 are used to answer Research Question 5. All students' answers were tallied in a table for each group (Appendix F). These statements had to do with graduate student metaphors for academic English writing and the possible influence of strategies and culture. Comparisons were made for each statement relating to the closed- and open-ended questions that answer Research Question 5.

3.5.1. *Topics for discussion: Research Question 5*

Most (72% Thai and 56% Chinese) participants agree that they are like architects when they write in English: that is, they plan, draft, and then edit their own work (Statement 46). Similarly, most (58% Thai and 55% Chinese) agree that they are like artists when they write in English because they re-work and revise their writing as they go along, rather than follow a strict plan or outline (Statement 48). These two sets of percentages suggest a possible overlap between the technical and creative aspects of composing in English for student participants. Only 40% of the Chinese agree that they slowly build and correct their language use as they write, in contrast to the Thai (58%) who seem to prefer this approach to writing in English (Statement 47).

It is interesting to note that, in contrast to the Chinese participants (N=50), most Thai participants did not answer the open-ended questions (#49 and #50). Only seven out of fifty responded to Statement # 49, and six out of fifty responded to Statement #50. This omission may have something to do with academic culture, proficiency in writing, or both.

Statement 49. Words or comparisons that the Chinese participants use to describe themselves as academic writers fall into four general categories: see Table 1 below.

Creative (and technical)	**Organic** (and dynamic)	**Technical** (and creative)	**Other: adjectives/phrases**
painter x2	gardener x5	archeologist x2	inspiration and logical
poet	like a learner x2	editor	careful x2
collector poet	like a farmer	partner	difficult to describe
drawer	like a cook	challenger	like x2
writer		engineer	good!
composer		teacher	not very good
inspiration creator		historian	responsibility
melodist		English learner	need to be enhanced
creative		explorer	partner
need creation and wisdom		scientist	necessary to improve
		sports player	conscientious
		strict x2	hard working
			it's a challenge
			challenger

Table 1. Words or comparisons describing Chinese academic writers

Statement 50. Similarly, words or comparisons describing the process of writing in academic English for Chinese participants fall into four categories: see Table 2 below.

Hard	Difficult but…	Gradual, organic	Plan and write
difficult x9	difficult but profitable	gradual process x2	systematic
complicated x2	hard but benefit	relaxed and work hard	we need to do it systematically
difficult & complex	hard process but enjoy it	not very strict outline	design, produce, and examine the quality
difficult & boring	it's very hard for us to describe something precisely	like planting a tree	scientist
collision of thoughts, reconstruct, innovate	[must] concentrate on	phrase a note...and compose a piece of music	must have and follow a blueprint but modify to improve it
must work hard so that I can harvest		I decide what to write then organize my material and language	I have a plan before writing but when I really begin to write, I need to work hard at that very time to enrich my content
			I plan draft and write and then I can get something from it

Table 2. Words or comparisons describing the process of writing in academic English for Chinese participants

In contrast to the Chinese, the Thai participants did not necessarily discern between words or comparisons that describe themselves as academic writers and those that describe the process of writing in academic English. As a result, some new categories emerged from the data: see Table 3 below.

Difficult	Consider/ collect and write	Understanding (of) process	Patterned	Transform into English
I am a handicap in academic english writing.	I consider the main points and then I explain.	English writing process is not systematic.	Try to follow a prototype	I imagine in Thai then summarize into English.
I am like a beginner. I still need more learn.	Have to collect content about the story.	English writing process I have to understand.	I write in accordance with Thai pattern.	I write in Thai first and then I transform…
Academic english writing is really difficult.		My academic English writing is like a laborer.		

Table 3. Words or comparisons Thai participants used to describe themselves as writers and the process of writing in academic English

3.5.2. *Topics for discussion: Research Question 5*

Although academic writing in English can be difficult for both Thai and Chinese student participants, the data underscore the importance of being systematic in the process. Both populations could benefit from knowledge of social/affective strategies that lessen anxiety and increase self-efficacy and motivation, such as interacting with teachers or peers to assist learning.

4. Discussion of results

The exploration of Thai and Chinese student perceptions and interpretations of academic English writing in this study opens a window into the socio-cultural experiences of graduate student EAP writers. Results for Research Question 1 disclose differing assumptions and expectations about who is primarily responsible for successful communication in an academic culture – the reader or the writer. Explicitness and directness appear to be socio-cultural elements of academic style for the Chinese participants, whereas the Thai participants may let readers infer the meaning of their writing. Although rhetorical preferences and style vary from culture to culture and from language to language, they may be influenced by the academic English curriculum and writing instruction as well, creating a shift in reader-writer responsibility as for native Mandarin student participants.

Results for Research Question 2 suggest that teaching students (a) how to write using authority from printed and electronic sources, and (b) how to make the shift from writer-centred learning to reader-centred communication may be desirable. An underlying cultural assumption is whether academic writing is assumed to be the writer's own view or opinion and the kind of support expected for the writer's ideas or arguments. Ownership of text and ideas is a key issue in writing that may contrast culturally, as is reader versus writer responsibility (Hinds 1987).

Results for Research Question 3 suggest that revising and editing – key components of the composing process engaged in differently by participants – may be strategically taught and learned. Revising may be defined as "the stage of the writing process in which one considers and improves the meaning and underlying structure of a draft" (Fowler & Aaron 2001: 963). Editing is a "distinct step in revising a written work, focusing on clarity, tone, and correctness" (*ibid.*: 951). Being strategic in delaying the editing process (Elbow 1973) may be helpful at lower levels of academic English writing proficiency. Planning for language use, however, has been associated with metacognition, "a key factor in self-directed, autonomous learning at all levels" (Ehrman 2002: 252).

Added to these are social strategies, which are found to be important for the Thai academic English writers in this study, suggesting a possible difference between student versus teacher roles in the Thai and Chinese academic cultures and curricula. Strategies for language use, such as taking the time needed to have an objective perspective of one's own writing, were found important for the Chinese participants. Critically reflecting on one's writing as well as analysing and integrating comments made by peers and teachers are high-level cognitive skills and strategies, useful for language learning and writing from source texts. Such processes may assist with knowledge-transforming or rewriting from one's own point of view.

Competence-related constructs for composing that relate to knowledge-transforming and knowledge-telling are discerned by results for Research Question 4. The composing levels relate to writing purpose and increasing processing demands (Grabe 2001). Embedded in these are summary, paraphrase, and synthesis that help develop L2 academic writers' purpose and knowledge for writing. Whether used as (unconscious) skills or (conscious) strategies, they are central to higher-order thinking and academic language use when writing from sources, known in the research literature as discourse synthesis – a common but cognitively demanding academic literacy task requiring students to select, organize, and connect content from source texts as they compose their own texts (Segev-Miller: 2004).

Research Question 5 results for both closed and open-ended items highlight the importance of a systematic approach for teaching and learning academic writing and for understanding writing as a recursive process. Writing as processes for planning, drafting and revising can be added to the curriculum through "explicit strategies' instruction" (Oxford 2011), for example. A strategic approach could include using pre-established rhetorical models and modifying existing structures, as suggested by the data. Revising and rhetorical structure are other key issues in writing that may vary across academic cultures, disciplines, and genres.

5. Conclusion: Why academic English writing research across cultures?

The academic culture of teaching and learning makes a difference for participants, as does the national English curriculum. Research results reveal that graduate student writers situated in Chinese academic culture and in Thai academic culture perceive academic English writing differently. The terms "learning cultures" (Kennedy 2002) and "small cultures" (Holliday 1999; Oxford 2002) refer to particular learning environments and the beliefs, values, attitudes, and behaviours in these environments that may contrast culturally. Staff and faculty in intensive language and support programs in English-speaking universities, therefore, need to be aware of international students' academic cultures of origin because such an awareness enhances (a) "culturally responsive teaching" (Gay 2000), and (b) the ethical treatment of students in terms of teaching, learning, and assessment (pedagogy).

Berating non-western style academic writing with threats of plagiarism, focusing on surface issues of grammar (akin to accent), or ignoring the teaching/learning situation of international students altogether does not help students think, write, or learn better in English. A strategy-based, problem-solving approach works for international student writers whose cultures of learning may differ from those in English-speaking countries. Responsible approaches invite L2 academic English writers to (a) compare and contrast academic writing conventions, and (b) reflect on aspects of writing acceptable in the academic culture of origin but unacceptable in the target academic culture. The questionnaire developed for this study facilitates this kind of reflection for students and needs analysis for teachers (West 1994). Writing teachers should become familiar with global issues related to writing that affect international student approaches to writing. These issues include the roles of research and inquiry, writer versus reader responsibility, the roles of revising and editing, student versus teacher roles, values of individualism versus collectivism, and ownership of text and ideas[2]. These are issues

[2] See the Conference on College Composition and Communication (CCCC) Statement on Second Language Writing and Writers (2009).

in writing that exist in academic cultural contexts and relate to western notions of plagiarism and intellectual property.

Our research results across academic cultures help make these writing issues visible for university administrators, teachers, and international students transitioning from writing abstracts in their home countries to graduate-level research and writing in professional programs in English-speaking host countries. According to Oates & Enquist (2009: 283): "Most ESL law students report that their foreign language classes concentrated only on vocabulary and sentence grammar; they stopped short of addressing the larger cultural issues that affect the overall approach to writing" – a socio-cultural gap dealt with in this ESP research across cultures.

5.1. *When presented with a student writer from another country, what do I do?*

Global issues in writing are revealed when teachers use the *Academic English Writing Questionnaire* (Appendix A) for student reflection and classroom discussion in a course or workshop. Cultural contrasts will emerge, allowing the teacher/facilitator to discern the influence of academic culture and background learning, providing opportunities to address expectations of the target academic culture. Teachers can compare students' survey responses to students' professional profiles and language learning history to tailor course syllabi to meet students' needs as well as program requirements. Teachers can very quickly understand who their students are as writers and what skills student writers bring with them from their home countries. This kind of research-based pedagogy discloses the impact of academic culture on students' formation of writing knowledge – the basis for intellectual growth and development in a professional program or graduate field of study. In sum, transitioning to a more professional program with a more rigorous level of expectation regarding performance in language use and in composition means (a) comprehensible input for learners within the context of academic culture, and (b) strategies for problem-solving in academic English writing that help develop language and academic proficiency (Krashen 2011).

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Appendix A

Native academic language________________ Country of origin _______________ Code name/number_______

Academic English Writing Questionnaire

The purpose of this survey is find out what YOU think about academic English writing for graduate school. There are no right or wrong answers. So, please answer the questions based on what you really think. Your answers will be kept confidential and will not affect anyone's opinion of you.

Directions

In this questionnaire, you will find statements describing academic writers and the process of writing an academic English assignment or paper. Indicate HOW WELL EACH STATEMENT DESCRIBES YOU by writing a number beside each statement according to the following scale:

1- I strongly **disagree**
2- I disagree
3- I neither agree nor disagree
4- I agree
5- I strongly **agree**.

___1. Different cultures and disciplines have different kinds of texts and writing styles.
___2. Standards for what is considered good academic writing are established by culture.
___3. Writing well in my native language is very important in my native academic culture.
___4. Academic writing in my native culture is *knowledge telling* or stating knowledge.
___5. Academic writing in my native culture is *knowledge transforming* or deepening the level of understanding to include analysis, synthesis, and evaluation of research.
___6. Revising is a very important stage of writing in my native academic culture.
___7. Academic writers in my native culture need a controlling idea for writing.
___8. Academic writers in my native culture borrow other writers' ideas randomly because knowledge is the common property of human beings, not personal intellectual property.
___9. Academic writers in my native culture let readers infer the meaning of their writing rather than express their meaning directly or explicitly.
___10. Good academic writers in my native culture refer to authoritative sources in their writing.
___11. Good academic writing in my native culture means working hard for clear meaning.
___12. Academic writing in any culture is a socialization process because to do it well, one must learn from others.
___13. Academic writing in English involves a different process from writing in my native academic language.
___14. Effective and efficient academic writing in English involves conscious use of strategies.
___15. Academic writing in English is a complex process because it involves learning from source text as well as communicating what I learned to a highly educated reader.
___16. I have been taught how to write using authority from printed (and electronic) sources.
___17. I always consider my purpose, audience, and level of formality for writing.
___18. As I write in English, I concentrate on both the content and on the language.
___19. I prefer to concentrate on the content first, before concentrating on my language use.
___20. My sentences are not too long or complex so they can be immediately understood.
___21. When I revise, I pay attention to how ideas are connected in my sentences, in my paragraphs, and in the sections of my writing assignment or paper.
___22. I like to have criteria for assessing the quality of my writing in stages: that is, pre-writing, drafting, and revising.
___23. I like to follow my original plans without revising them.
___24. When I do not understand an academic writing assignment, I ask the professor for clarification.

___25. Sometimes I ask my classmates to clarify the writing task for me.
___26. I generate ideas by thinking about what I have written and by making associations.
___27. I refine my ideas by interacting with people at different stages of my writing.
___28. I improve my English academic writing by speaking about my work to others.
___29. I re-use language from source text in English academic writing.
___30. My first draft is usually close to my final one.
___31. I correct language-related issues only after revising my ideas.
___32. When revising a paper, I leave it for several days to have an objective perspective of my own writing.
___33. When revising, I examine each idea again and see how it is developed within each paragraph or paragraph block (section).
___34. I consider various ways of organizing ideas, depending on my purpose, such as comparison and contrast, cause-effect, problem and solution, pros and cons.
___35. I paraphrase information in English by putting source material into my own words.
___36. I summarize information in English simply by reducing source text.
___37. I summarize information in English complexly by selecting and reorganizing source text.
___38. I synthesize information in English by combining and connecting source text.
___39. I analyze information in English by reflecting and breaking down source text into its parts.
___40. I write to state knowledge in English by listing, repeating, or paraphrasing source text.
___41. I write to understand, remember, summarize simply, or extend notes in English to myself.
___42. I write to learn, problem-solve, summarize complexly, or synthesize information in English.
___43. I write to critique, persuade, or interpret evidence selectively and appropriately in English.
___44. Writing well in English is important for my studies in graduate school.
___45. Writing well in English is important for my career or profession.
___46. I am like an *architect* when I write in English because I plan, draft, and then edit my own work.
___47. I am like a *laborer* when I write in English because I slowly build and correct my language as I write.
___48. I am like an *artist* when I write in English because I re-work and revise my writing as I go along rather than follow a strict plan or outline.
___49. Another word or comparison that describes me as an academic writer is:

____

___50. Another word or comparison that describes the process of writing in academic English is:

____

Appendix B

Graduate writers' perceptions of native academic culture

Item	Thai					China				
	1	2	3	4	5	1	2	3	4	5
1		4%	6%	60%	30%		14%	2%	50%	34%
2	2%		22%	64%	12%		20%	14%	54%	12%
3			4%	44%	52%	4%	4%	8%	44%	40%
4		2%	2%	56%	40%	2%	26%	20%	42%	10%
5			6%	64%	30%		2%	4%	64%	30%
6		2%	18%	48%	32%		2%	8%	66%	24%
7			6%	68%	26%	4%	12%	12%	56%	16%
8		2%	18%	34%	38%	8%	20%	26%	34%	12%
9	2%	6%	20%	62%	10%	2%	48%	18%	24%	8%
10				22%	78%		20%	16%	54%	10%
11	2%	4%	16%	32%	46%		22%	20%	46%	12%
12			8%	62%	30%		8%	14%	48%	30%

Appendix C

Graduate writers' perceptions of academic English writing

Item	Thai					China				
	1	2	3	4	5	1	2	3	4	5
13		2%	22%	46%	30%		22%	6%	66%	6%
14			30%	60%	10%		8%	16%	48%	28%
15	2%	8%	10%	50%	30%			10%	62%	28%
16		10%	24%	48%	18%	2%	22%	6%	64%	6%
44			4%	56%	40%		2%	18%	42%	38%
45			14%	50%	36%		8%	14%	38%	40%

Appendix D

Graduate writers' perceptions of strategies for academic English writing

Item	Thai					China				
	1	2	3	4	5	1	2	3	4	5
17			10%	60%	30%	2%	22%	14%	58%	4%
18			10%	58%	32%		8%	4%	64%	24%
19	2%		16%	50%	32%		22%	14%	54%	10%
20		2%	4%	60%	34%		26%	18%	48%	8%
21			8%	70%	22%		8%	4%	70%	18%
22		2%	14%	70%	14%		12%	22%	50%	16%
23	12%	30%	34%	12%	12%	8%	68%	12%	8%	4%
24			4%	64%	32%	2%	20%	6%	56%	16%
25			6%	60%	34%	2%	22%	16%	56%	4%
26		2%	6%	74%	18%		2%	18%	80%	
27		4%	12%	70%	14%		28%	18%	42%	12%
28		4%	22%	58%	16%	2%	36%	30%	26%	6%
29		6%	20%	60%	14%	4%	16%	36%	40%	4%
30	4%	10%	30%	48%	8%	6%	34%	22%	30%	8%
31			8%	70%	22%	4%	42%	8%	40%	6%
32	4%	12%	36%	36%	12%		28%	8%	52%	12%
33		2%	14%	70%	14%	2%	4%	10%	70%	14%
34			14%	60%	26%	2%		14%	62%	22%
35	2%	10%	18%	54%	16%		22%	10%	54%	14%
36		8%	14%	60%	18%		58%	22%	20%	
37		16%	30%	44%	10%		14%	20%	60%	6%
38		4%	22%	60%	14%		10%	18%	70%	2%
39		8%	18%	58%	16%		22%	24%	54%	

Appendix E

Graduate writers' perceptions of composing for academic purposes

Item	Thai					China				
	1	2	3	4	5	1	2	3	4	5
40		4%	42%	50%	4%	2%	18%	18%	60%	2%
41		2%	12%	72%	14%		20%	18%	52%	10%
42		4%	32%	58%	6%		14%	18%	62%	6%
43		8%	36%	50%	6%		18%	22%	50%	10%

Appendix F

Graduate writers' metaphors for academic English writing

Item	Thai					China				
	1	2	3	4	5	1	2	3	4	5
46		2%	26%	52%	20%		16%	28%	44%	12%
47	8%	8%	26%	36%	22%	2%	28%	30%	32%	8%
48	2%	6%	34%	40%	18%	4.1%	20.4%	20.4	44.9%	10.2%

GENRE VARIATION AND ITS IMPACT ON EFL STUDENTS' READING COMPREHENSION

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Abstract

Recent years have seen increased attention being given to the notion of genre in ELT. This has been especially true in the case of ESP, where researchers have been interested in genre as a tool for analysing and teaching the spoken and written language required of non-native speakers in academic and professional settings (Bruce 2008; Hyland 2007; Mysko & Gordon 2009; Swales 1990, 2011). In studies of ESL reading development, a number of studies (e.g. Cervetti *et al*. 2009; Francis & Hallam 2000; Toledo 2005) reported positive effects of genre instruction on students' understanding of text structure.

In spite of the fact that the studies conducted on the impact of genre instruction on written production of texts is well researched, little research has been conducted to investigate whether a change in text genre can affect learners' reading comprehension. This is especially important given that reading is the most needed skill in ESP contexts worldwide.

This study is the report of a research project which attempted to answer the following research question: What is the effect of genre variation on the reading comprehension of medical students? To that end a reading comprehension test was developed which consisted of two types of texts (with the same text difficulty) each in a different genre, a medical English textbook and a general English textbook. 93 students majoring in medicine took the test. A matched-pairs t-test was used to compare their performance on the two different text genres. The findings indicated that the participants were more proficient in comprehending EGP texts compared to ESP texts. This shows the relative superiority of topic familiarity over text structure familiarity in text processing. The inability of readability formulas to exactly mirror the text difficulty might be the second reason for the better performance of learners on EGP texts.

1. Introduction

The last three decades have witnessed increasing attention being given to the concept of genre. Numerous pieces of research have been conducted to explore how genre can contribute to a better understanding of linguistic theory and practice (e.g. Flowerdew 2005; Cheng 2011; Costino & Hyon 2011). Traditional definitions of genre focused on textual regularities. In traditional literary studies the genres were defined by conventions of form and content. Current genre theories place further emphasis on the social and cultural understanding of language and define it as "abstract socially recognized ways of using language" (Hyland 2002: 114). This rethinking has since informed a large number of research works mainly focusing on school and workplace writing through ethnographic research methods (e.g. Flowerdew & Dudley-Evans 2002; Bhatia 2008).

Three schools of genre convention can be distinguished, namely New Rhetoric, Australian Framework (known as the Sydney School in the US), and ESP. Each school assigns a varying amount of emphasis to textual regularities or contextual facts influencing how a text is used and why it is used the way it is.

To begin with, the New Rhetorician orientation to genre is built mainly upon "the seminal paper by Miller (1984) and is represented in the work of Bazerman (1994), Freedman and Medway (1994) and Berkenkotter and Huckin (1995)" (Hyland 2002: 114). Proponents of this approach tend to give priority to contextual variables which have the potential to influence the rhetorical structure of a text. That is why ethnography is the methodology of choice for their researchers in the process of uncovering text-external issues. The second orientation, drawing on Halliday's Systemic Functional Linguistics, is known as the Sydney School. This genre approach stresses the social purposes genres are intended to serve and it elaborates the schematic structures devised to serve those purposes. "Genre is seen as staged goal-oriented social process, emphasizing the purposeful, interactive, and sequential character of different genres and the ways that language is systematically linked to context" (Hyland 2002: 115).

The third genre perspective, known as the ESP approach, falls somewhere between the two orientations above. The most prominent figure in this tradition is Swales. It was Swales' 1990 seminal work, *Genre Analysis,* which is mainly considered as the pioneer of genre discussions in the field of ESP. According to Swales (1990: 58):

> A genre comprises a class of communicative events, the members of which share some set of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse and influences and constrains choice of content and style. […] In addition to purpose, exemplars of a genre exhibit various patterns of similarity in terms of structure, style, content and intended audience. If all high probability expectations are realized, the exemplar will be viewed as prototypical by the parent discourse community.

This approach to genre places equal emphasis on both communicative purpose and the formal aspects of genre theory. Swales' classification of different academic genres revolves around the writer's communicative purpose.

In sum, what all these genre theories have in common is that they all draw on the fact that groups of texts can be similar or different based on certain restrictions imposed from inside or outside the text. It is worth noting that although genres are assumed to convey some consistency and stability in form, these schemes and structures can be subject to change due to variations in culture, history, and the communicative situation in which they first emerged.

2. Reading comprehension

Research on the variables that have the potential to influence the nature of reading comprehension has been commonly divided into two categories: the research investigating text-related variables and that studying reader-related factors. Text readability is among the first group of factors and has received considerable attention in reading literature. This is mainly rooted in the researchers' concern to adjust the text difficulty to the target reader. On the other hand, reading is usually assessed through the administration of a number of passages rather than a single text, and in such cases care needs to be exercised to make the passages equally readable. Syntax and lexis are the main areas considered in the development of readability formulas. However, regarding the myriad of variables that can affect comprehension of a certain passage, "readability formulae give only crude measures of text difficulty" (Alderson 2000: 73). Text genre is one such factor which is likely to influence meaning processing and ease of comprehension. As Toledo (2005: 1059) puts it: "The notion of genre or rhetoric schemata brings up a pragmatic dimension, and incorporates a consideration of the sociocultural conventions for the assessment of reading comprehension." The important point about genre is that it is discussed under both text-driven as well as reader-related variables.

Perhaps the most important concept with regard to the second group of factors, i.e. reader-related factors, is schema theory. According to this theory, meaning does not autonomously reside in the text; rather, the text helps readers to construct meaning from their previously acquired knowledge, i.e. background knowledge. The collection of these knowledge structures, concepts and ideas is referred to as schema. According to schema theory success in deciphering a text requires an interaction between the material in the text and the reader's background knowledge (Hadley 2003). Another notion which is worth mentioning is top-down processing in which readers rely on their experience, emanating from their acquired schemata, to decipher the text. In other words, "the starting point is within the mind of the listener/reader" (Johnson 2001: 275).

While numerous studies (e.g. Hyon 1996; Ghaith & Harkouss 2003; Brantmeier 2005) have been conducted on the impact of genre instruction on the written production of texts, there has been little research investigating whether a change in text genre can affect learners' reading comprehension (Hyon 1996; Alderson 2000). This is especially important given that reading is the most generally needed skill in ESP contexts worldwide, particularly in Iran. According to a figure gained through a number of carefully conducted research studies, nearly 80 percent of scientific and technical texts all over the world are written in English (Garfield 1983, as cited in Swales 1990). This underlines the importance of reading skills, particularly in ESP.

In studies of ESL reading development, a number of studies (e.g. Francis & Hallam 2000; Toledo 2005; Cervetti *et al.* 2009) reported positive effects of genre instruction on students' understanding of text structure. This is in line with the findings of research concerning the positive influence of formal schemata on reading comprehension. In another study Salager-Meyer (1991, as cited in Alderson 2000), showed there was an interaction between text-structure familiarity and topic familiarity. She further argued that when readers are familiar with the topic of the passage, unfamiliarity with the text structure may only marginally hinder the comprehension process.

The present study tries to find an answer to the following research question: What is the effect of genre variation on the reading comprehension of EFL students?

3. Method

3.1. *Participants*

The participants in this project were 123 first-year undergraduates (45 males and 78 females) majoring in medicine at two universities in Ardabil, Iran, namely Islamic Azad University in Ardabil and Ardabil University of Medical Sciences. They were taking their ESP Medicine course, the syllabus of which mainly focused on the use of specific medical terms as well as improving reading comprehension skills. Their classes were held three hours a week in the 2009-2010 academic year. They had already passed their English for General Purposes (EGP) course. 30 of these students took part in the validation phase of the Reading Comprehension Test (RCT) which was specially devised for this study. The remaining 93 students (30 males and 63 females) participated in the main phase of the project.

3.2. *Materials*

The RCT was composed of four passages which were in two main genres, general and medical English textbooks, based on Swales' (1990) definition (see section 1). These passages were selected from four books taught for general and medical English courses. Each text was followed by five multiple-choice test items giving a total of 20 items (see Appendix). The Flesch Reading Ease (FRE) formula was employed to calculate the text difficulty for the test passages. The FREs for EGP texts were 60 and 48.6, while for the ESP passages they were 58.5 and 47.6. Seven units of the course book by Deedari & Ziahosseiny (1989), taught during the term for all students, were randomly selected out of all 19 units of the book, irrespective of text length. The reading passages from these units ranged in text difficulty from a minimum of 47.3 to a maximum of 62.3. Mean text difficulty was computed for these seven units and came to 53.4. The selected passages for RCT had FREs within the minimum and maximum indexes mentioned above. Care was also taken to make the comprehension questions of the passages comparable in terms of referential and inferential questions.

3.3. *Procedures*

At the beginning of the first semester of the 2010-2011 academic year two classes of medical students at two universities were selected. They were going to take their ESP Medicine course. Both classes studied the same book (English for students of medicine) during the term. At the final exam session (8 January, 2011) they took the RCT.

3.4. *Design and analyses*

In order to determine the causes for differences that already existed among the participants' reading comprehension ability as a result of genre variation, this study employed a causal-comparative research method which was ex-post-facto in nature (the researchers had no control over the events). Text genre was the independent variable and reading comprehension was the dependent variable of the study. Since the same book was taught for both classes the textbook variable was controlled.

A matched-pairs t-test was used to compare the performance of the students on both text genres. The effect size was calculated using eta squared (η^2).

4. Results

Table 1 presents the descriptive statistics for mean student performances (mean test scores) on the two genres across texts with different readability indexes.

			N	M	SD
Genre	EGP	Easy	93	3.58	0.771
		Difficult	93	3.18	1.103
	ESP	Easy	93	2.00	1.437
		Difficult	93	3.30	1.081

N: Number
M: Mean
SD: Standard Deviation

Table 1. Descriptive statistics for EGP and ESP texts

To compare the performances of students on EGP and ESP passages, a matched-pairs t-test was employed. Table 2 below gives the summary of t-test procedure.

	t	df	Sig.
EGP vs. ESP	7.479	92	.000

Table 2. T-test for genre-induced differences in performance

Table 2 shows that the test scores of the students on EGP and ESP passages are different at 0.01 probability level. Adding up mean test scores of all students in Table 1 shows that the performance of students on EGP texts was better than that on ESP texts (3.58+3.18=6.76 > 2.00+3.30=5.30).

Eta squared (η^2) was calculated for the effect size which came to 0.37. This index shows the strength of association between two variables of text genre and reading comprehension which is 37% in this case. This indicates that the two independent and dependent variables of the study are related.

5. Conclusion

This study was an attempt to explore the effect of two different genres (general versus medical English textbooks) on the reading comprehension of EFL students. The findings indicated that readers were significantly more proficient in comprehending EGP texts compared to ESP texts. This is partly in line with Salager-Meyer's (1991, as cited in Alderson 2000) finding concerning the relative superiority of topic familiarity over text structure familiarity in text processing. In other words, when learners are acquainted with the topic at issue, they have fewer obstacles in extracting meaning out of a passage. With regard to the present study it might be claimed that since the students had previous experience with EGP passages while passing their general English course at university and during their high school education, their performance was markedly better in EGP texts in comparison with that in ESP passages.

The inability of readability formulas to exactly mirror text difficulty might be the second reason for the better performance of learners on EGP texts. As Alderson (2000) puts it, readability indices do not seem to be reliable because they focus on a very limited number of factors such as lexis and syntax to gauge the passage difficulty and fail to consider many other elements involved, including text genre. In fact, these formulas restrict their computations to sentence level and do not go beyond to consider discourse factors and ultimately text genre. In the present research, although the text difficulty of both passages was the same, there might be some other determining factors at work which make EGP passages easier to understand, at least for the learners of this study.

Finally, some other areas for further research are recommended below. First, this study could be conducted with students belonging to different proficiency levels to explore the moderating effect of proficiency level on reading comprehension. Second, similar studies could be performed to examine the differing influence of gender along with genre variation on reading comprehension. As another line of research the performance of students studying other academic disciplines such as Engineering, Social Sciences, Arts, etc. could be compared with their performance on EGP texts.

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Appendix

Passage one (FRE=60)

Thomas Alva Edison lit up the world with his invention of the electric light. Without him, the world might still be a dark place. However, the electric light was not his only invention. He also invented the phonograph, the motion picture camera, and over 1,200 other things. About every two weeks he created something new.

Thomas A. Edison was born in Milan, Ohio, on February 11, 1847. His family moved to Port Huron, Michigan, when he was seven years old. Surprisingly, he attended school for only two months. His mother, a former teacher, taught him a few things, but Thomas was mostly self-educated. His natural curiosity led him to start experimenting at a young age with electrical and mechanical things at home.

When he was 12 years old, he got his first job. He became a newsboy on a train that ran between Port Huron and Detroit. He set up a laboratory in a baggage care of the train so that he could continue his experiments in his spare time. Unfortunately, his first work experience did not end well. Thomas was fired when he accidentally set fire to the floor of the baggage car.

Thomas then worked for five years as a telegraph operator, but he continued to spend much of his time on the job conducting experiments. He got his first patent in 1868 for a vote recorder run by electricity. However, the vote recorder was not a success. In 1870, he sold another invention, a stock-ticker, for $40,000. A stock-ticker is a machine that automatically prints stock prices on a tape. He was then able to build his first shop in Newark, New Jersey.

Thomas Edison was totally deaf in one ear and hard of hearing in the other, but thought of his deafness as a blessing in many ways. It kept conversations short, so that he could have more time for work. He called himself a "two-shift man" because he worked 16 out of every 24 hours. Sometimes he worked so intensely that his wife had to remind him to sleep and eat.

Thomas Edison died at the age of 84 on October 18, 1931, at his estate in West Orange, New Jersey. He left numerous inventions that improved the quality of life all over the world.

1. In his life, Thomas Edison did things in this order:
   a. became a telegraph operator, a newsboy, and then got his first patent.
   b. became a newsboy, got his first patent, and then became a telegraph operator.
   c. got a patent, became a telegraph operator, and then became a newsboy.
   d. became a newsboy, a telegraph operator, and then got a patent.
2. In paragraph 3 line 17 the word ‘car’ means …..
   a. automobile.
   b. coach.
   c. machine.
   d. vehicle.
3. Edison considered his deafness …..
   a. a disadvantage.
   b. a blessing.
   c. something from a priest.
   d. a necessity.
4. Of all the inventions, the ….. was probably the most important for civilization.
   a. vote recorder
   b. stock ticker
   c. light bulb
   d. motion picture camera
5. The main idea of this passage is that …..
   a. Thomas Edison was always interested in science and inventions, and he invented many important things.

b. Thomas Edison could not keep a job.
c. Thomas Edison worked day and night on his experiments.
d. Deaf people make good inventors because they can focus without the distraction of spoken conversation.

Passage two (FRE=58.5)

The human skin can suffer from a number of diseases although the face is relatively immune. Constant exposure to air and sun protects the face from a lot of infections that are due to organisms that love dark and damp areas, such as between the toes. But for men, any diseases on the face can affect shaving.

The one face rash which is very common is acne. The complaint is far more common among youths than any other age group, especially young men. Unless a male patient has a desire to grow a beard, I advise him to continue shaving but rather sketchily, skating around the worst spots. He should use a good, unscented soap, or a medicated one.

Eczema of the face is much less common than acne. Again, keep on shaving, but avoid the worst areas as far as possible. Fortunately, eczema rarely lasts for anything like as long as acne.

Impetigo, another skin infection, seems to prefer the face to any other parts of the body surface. Germs affect isolated areas of the face but do not spread outwards from the main areas. Sufferers should seek medical advice since it is very often rapidly cleared up by the appropriate antibiotic drug.

Since the majority of men do not have the time to go to the barber, and therefore do their own shaving, barber's rash is now a rarity. Even among the few who still attend hairdressing salons, the latter are now almost invariably carefully maintained and have a high standard of hygiene.

Whatever the skin condition from which the face may suffer, the patient must always keep to his own towel. Also, the razor must be thoroughly cleaned after every shave, (though actual scalding is said to blunt the edge). Very occasionally a patient who uses an electric razor gets an allergic rash due to the chrome or nickel in the razor. But it is possible to identify the metal responsible and take precautions.

Finally, use pleasantly warm water for shaving when you have any skin trouble on the face, and don't follow the shaving by after-shaving lotion until the rash is better. There are plenty of shaving products for men that are available, such as skin soothers or moisturisers, so, if you are not suffering from any infections, there is no reason why you cannot have a close shave and maintain healthy skin.

6. The main idea of the passage is how to …..
   a. manage face skin troubles
   b. shave in cases of having skin infections
   c. follow hygienic rules in barber-shops
   d. treat skin problems in the best way
7. 'Skating around' in line 8 means …..
   a. shaving
   b. cleaning
   c. avoiding
   d. rubbing
8. How many different face infections are mentioned in this passage?
   a. Three
   b. Four
   c. Five
   d. Six
9. 'Keep to' in line 22 means …..
   a. share
   b. carry
   c. buy
   d. use
10. The writer is probably …..
    a. in favor of attending hairdressing salons

b. not in favor of attending hairdressing salons
c. in favor of a close shave
d. not in favor of a close shave

Passage three (FRE=48.6)

At the very top of a rocky, wind-whipped ridge above this sprawling ski resort west of Yellowstone National Park stands a towering grove of ancient whitebark pine trees. They are one of the few living things that thrive in the harshness at such altitudes, and they produce a large nut that is rich in fat and critical to wildlife.

There is mounting concern among biologists and other researchers, however, that global climate change may be creating conditions in and around the park that are inhospitable for the tree. If climate warming is the real, long-term phenomenon that many experts think it is, scientists believe it could set off a series of changes that could kill 90 percent or more of the whitebark pine trees and possibly compromise the future of the threatened grizzly bear.

The whitebark pine produces cones with pea-size nuts that bears eat in the fall. "Of all the vegetable foods in the ecosystem, whitebark pine is probably the most important," said Chuck Schwartz, leader of the Interagency Grizzly Bear Study Team, a federal agency responsible for protection of the bear. "They are critical to the fall fattening process to get the bears through the winter."

11. The word 'inhospitable' in line 7 means …..
    a. dangerous
    b. welcoming
    c. far-reaching
    d. inviting
12. The main idea of this passage is that .....
    a. whitebark pines can live at high altitudes
    b. grizzly bears eat whitebark pine nuts
    c. global warming may be a real problem, but no one knows for sure
    d. global warming is affecting whitebark pines and grizzlies
13. Grizzly bears need to eat whitebark pine nuts because the nuts …..
    a. are the only food available in the park
    b. help the bears fatten up for the winter
    c. contain an important kind of protein
    d. are hard for other animals to open
14. Chuck Schwartz's job is to ..…
    a. manage Yellowstone National Park
    b. protect grizzly bears
    c. protect pine trees.
    d. save pine trees from bear damage
15. Scientists believe that global warming is affecting grizzly bears by…
    a. making their coats less warm
    b. causing them to have fewer cubs
    c. increasing the number of animals that can kill them
    d. harming the trees that produce their major food

Passage four (FRE=47.6)

Surgery has always been one of the most effective ways to remove cancers. By the removal of localized growths, the patient may be completely cured. Approaches to treatment may be varied, and may not, in some cases, even include surgery. X-ray or radium treatment is employed successfully in many types of pelvic cancer. Chemical therapy includes hormone treatments of breast and prostate cancer, and also drug management of the leukemias, blood cancers. Often a combination of surgery, X-ray, and drugs is used.

Among the substances being applied in studies of cancer treatment is a product in various forms known as aminopterin and teropterin. A substance called folic acid has the power to stimulate the growth of blood cells. The substance called aminopterin opposes folic acid. Therefore, it has been used in an attempt to control rapid growth of cells, and there seems to be evidence that in some instances it does delay growth because patients may say that they feel better and suffer less pain. In addition, aminopterin has been applied with some success in attacking leukemia.

The use of radioactive isotopes is the most exciting of the recent approaches to the treatment. Since these chemicals are likely to go directly to one tissue of the body, they concentrate in that organ and destroy abnormal tissues there. Cancer of the thyroid has been successfully treated by using radioactive iodine. Iron, sodium, potassium, chlorine, bromine, calcium, strontium, sulphur, carbon, and hydrogen have all been subjected to experiments in controlling growths in various parts of the body. Radioactive phosphorus has also been applied externally to warts, moles, and other growths on the surface of the body, and in some instances with apparent success.

The nitrogen mustard chemicals, developed for the use in warfare, have been helpful in destroying cancer cells of the blood. These drugs are used effectively in Hodgkin's disease, chronic leukemia, and in other forms of blood tumors.

Much remains to be learned about cancer, and much will depend on the cooperation of patients in promptly reporting to their doctor any suspicious signs. Regular yearly checkups aid in early detection of cancers.

16. One of the most effective ways of cancer treatment is …..
    a. the removal of localized growth
    b. the exposure to X-ray
    c. chemical therapy
    d. drug management
17. Aminopterin is one of the substances applied to …..
    a. stimulate the growth of blood cells
    b. develop folic acid
    c. control rapid growth of blood cells
    d. develop leukemia
18. Radioactive isotopes is a recent approach to …..
    a. concentrate cancer in one tissue of the body
    b. the treatment of blood cells
    c. control the growth of radioactive iodine
    d. the treatment of the thyroid
19. The nitrogen mustard chemicals are helpful in …..
    a. destroying the affected cells in pelvic cancer
    b. the treatment of growths on the surface of the body
    c. chronic leukemia and other forms of blood tumors
    d. attacking folic acid in the blood
20. Cancer can be prevented and treated successfully by …..
    a. regular yearly checkups
    b. increasing the intake of folic acid
    c. learning more about cancer
    d. consuming mustard

FORMULATING IDENTITY IN ACADEMIC WRITING ACROSS CULTURES: N-GRAMS IN INTRODUCTION SECTIONS[1]

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Abstract
Language and identity are claimed to be constitutive of knowledge production and thus become integral to writing. In this article, I start from the premise that a relationship between knowledge construction and academic text production is negotiated in intercultural contexts (cf. Connor 2008) under the constraints of social, cultural and personal factors (cf. Canagarajah 2002). As reported by scholarly work (Swales 2004; Bhatia 2004) this relationship is reflected at a textual level in a range of linguistic and discoursal conventions that are commonly agreed for successful English-medium scholarly exchange. Further, this relationship is to be understood as constituting a frame of reference for the inquiry into language and identity-related questions. In this study I take the case of the biomedical discourse community to examine and illustrate the two different textual responses of L1 English and L2 English (Spanish) scholars publishing research in international English-medium journals. Essentially, I analyse the linguistic expression of disciplinary identity when culture (i.e. a different linguistic background) is factored into scientific discourse. Corpus results suggest that the research article is a negotiated intercultural space which promotes a shared disciplinary identity across cultures to provide a temporarily stable ground for further social action. However, results also indicate that the linguistic expression of identity throughout the different rhetorical sections of a research article does not completely erase cultural identities and that it is difficult to disengage references to these in English-medium academic writing practices.

1. Introduction

It is broadly claimed that the research article genre acts as an instrument of discourse communities in knowledge construction and dissemination practices (Atkinson 1999; Bazerman 1988; Berkenkotter & Huckin 1995; Myers 1990; Knorr-Cetina 1981; Swales 1990, 2004). Furthermore, it has been consistently argued that research article writing becomes one of the central elements of knowledge production practices in the context of an “increasing sensitivity to the connection between writing and knowledge these days” (Canagarajah 2002: 45). Currently a much discussed academic genre across a wide range of disciplines and cultures (Fløttum *et al.* 2006;

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Hyland 2000), it is mainly regarded as a written specialized text that aims to inform an academic audience of peers of the research carried out in the discipline in a way that requires careful discourse planning in agreement with a community's broadly agreed set of common public goals (Swales 1990, 2004).

The focus on the relationship between research article writing and knowledge has revealed that discursive practices of the different academic tribes are contextualized and disciplinary territory distinctive, value-charged and directed at securing prestige and promotion as a result of successfully establishing claims within a community of peers (Becher & Trowler 2001). According to Canagarajah (2002: 66), "[i]f the new findings produced by the research are widely accepted, the scholar will earn more grants for research, hold patents on the products manufactured by using the findings, and finally gain more status in the academic world (as reflected in increased salary and promotions)." This claim endorses the view that research article writing does not simply describe and explain aspects of reality in a transparent objective fashion, valuing clarity, concision and rational argument above style or interpersonal factors to communicate research findings in a discipline-specific, empirically-oriented, standard textual format, i.e. Introduction-Method-Results-Discussion/Conclusions (IMRaD: see Swales 1990, 2004); the research article genre is also a rhetorical endeavour, with a strong audience- or reader-oriented dimension (cf. Bondi & Hyland 2006), most obvious in the Introduction section (Samraj 2002; Burgess 2002). Therefore, a range of rhetorical devices would be needed to support one's hypothesis against concurrent arguments and to convince an audience of peers, as illustrated by the 'create-a-research space' (CARS) rhetorical model proposed by Swales (1990: 142):

> the need to re-establish in the eyes of the discourse community the significance of the research field itself; the need to 'situate' the actual research in terms of that significance; and the need to show how this niche in the wider ecosystem will be occupied and defended. It follows that the amount of rhetorical work needed to create such a space depends on existing ecological competition, on the size and importance of the niche to be established, and on various other factors such as the writer's reputation (1990: 142).

Introduction sections often set forth a statement of purpose to 'create a research space'. Therefore, this part-genre has a conventional structure of organization that can readily be compared. However it is also widely acknowledged as the part of the research article writing which often gives writers difficulty and which can be used to determine whether an article will be accepted or rejected for publication (*ibid.*). Swales associates this difficulty with the fact that "[t]he opening paragraph requires the writer to make some decisions about the amount and type of background knowledge to be included, and authoritative versus a sincere stance [...] the appropriateness of the appeal to the readership, and the directness of the approach" (*ibid.*: 137). The Introduction section thus becomes one of the most demanding ones in terms of rhetorical effort.

Furthermore, the Introduction section is a rhetorical enterprise with important implications for users of English as a foreign language. Firstly, because non-English background scholars are compelled to publish in international English-medium journals to disseminate their work and validate it in the academic tribes which matter in their profession. In this respect, Moreno (2010) indicates that Spanish speakers are a neglected population of users of English as regards variation in non-native academic English although, as shown by a large-scale survey of Spanish scholars' training needs for research and publication purposes, there seems to be a high level of interest in publishing research articles in English in the field of medical sciences (Moreno 2012). In another recent ethnographic study from the Spanish academic context, Pérez-Llantada *et al.*'s (2011) informants point to the Introduction section as a problematic area, while Burgess (2002) has previously reported differences in the Introduction section written by Spanish scholars as compared to their native English counterparts based on a rhetorical move-analysis of linguistics research articles.

Secondly, from a different perspective, it has been argued that attitudes of academic publishing on the rhetorical processes of research article writing has implications for the identity of local scholars (see also Canagarajah 2002: 55; Bazerman 2001). On the one hand, English-only international publications seem to impose normative academic writing conventions at the expense of scholars' culture-specific rhetorical conventions (Curry & Lillis 2004). On the other hand, according to Flowerdew (2008), contrastive rhetorical analysis of academic discourse shows that there are discrepancies in the way information is organized in different languages and cultures. In other words, "vast complexities of the cultural, social, situational and contextual factors affecting a writing situation" (Connor 2008: 304) also influence scholars' self-representation. As reported by contrastive rhetoric research, identity is visible and reflects institutional policies and attitudes of academic publishing, but takes a different shape across diverse linguistic/cultural backgrounds (see Bondi 2004, 2009; Duszak 1997; Pérez-Llantada 2010, 2012; Yakhontova 2006). Since it is posited that writing is rooted in specific cultural traditions and ways of constructing knowledge (Bazerman 1988) and raises questions of identity (Berkenkotter & Huckin 1995; Ivanič 1998; Gee 1999), both culture and identity could thus be an important determinant of academic authors' rhetorical behaviour (Mauranen *et al.* 2010).

In line with this research, differences in the rhetorical behaviour of the authors across cultures and languages could be seen to produce different identity cues in writing. Features such as uncertainty avoidance, power distance, and individualism vs. collectivism may be reflected in the authors' use or avoidance of first person plural references. The textual effects thus created might range from the expression of their certainty and commitment to their claims to the appeal to group solidarity and communal opinion with a view to soliciting readers' acceptance of claims and community consensus. In addition, identity has to do with forms of engagement and disengagement with the beliefs and values of the disciplinary discourse community, and it appears to cohere with group identities in academic writing (Becher & Trowler 2001).

Research has paid attention to identity either as a co-textual mode (i.e. personal pronouns as words in texts, sections, moves, etc.) or as a contextual one (i.e. as indicators of voice, stance, evaluation, and metadiscourse). To approach its study and show its disciplinary or cultural specificities or variations, a combination of frameworks and methodologies has been used, giving a kind of multidimensional perspective on identity (cf. Bondi 2009; Bondi & Hyland 2006 with special attention to phraseology, collocation and semantic preference; also, on cross-cultural variations Duszak 1997; Fløttum *et al.* 2006 among others). However, one of the frameworks not yet applied to the study of identity from a cross-cultural standpoint in the Spanish-English biomedical research article Introduction section is that of phraseology (although see for instance Gledhill (2000) and Luzón Marco (2000) on grammatical collocation in medical research articles in English). Furthermore, according to Hyland (2008: 41), phraseological units constitute "an important component of fluent linguistic production", accounting for "the needs of the interactants, irrespective of different communicative situations, in which sender and receiver or addresser and addressee have different levels of knowledge concerning the specialized domain of communication" (Schulze & Römer 2008: 269).

This paper examines the phraseological patterns of first-person plural references as markers of identity in writing, i.e. word combinations such as *we show that*, which are governed by publishing and specific textual conventions related to matters of structure and language use in academic texts, i.e. CARS rhetorical organization of the research article Introduction section and English-medium international journals' writing conventions. The objective of this paper is to show the form, occurrence and distribution of 'we' n-grams in comparable sets of biomedical research article Introduction sections written by English and Spanish scholars publishing in English as a *lingua franca,* and thus identify cultural and linguistic differences in a rhetorically demanding standard communicative section.

1.1. *Theoretical framework*

As Römer (2009) suggests, the word is not the most useful unit of analysis in the search for discourse roles. As such this analysis explores word combinations instead of single words. Phraseological items are defined according to Schulze & Römer (2008: 265) as "strings of words that are highly structured, well-organized and firmly entrenched in the human being's mind". It could be hypothesized that an analysis of the rhetorical behaviour of the discourse community in a genre could rest on the phraseological expressions associated with communicative purposes and discourse roles specific to that genre. In this paper, 'we' n-grams, that is, continuous sequences of word forms that cluster around first person plural references in the biomedical research article Introductions section, are explored as indicators of writer identity, i.e. discourse roles which reflect the specific communicative purpose of the writer in a certain part of the introduction.

The theoretical framework within which 'we' n-grams developed in the Introduction section of biomedical research articles are explored can be summarized as follows:

– Introductions to academic articles often conform to Swales' Create-A-Research-Space (CARS) model (1990) and therefore show the importance of the general topic and particular issue concerned, outline the gap to be filled, and make the article purpose explicit.
- The rhetorical behaviour of authors has been mapped along three lines: (1) the national culture or language background line encompassing traits such as (dis)engagement, collectivity/individuality, collaborative, in compliance with social, cultural and personal factors which prompt the redefinition of their conventional meaning and hint at "our expectation that members of different

cultures have learned different ways of expressing themselves generally and that these affect academic writing"; (2) the national science or local disciplinary culture or community line indicative of a more competitive research environment or a less competitive environment associated with the dichotomy local or national vs. international audience which may trigger the use of different rhetoric and discipline (Shaw 2003: 344-345); and (3) the personal dimension associated with responsibility but also recognition, promotion and governmental funding which is assigned to individuals who publish research in scholarly journals (see *The Uniform Requirements of the International Committee of Medical Journal Editors* 2009, http://www.icmje.org/urm_main.html).

– Personal pronouns endorse discourse roles as "signs waiting to be filled in the instance of discourse, since the deictics do not refer to any objective reality but must constantly refer to the instance of discourse that contains them." Therefore, a set of discourse-defined semantic roles or functions which reflect the specific communicative purpose of the writer (see also Tang & John 1999; Kuo 1999) in a certain part of the introduction can be associated with personal pronouns, such as the following:

(a) the author as describer of the research
(b) the author as experiment conductor
(c) the author as opinion holder
(d) the author as cautious claim maker
(e) the author as fully-committed claim maker.

2. Corpus and methodology

2.1. *Data*

For the purposes of the present study, the Biomedical and Health Sciences (BHS) component of the *Spanish-English Research Article Corpus* (SERAC[2]) (see Pérez-Llantada 2008) was selected. The BHS-SERAC corpus is an electronic collection of English and Spanish research articles published in English-medium and Spanish-medium journals. It is designed as a specialized corpus consisting of 270 research articles, 90 written by native English scholars (English L1), 90 by Spanish scholars in English (English L2) and another set of 90 articles in Spanish (Spanish L1). The text files were sorted into two folders: ENG texts written by native English scholars, SPENG texts written in English by Spanish scholars and published in the same international journals as the ones in the first corpus, and SP texts written by Spanish scholars and published in national journals in Spanish. Each text file has been labelled with the name of the folder and a number, e.g. ENG 1, ENG 2, etc. The third subcorpus (SP) was deemed necessary to validate the findings of the ENG and SPENG

[2] The three sets of texts belong to the biological & health sciences component of SERAC (The Spanish-English Research Article Corpus) compiled by the InterLAE research group at the University of Zaragoza http://www.interlae.com/). I am most grateful to the research group for providing this comprehensive source for my linguistic analysis of n-grams.

comparison, following the *tertium comparationis* principle proposed by Connor & Moreno (2005). Samples of biomedical research article Introduction sections were selected, since journals in the field of medicine generally adhere to standardized conventions, i.e. the *Uniform Requirements for Manuscripts* (http://www.icmje.org/), as required by journals (see also Skelton 1994). This shared policy would thus secure the comparability between ENG and SPENG (see also Table 1 below for other features of the groups of texts, i.e. number of texts in the three subcorpora of Introduction sections, source journals[3] & year, type of text).

Corpus	ENG	SPENG	SP
Language	English L1	English L2 by Spanish L1	Spanish L1
Journals	British Journal of Haematology, Blood, Experimental Hematology, European Journal of Cancer, Journal of Clinical Oncology, British Journal of Cancer, European Urology, BJU International, Urology	British Journal of Haematology, Blood, Experimental Hematology, European Journal of Cancer, Journal of Clinical Oncology, British Journal of Cancer, European Urology, BJU International, Urology	Anales de Medicina Interna, Medicina Clínica, Medicina Intensiva, Oncología, Cirugía Española, Archivos Españoles de Urología, Actas Urológicas Españolas
Years	2000 – 2010	2000 – 2010	2000 – 2010
Type of texts	RA Introduction section	RA Introduction section	RA Introduction section
No. of texts	90	90	90
Word count	37,987 words	38,777 words	34,197 words

Table 1. BHS-SERAC Corpus of Biomedical Research Articles Introduction section

All texts in the corpus are kept in plain text file format, and so far no metalinguistic annotational material (like word class labels or paragraph markers) has been added. This version consists of body text sections only so that targeted searches can be performed; therefore, article headers (including date of publication, email address and affiliation of the authors), footnotes, and references were cut, and any kind of information about the author (name, affiliation, research interest) was deleted as this information was not deemed necessary in the rhetorical analysis of the texts (see Cortes 2004).

2.2. *Analytical steps*

The main strategy for the computerized extraction of recurrent word-combinations is the analysis of n-grams (i.e. the analysis of 2-, 3-, 4-, …, n-word sequences occurring in the corpus (cf. Biber *et al.* 1999). In this paper, the phraseological corpus engine *kFNgram* (Fletcher 2007) was used to explore the phraseological profile of the two sets of scholars' first person plural references. This program extracts contiguous lists of n-grams of different lengths (i.e. combinations of n words) from a corpus and their frequencies. Of note, although the four-word scope is "the most researched length for

[3] Ten articles were extracted out of each journal, except for the SP corpus.

writing studies" (Chen & Baker 2010: 32), Simpson-Vlach & Ellis (2010: 509) have suggested in a recent study that three-word bundles constitute many important recurrent word combinations. Therefore, for the present study lists of 3-grams (such as *we show that*) have been extracted. Since the two corpora are of a relatively small size and approximately equal, the cut-off frequency was established at a raw frequency of 3, occurring in at least three texts[4]. Table 2 and Table 3 show the threshold adopted as sufficiently representative of the corpora being examined, i.e. the raw cut-off frequency and the corresponding normalized frequency are set to 3 and 80, respectively.

Corpus	Set raw frequency threshold	Corresponding normalized frequency (per million words)
ENG	3	79
SPENG	3	77.4
SP	3	87.8

Table 2. Raw and corresponding normalized frequency thresholds adopted

Corpus	Set raw frequency threshold	Corresponding normalized frequency (per million words)
ENG	80	3
SPENG	80	3.1
SP	80	2.7

Table 3. Normalized and corresponding raw frequency thresholds for comparison

Frequencies of both tokens (in parenthesis) and types are provided. Overlapping word sequences were checked manually through concordance to avoid inflating quantitative results (cf. Chen & Baker 2010, Ädel & Erman 2012). Following Ädel & Erman (2012: 84), overlapping grams such as *here we report* and *we report the* merged into *here + we report the*, and the word is put in parenthesis when the sequence does not occur with it in all instances. In addition to producing lists of repeated word combinations, *kfNgram* also identifies patterns in the extracted n-gram lists and groups n-grams that differ by only one word in the same position together, e.g. *we investigated the*, *we report the*. Such groups of n-grams are called phrase-frames (henceforth "p-frames") and contain a wildcard character (*) that replaces any one word. The p-frame *we * the* thus summarizes the 3-grams *we investigated the*, *we report the*. *kfNgram* lists how many variants are found for each of the p-frames. A p-frame analysis hence provides insights into pattern variability to inquire to what extent John Sinclair's Idiom Principle (Sinclair 1991) is at work, i.e. how fixed language units are or how much they allow for variation across culture and/or languages.

For the analysis a contrastive L1/L2 English comparable corpus of research articles will be used following Connor & Moreno's (2005) comparability criteria for corpus

[4] Following Chen & Baker (2010), in this study all the frequencies of 3-*we*-grams are raw frequencies.

studies. To illustrate differences across cultures, a reference corpus of research articles written in Spanish is used.

3. Data analysis

This section reports on the refined lists of 3-*we*-grams in ENG, SPENG and SP groups of texts. In addition, the realizations of these sequences are compared across cultures and languages and the structural variation in the corpus is presented, followed by the functional classification of *we* 3-grams found in this study, i.e. discourse roles.

3.1. We *3-grams in Introduction sections*

This part of the analysis consisted of finding both common and different 3-*we*-grams together with their frequency of occurrence. Attention has recently been drawn to the need to distinguish between type and token frequencies in comparisons across corpora, since there might be differences and/or similarities which account either for a "narrow range of bundles but have very high frequencies of them, while another [corpus] might have the opposite pattern" (Chen & Baker 2010: 33). Therefore, the first step in the analysis was to check for 3-grams either overlapping or embedded in larger sequences (see also Biber *et al.* 1999). As shown in Table 4, the refinement prevented the retrieval of inflated quantitative data that resulted in the exclusion of six types from both ENG and SPENG, accounting for 24 tokens from the first and 26 tokens from the latter. As can be seen (Table 4), ENG seems to be similar to SPENG with regard to both occurrence (tokens) and types. These frequencies are in sharp contrast with the number of the tokens (3) and types (1) found in the Spanish L1 corpus for the Spanish *we*-sequence counterparts, i.e. queries of 3-grams containing *nosotros* and/or **mos*.

Corpus	Before refinement		After refinement	
	No. of 3-*we*-grams (types)	No. of 3-*we*-grams (tokens)	No. of 3-*we*-grams (types)	No. of 3-*we*-grams (tokens)
ENG	22	93	16	69
SPENG	18	86	12	60
SP	1	3	1	3

Table 4. Number of bundles before and after the exclusion of overlapping and embedded 3-grams *we*-sequences

Although, as Ädel & Erman (2010: 85) have pointed out, in the lexical bundles tradition only simple descriptive statistics have been used, more recent studies (Simpson-Vlach & Ellis 2010; Chen & Baker 2010) have used statistics in their studies. Therefore, the frequency difference across ENG and SPENG was tested for statistical significance, using the log-likelihood statistic[5]. No statistical significance was found

[5]To check statistical significance, Paul Rayson's online calculator was used (http://ucrel.lancs.ac.uk/llwizard.html), accessed August 2012.

when comparing type frequency (LL= 1.33). However, in the case of tokens the log-likelihood value points to a significant overuse at the level of $p<0.05$ in ENG as compared with SPENG (LL= 5.21, $p<0.05$).

3.2. *Non-shared and shared* we *3-grams*

Table 5 provides a list of *we* 3-grams divided into those that are found in L1 and L2 English writers groups. Table 6 shows only those grams which are shared across subcorpora, indicating in brackets first the frequency for the L1 English group, and second the L2 English group. For the most part, as Ädel & Erman (2012: 85) argue, it should also be taken into account that criteria, i.e. frequency and dispersion, influence what is included in the list, but it does not necessarily mean that if an n-gram is present only in the list from the L1 English writers it is not used by their L2 counterparts and vice versa.

Corpus	ENG	SPENG
***We* 3-grams**	. we also (9)	#. we (10)
	. we previously (4)	and we have (3)
	. we therefore (3)	in addition we (4)
	et al #### we (5)	in + this paper we (3)
	(to test) + this hypothesis we (3)	in + this report we (3)
	we have used (3)	we have recently (3)
	we hypothesized that (7)	we investigated the (4)
	we recently reported (3)	
	(here) + we report the (5)	
	we set out (+to) (3)	
	we sought to (4)	
	we studied the (3)	
Type	11	7
Token	52	30

Table 5. Distribution of *we* 3-grams in ENG and SPENG, including raw frequency in brackets

Corpus	ENG & SPENG	SP
***We* 3-grams**	. here we (4; 4)	en este articulo presentamos (3)
	. we have (4; 7)	
	in the + present study we (4; 8)	
	in + this study we (3; 8)	
	we show that (6; 3)	
Type	5	1
Token	21; 30	3

Table 6. Shared *we* 3-grams in ENG and SPENG

As can be seen in Table 5, overall there are 52 *we* 3-grams in ENG and 30 in SPENG, the second group representing around 57% of the tokens in the first subcorpus. Thus, it can be said that L1 English scholars generally use more *we* 3-gram sequences than their Spanish counterparts in their writing. With regard to the n-grams absent from the non-native list, the sequence containing both the research noun, i.e. *hypothesis* and the research verb, i.e. *hypothesize* and the grams *we sought to, we set out to* offer a complex picture, in that native English scholars seem to show more variation as far as the possibilities for structuring *we* sequences are concerned. Furthermore, another difference is established in that non-native English scholars seem to draw on the research noun *report* in the sequence *in this report* as an alternative to the noun commonly used in this structure, i.e. *study*, whereas in the native list it appears in the active voice construction *we report the*. In contrast, the use of the sequence *and we have* might point to a cultural pattern specific to the Spanish language which favors the use of long sentences, a claim supported by the use of the coordinating conjunction *and* in this gram. Perhaps it is also important to consider that the *we* 3-gram which has the highest number of occurrences in the native list, i.e. *we also* (9), is a sequence which joins the human agent *we* and an adverb related to signalling the connection between specific information and the authors' point to ensure coherence in the development of arguments. Since academic discourse has the reputation of foregrounding the information being conveyed rather than the human agent, it is a pattern which should not be ignored. If this is weighted against the most frequent sequence in the non-native list which emphasizes the use of sentence-initial *we* after citation markers, i.e. *#. we* (10), it could be inferred that these sequences would help to build a promotional space in the Introduction section (cf. Bhatia 1993, 2004).

With reference to shared bundles, around 20% of the bundles are shared by the two groups. However, there are differences in the frequencies of the majority of these shared grams across subcorpora (as shown in Table 6). As such, non-natives use almost twice as often the sequences *.we have, present study we, this study we* as compared to the other group, whereas native English scholars use *we show the* more than their Spanish counterparts. With regard to the sequence *. we have*, its use may be considered as typical of academic discourse in that it implies the continuing validity of earlier findings or practices (Biber *et al*. 1999: 465). It is also important to note that the presence of the *we* 3-gram *en + este articulo presentamos* [in+ this article/paper/report we present] in the SP corpus points not to a cultural pattern, but to a genre-related use of these shared grams in the Introduction section, i.e. *here we, present study we, this study we, we show the*, as they have been shown to be important devices in the CARS model inasmuch as they introduce the purpose of the article (Swales 1990, 2004). Furthermore, it is unclear whether the fact that non-natives overuse this type of metadiscourse (such as *in+this study we*), but also that they use different wordings from the native writers (e.g. *in+this paper/report/study we*) is related to a cultural pattern.

3.3. *P-frames in Introduction sections*

Sinclair (1991) argued that multi-word sequences can be discontinuous, with high frequency function words as fixed elements co-occurring with variable lexical slots.

Here I turn from n-grams to p-frames to inquire into pattern variability: the patterns that occur most commonly in the corpus are identified (with the floor set at three, meaning that only items that occur three or more times are included). The different ways in which those patterns are variable or fixed are also determined, contrasting the overall patterns of use in ENG and SPENG. No instance of patterns for *we* 3-grams has been recorded in the SP subcorpus.

Three type patterns can be distinguished (see Table 7), namely:

a) the pattern in which the first and second positions are fixed, while the third slot is variable (12*), e.g. *this study we/was, .we also/have/report/recently/therefore, we report the/on*; as can be seen from these examples, within this type pattern it can be observed that there are cases in which *we* occupies the variable slot (illustrate impersonal vs. personal constructions choices) and cases in which *we* is fixed with other items in the variable slot (personal constructions);
b) the pattern in which the first and the third positions are fixed, while the second is variable (1*3), e.g. *we show/hypothesized that, this study/report/paper* (personal constructions);
c) and the pattern in which the first slot is variable, with fixed second and third positions (*23), e.g. *present/this study we, ./study/and we have* (personal constructions).

Pattern Type	Categories	ENG	Variable slot (*)	SPENG	Variable slot (*)
(1) Pattern type 12*	(1a) we in variable slot (3)	al #### *	and (17), the (13), in (7), although (7), we (6), a (4), which (3), these (3), it (3), but (3), as (3), however (3)	in addition *	to (10), we (6), in (3), the (3)
		present study *	was (7), we (4)	present study *	was (9), we (8)
		this study *	was (8), we (3)	this study *	we (8), was (5)
	(1b) we fix in 2 (ENG) or 1 (SPENG)	. we *	also (9), have (5), report (4), therefore (3), recently (3), previously (3), hypothesized (3)	we report *	the (3), on (3)
(2) Pattern type 1*3	(2a) we fix in 1	we * that	show (6), hypothesize (6)	we * that	show (4), demonstrate(d) (6)
		we * the	report (5), studied (3), evaluated (3)	we * the	report (3), investigated (4), analyzed (3)
	(2b) we fix in 3	this*we	study (3), hypothesis (3)	this*we	study (8), report (3), paper (3)
(3) Pattern type *23	(3a) we fix in 3	* study we	present (4), this (3)	* study we	present (8), this (8)
	(2b) we fix in 2	* we report	. (4), here (3)	* we have	. (8), study (5), and (3)

Figure 1. Pattern types and variable slots (*) in ENG and SPENG

Figure 1 shows the proportions for the two cases found for pattern type 12*, that is, the case in which the third variable slot is filled by a word different from the personal pronoun (impersonal construction) or in which the third variable slot is the personal pronoun *we* (personal construction). These proportions indicate that the use of personal constructions is more common in the non-native corpus (42%) than in the native corpus (13%). However, if we compare impersonal and personal constructions, it seems that the latter represent more than half of the total occurrences of the pattern 12* in SPENG, whereas the highest percentage is found in ENG. The variable slot in this type pattern for impersonal constructions (see Table 7) is either a function word or the copular verb *be*.

Table 7. Distribution of impersonal and personal constructions, the percentage of all sequences patterned 12* in ENG vs. SPENG

Whereas the first pattern type subcategory (1a) can be considered a variable one as regards the position of *we* in the 3-gram, the other subtypes show a fixed position of *we* in all possible fix slots of the 3-gram. As far as the variable slot (*) is concerned, this is filled either by function words or lexical items, i.e. research verbs and nouns such as *study, report, hypothesize/hypothesis, analyse, investigate, evaluate, demonstrate*. Contrasting across corpora, the pattern type (1b) records a wide range of options in the variable slot in ENG, thus illustrating perhaps the most striking difference between native scholars and Spanish scholars publishing in English (Table 7).

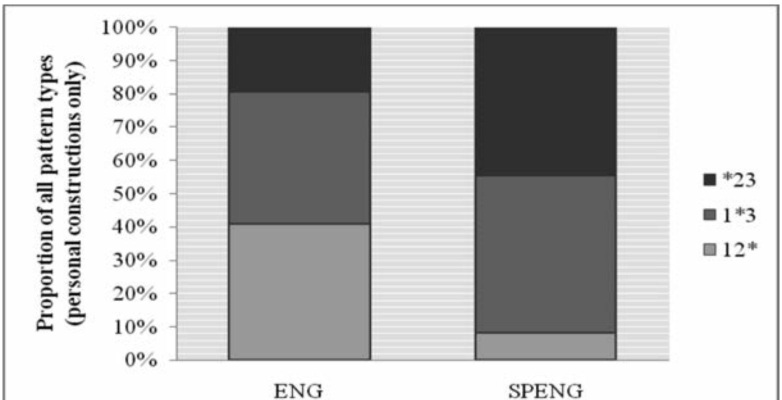

Figure 2. Proportional distribution of all pattern types (personal constructions only) in ENG and SPENG

In relation to the distribution of the three patterns for personal constructions across the native and non-native subcorpora, the following tendencies can be observed (see Figure 2). SPENG writers use the pattern type 12* less than their native counterparts. Conversely, the pattern *23 is used more in the non-native corpus than in the native one. Finally, the pattern 1*3 offers a more balanced picture of its distribution across ENG and SPENG. This is not unsurprising since the *we* 3-grams in this pattern are discourse frames (Biber & Barbieri 2007), i.e. *we (show) that, we (report) the,* thus of high importance in framing arguments and, consequently, of a more fixed or even formulaic nature (formulaic frames).

3.4. *Discourse roles*

As Rounds (1987: 15) suggests, personal pronouns endorse discourse roles as "signs waiting to be filled in the instance of discourse, since the deictics do not refer to any objective reality but must constantly refer to the instance of discourse that contains them". Furthermore, based on interviews, Harwood (2007: 27) accounts for seven textual effects of the pronouns *I* and *we* which

> are said to help (i) make the readership feel included and involved in the writers' argument; (ii) make the text more accessible; (iii) convey a tentative tone and hedge writers' claims; (iv) explicate the writers' logic or method regarding their arguments or procedures; (v) signal writers' intentions and arguments; (vi) indicate the contribution and newsworthiness of the research; and (vii) allow the writer to inject a personal tenor into the text.

The textual effects of the personal pronouns may be summarized as a set of discourse-defined semantic roles or functions which reflect the specific communicative purpose of the writer (see also Tang & John 1999; Kuo 1999; Martín Martín 2003) in a certain part of the introduction. The following discourse roles are considered here:

The author as describer of the research role, guiding the reader, underpins the engagement of the writer with readers. The textual effect of *we* 3-grams may consist in signalling writers' intentions, as in the following examples:

– announcing present research (as in 1), or announcing principal findings (examples 2 and 3) in Move 3, the last rhetorical move of the Introduction section, that is, the "occupying the niche" move, using, for instance, *we* 3-grams such as *in the + present study we, in + this study we, .here we, we show that, we report the.*

> (1) *In* <u>this study, we</u> *estimate the breast cancer risks for women with a strong family history of breast cancer, but tested negative for a mutation in BRCA1 or BRCA2 (ENG 60)*
> (2) Here<u> we show</u> *that dietary PUFAs themselves are not strong stimulators of CaP invasion but require adipocyte processing.* <u>We</u> *also* <u>show that</u> *AA induces invasion itself and induces differentiation of BM mesenchymal stem cells (MSC) into adipocytes, which are themselves potent inducers of invasion (ENG 54)*
> (3) In the <u>present study we show that</u> *this type of non-apoptotic Fas signalling during*

the process of T cell blast generation is needed for the induction of Bim expression and the sensitization of these cells to death by cytokine deprivation (SPENG 6)

– outlining purposes (Move 3); here it can be seen how writers use adverbials to develop arguments, e.g. *in addition we, . we also* (see examples 4 and 5):

(4) <u>We also assessed</u> *the effects of FLT3 inhibition on proliferative and antiapoptotic signaling to enable greater understanding of the inter-patient variations in signaling patterns that appear to influence the onset of cytotoxicity. (ENG 16)*
(5) *(…) the objective of this study was to expand our understanding of the antiaromatase properties of melatonin and to assess whether the promoters that drive aromatase expression are regulated by melatonin and to evaluate (…).* <u>In addition, we</u> *studied whether the effects of melatonin on aromatase expression are related to the effects of this hormone on intracellular cAMP concentration (SPENG 42)*

– or establishing a niche (Move 2); in the case of the sequence . *we therefore* it might be said that, in addition to its linking role, it is used to connect the writers' claim to supporting facts, and thus it could be read as an attempt to make the reader feel included and involved in the writers' claims, through the emphasis of the conclusions that the writer expects the reader to draw (as shown in 6). Perhaps it is worth pointing out that although this expression did not occur in SPENG, it does not mean that it is not used at all by the L2 scholars, but that it did not meet the criteria previously established in the retrieval of these sequences in the current study (see example 7):

(6) *A range of tools is available for the genetic manipulation of the zebrafish, as are extensive genomics resources, including a draft sequence of the entire genome.* We therefore selected *this species as an ideal organism for the generation of a simplified, genetically tractable model using fluorescent neutrophils to track the inflammatory response (ENG 13)*
(7) *Moreover, a longer confirmatory study for this strategy in poor prognosis DLBCL has not been reported.* Therefore, we *performed a prospective study with DA-EPOCH plus rituximab (DA-EPOCH-R) in newly diagnosed intermediate-high and high-risk DLBCL. (SPENG 29).*

Inasmuch as the majority of *we* sequences in the above-mentioned examples might represent fixed, formulaic discourse frames, no cultural-related patterns seem to be recorded in SPENG Introduction sections concerning this role.

The author as experiment conductor role is related to explaining research or reference to the main research procedure. The textual effect of *we* 3-grams for this role is that of foregrounding the writer as agent in situations where it is necessary to detail writers' logic or method regarding their arguments or procedures, as contributors in the development of arguments, e.g. *we studied, we analyzed, we demonstrate(ed), we investigated, we evaluated, we used*, *we hypothesized*, (*to test*) *this hypothesis we*. These are alternatives to impersonal expressions traditionally used in academic writing.

(8) *To test* this hypothesis, we *developed and externally validated a contemporary nomogram predicting the probability of SVI in a split-sample cohort. Moreover,* we used *our external validation cohort to perform a head-to-head comparison of predictive accuracy estimates of our nomogram with that of Koh's and Partin's tools [16,19] (ENG 61)*
(9) […] we analysed the *role of CB2 receptor in the androgen-resistant prostate cell line, PC-3, which represents the androgen-refractory phase of advanced prostate cancer.* We used the *anandamide analogue, R(+) Methanandamide (MET), for comparison with previous results, and a potent and selective CB2 receptor agonist, JWH-015 (JWH), as well as CB2 antagonists and RNA silencing to show the role of CB2 in PC-3 cells (SPENG 43).*

The author as opinion holder role might be interpreted as allowing the writer to inject a personal tenor into the text, the opposite of what has been done previously. Only one *we* 3-gram could be said to fit into this category, namely *we set out (to)* inasmuch as it marks the source of knowledge, and it was found in the native subcorpus. Since this role is related to tenor, it might be expected that such expressions would not occur in fixed continuous sequences. In example 10 this sequence performs the rhetorical transition from establishing the niche (Move 2) to occupying it (Move 3).

(10) *Previous studies examining gene regulation by COX-2 in CRC cells have focused on long time points and have used relatively high doses of NSAIDs (Zhang and DuBois, 2001). With this in mind,* we set out *to explore early changes in gene expression in CRC cells resulting from low-dose treatment with a selective COX-2 inhibitor, to improve our understanding of the early signalling events downstream of prostaglandin production. […] The aim of this study was to explore the relationship between COX-2 and DRAK2 as a potential downstream regulator of cell survival in CRC (ENG 57).*

The author as cautious claim maker role puts forth a textual effect in which communality can be said to be strong inasmuch as there is a concern to convey a tentative tone and hedge writers' claims, e.g. *we sought to* in ENG. As can be seen in example 11, it could be used to establish the niche and mitigate the potential negative effect of the gap indicated previously. Again, although this sequence or another similar one was not observed in SPENG, as example 12 below shows, non-native scholars are also cautions when making claims.

(11) *To the best of our knowledge, no comparative study has evaluated the impact of LRN and LPN on long-term renal function.* We sought to *investigate the long-term effect of LPN and LRN on sCr in patients with two normal kidneys on imaging and normal preoperative sCr (ENG 78)*
(12) *On the other hand,* we should consider *that the cellular type (tumoural cell/stromal cell) expressing these factors* might be *of biological importance in breast cancer (see Decock et al, 2005, for review) (SPENG 46).*

The author as fully-committed claim maker role reveals the author as a committed community member who indicates the contribution and newsworthiness of the research. Consider for example the use of *we* 3-grams such as *we (have) recently* with an emphasis on the temporal relationship between two events; furthermore, the use of the present perfect can be noted in the sequence *we have,* an aspect which has been suggested as typical of academic discourse in that it implies the continuing validity of earlier findings or practices (Biber *et al*. 1999: 465). For instance, in example 13 below, the phrase *we recently reported* is part of the rhetorical move 1, establishing a territory by placing their research within the field opting for the visible phrase rather than using an impersonal construction. On the other hand, example 14 shows how non-native writers also place their research visibly (*we, the most important*) within the field.

> (13) *Despite advances in therapy, there exists a growing recognition of potential long-term health problems related to therapies for childhood cancer.* We recently *reported that by 30 years after a cancer diagnosis,* *73%* *of survivors suffer from a chronic health condition, with 42% of these individuals having a* *severe or life-threatening disease* *or* *death* *owing to a chronic condition 2 (ENG 49)*
> (14) We have recently *shown that the methylation of cytosine nucleotides in ALL cells may be* *the most important way* *of inactivating cancer-related genes in this disease (SPENG 1).*

It could be claimed that, inasmuch as the agent is marked for the rhetorical purpose of establishing a research niche, this fact points to and supports the previously observed characteristic of the Introduction section as a promotional space (Bhatia 1993, 2004).

4. Conclusion

In this paper I set out to explore the phraseological profile of *we* first-person pronoun references in native and non-native biomedical research article Introduction sections and address the question of whether culture-specific features can be explored through phraseological items in written academic English. I compared frequencies and lists of *we* 3-grams and 3-p-frames taken from the corpus (each capturing native and non-native productions) in order to see in what ways nativeness affects language patterning and displays cultural patterns with regard to *we* sequences.

The section-based frequencies show that there are differences in that English L2 scholars show a greater degree of formulaicity. The 3-gram analyses show that there is an overlap between the ENG and SPENG-based lists, but that there are also differences among the two sets of scholars which cannot be explained only by the use of personal references in Spanish L1. The latter group shows a high degree of impersonality, seemingly almost avoiding the use of n-grams with *we* references. Whereas similarities between English L1 and English L2 can be explained by the disciplinary and genre-specific phraseology, differences can be interpreted as a sign of the L1 vs L2 language user status. The 3-p-frame analysis supported the findings from the n-gram explorations and also point towards specific genre strategies that the L1 writers use such as the use of fixed expressions to point out the characteristic communicative purposes of Introduction sections.

As can be seen in the corpus used in this study, it is particularly common in Introduction sections to use *we* 3-grams as part of textual sentence stems, that is, main clauses which present assertions and observations indirectly and emphasize the interpersonal dimension. Some of these framing sequences have specific semantic content (expressing attitude, e.g. *we sought to*), but others are discursive formulae related to specific communicative purposes in the Create-A-Research-Space (CARS) rhetorical structure of the Introduction section (see also Bondi 2010). Examples include: *in the + present study we, in + this study we, .here we, we show that, we report the, in addition we, . we also, . we therefore, we (have) recently*.

The *we* 3-gram found to be similar in the three subcorpora, ENG, SPENG and SP, namely *in+this study we* may indicate a high awareness of genre-related phraseological items commonly used in the Introduction section as discourse structuring devices on the part of Spanish scholars publishing in English and Spanish, especially for the rhetorical purpose of announcing present research to occupy the niche in Move 3 (cf. Bondi 2010).

Overall, the set of discourse roles explored here for *we* 3-grams can be said to support the claim that it is important to establish an interpersonal dimension in discourse. The textual effects did not differ for the native and non-native scholars in the cases where instances have been found in both subcorpora. This finding perhaps adds to the hypothesis that the shared *we* 3-grams can be seen as formulaic discourse frames, as suggested by their use in the L2 English non-native corpus. However, as the contrast of the discourse roles across cultures shows, and perhaps as a limitation of the approach adopted in this study for the analysis of *we* sequences, other *we* phrases associated with the stance dimension (for instance *the author as cautious claim maker*) cannot be captured with the continuous sequences methodology, and it might be the case that cultural patterns could be revealed in these instances.

These items, together with their function and use, would probably be worth focusing on in academic writing instruction for L1 and L2 English scholars. Their significance consists in shaping a consistent disciplinary discourse identity, not necessarily subjective but where writers are visible as agents in the organization of discourse as shown by the discourse-structuring phraseological items, but also involved in establishing a genre-specific interpersonal relationship with their peers.

Canagarajah (2002: 291) emphasizes that knowledge brokering should become a multidirectional rather than unidirectional process with regard to content and linguistic and rhetorical forms. In addition, a different linguistic background, when factored into scientific discourse, brings to the fore social, cultural and personal factors that interfere with the expression of disciplinary identity and draw the use of rhetorical strategies when communicating research to a multilingual discourse community. First, social and personal factors interfere in the context of publication in English. Thus academics in Spain are under pressure to contribute to the advancement of knowledge using the current lingua franca of academia, i.e. English (Curry & Lillis 2004; Pérez-Llantada *et al.* 2011; Tardy 2004); in particular, "Spain is giving priority to publication in high impact international journals" (Pérez-Llantada *et al.* 2011: 22). As such, research on phraseologies in Introduction sections is needed to reveal rhetorical strategies of non-native scholars in internationally published research papers. Second, from the standpoint of culture, phraseological items suggest that the linguistic expression of identity is different in the two cultures, i.e. Spanish and English. Spanish scholars publishing in English-medium journals could thus be claimed to be in search of a global identity, instead of bringing to the fore their national identity, as they work in intercultural settings. Similar results have been shown in studies contrasting English and Spanish academic writing (Burgess 2002; Lorés Sanz 2006; Mur Dueñas 2009; Murillo 2011; Pérez-Llantada 2012) or English and other languages (Bondi 2004, 2009; Dahl 2004; Duszak 1997; Shaw 2003; Vassileva 2001; Yakhontova 2006). As a result, English can be argued to be "developing into an autonomous variety" which "is far removed from its speakers' linguacultural norms and identities" (Bondi 2004: 58).

An important implication for cross-cultural research is that there are similarities of n-grams among scholars engaging in similar practices regardless of their national affiliation. At this point, the control corpus allows us to turn from a focus on the national membership of scholars to what they do, to their participation in practices.

In conclusion, the introduction of a research article is a negotiated intercultural space which promotes a shared disciplinary identity across cultures to provide a temporarily stable ground for further social action. However, the linguistic expression of identity throughout the research article does not completely erase cultural identities and it is difficult to disengage references to it in international academic writing practices (see also Gotti 2009). These findings seem to indicate that when we deal with research article Introduction sections, biomedical writers move beyond the subjective vs. objective and L1 vs. L2 English distinctions to signal disciplinary and genre-related roles and identities. In this context, communicative performance seems a more important aspect to consider than nativeness/mother language status (cf. Bondi 2010; Römer 2009; Swales 2004). Non-native authors seem to write in a style which they consider to be similar to that of English L1 scholars.

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Appendix A

List of articles by native English scholars (judged by affiliation) from the **ENG subcorpus**, and by Spanish scholars publishing in the same journals in English from the **SPENG subcorpus**, used as data for the examples cited in the paper.

ENG Subcorpus

ENG 60 *Genetics and Genomics* KA Metcalfe, A Finch, A Poll, D Horsman, C Kim-Sing, J Scott, R Royer, P Sun and SA Narod (2009) "Breast cancer risks in women with a family history of breast or ovarian cancer who have tested negative for a BRCA1 or BRCA2 mutation". *British Journal of Cancer* 100(2): 421-425. doi:10.1038/sj.bjc.6604830.

ENG 54 *Molecular Diagnostics* MD Brown, C Hart, E Gazi, P Gardner, N Lockyer and N Clarke (2010) "Influence of omega-6 PUFA arachidonic acid and bone marrow adipocytes on metastatic spread from prostate cancer". *British Journal of Cancer* 102(2): 403-413. doi: 10.1038/sj.bjc.6605481.

ENG 16 *Neoplasia* Knapper, Steven, Mills, Kenneth I., Gilkes, Amanda F., Austin, Steve J., Walsh, Val and Burnett, Alan K. (2006) "The effects of lestaurtinib (CEP701) and PKC412 on primary AML blasts: the induction of cytotoxicity varies with dependence on FLT3 signaling in both FLT3-mutated and wild-type cases". *Blood* 108:3494-3503. DOI 10.1182/blood-2006-04-015487.

ENG 13 *Plenary paper* Renshaw, Stephen A., Loynes, Catherine A., Trushell, Daniel M.I., Elworthy, Stone, Ingham, Philip W. and Whyte, Moira K.B. (2006) "A transgenic zebrafish model of neutrophilic inflammation". *Blood* 108:3976-3978. DOI 10.1182/blood-2006-05-024075.

ENG 61 *Prostate Cancer* Andrea Gallina, Felix K.-H. Chun, Alberto Briganti, Shahrokh F. Shariat, Francesco Montorsi, Andrea Salonia, Andreas Erbersdobler, Patrizio Rigatti, Luc Valiquette, Hartwig Huland, Markus Graefen, Pierre I. Karakiewicz (2007) "Development and Split-Sample Validation of a Nomogram Predicting the Probability of Seminal Vesicle Invasion at Radical Prostatectomy". *European Urology* 53: 98-105. doi:10.1016/j.eururo.2007.01.060.

ENG 57 *Molecular Diagnostics* GA Doherty, SM Byrne, SC Austin, GM Scully, DM Sadlier, TG Neilan, EW Kay, FE Murray and DJ Fitzgerald (2009) "Regulation of the apoptosis-inducing kinase DRAK2 by cyclooxygenase-2 in colorectal cancer". *British Journal of Cancer* 101 (101): 483-491. doi:10.1038/sj.bjc.6605144.

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SPENG Subcorpus

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CITATION FROM A CROSS-LINGUISTIC PERSPECTIVE: THE CASE OF FRENCH RESEARCHERS PUBLISHING IN ENGLISH

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Abstract
The problems of non-English-speaking researchers who have to publish in English have been addressed by a number of cross-linguistic and cross-cultural studies. However, one core feature of research articles (RA), namely citation, has rarely been examined from this perspective. The present study therefore investigates the citation practices of French researchers publishing in English, using a corpus of the uncorrected pre-publication final versions of their articles in science and linguistics, and two comparable corpora of published RAs in English and French. The analysis focuses on three of the problems encountered in the data: hybrid citing styles, referential ambiguity and the use of reporting structures. The results show that the writer's native language and culture both impact on the management of citation. In particular, ambiguous inter- and intra-textual reference and the underuse of reporting verbs and nouns can appreciably diminish the efficacy of citation in the French researchers' articles written in English.

1. Introduction

The rise of English as the dominant language in international research communication has led to a considerable number of studies addressing the difficulties of non-English-speaking academics who have to publish in English. These investigations highlight the differences and culture-specific features which may result in an "unintentionally inefficient rhetoric" (Mauranen 1993). Much of this work has focused on differences in styles of argumentation and rhetoric (Ventola & Mauranen 1996; Candlin & Gotti 2004; Connor *et al*. 2008), with a specific focus on the move structure of research article (RA) introductions by writers of different languages – for example, Spanish (Sheldon 2011), Portuguese (Bennett 2010), Chinese (Loi 2010) and Brazilian Portuguese (Hirano 2009), to mention just some recent studies. Other features of the RA frequently examined from this contrastive perspective are the use of metatext (Peterlin 2005; Lorés Sanz 2006), authorial presence in the text (Fløttum 2003; Molino 2010), or modality and hedging (Vold 2006; Davoodifard 2008). While some studies (e.g. Shaw 2003) have concluded that the differences are barely perceptible and unlikely to have a negative impact on the text's efficacy, and others have stressed the importance of cross-disciplinary factors (Yakhontova 2006; Harwood 2009), the general conclusion to emerge from this research is that the writer's L1 has a non-negligible influence on a wide range of linguistic and rhetorical features in the RA.

One important aspect of research communication that has been rarely examined from a cross-linguistic perspective, perhaps because it is generally considered to be culture-free or culture-neutral, is that of citation practices (see however Mur-Dueñas 2009). Citation is one of the defining features of research articles, enabling writers to demonstrate familiarity with the literature in the field, position their findings and claims, and highlight the novelty of their research. A prominent theme in studies of citation is the use of reporting verbs (Thompson & Ye 1991; Hyland 2002; Charles 2006) and of integral vs non-integral citation (Swales 1990). Various rhetorical functions of citation, such as attribution, evaluation, and stance, have also been addressed (e.g. Chang & Schleppegrell 2011; Mansourizadeh & Ahmad 2011), as has self-mention (Hyland 2001). Several of these studies contrast the citation practices of expert and novice writers, and have shown that an ineffective use of citation by the latter significantly weakens the writer's argument and claims; Petrić (2007), for example, observed a correlation between effective citation practice and the thesis grade awarded. The strategic importance of citation therefore seems to be beyond doubt.

Among the few studies that have considered citation from a cross-linguistic perspective and investigated the specific citation problems of non-English-speaking writers, almost all focus on novice researchers such as graduate or doctoral students (see e.g. Thompson & Tribble 2001; Boch & Grossmann 2002; Charles 2006; Petrić 2007; Mansourizadeh & Ahmad 2011). This raises a methodological problem, however. The shortcomings in citation use by this population may stem from two different factors: their relative unfamiliarity with research discourse norms and/or their difficulties using the English language, making it hard to distinguish between the two. To obviate this problem, the present study focuses exclusively on the citation practices of expert non-English-speaking writers. These researchers can all be expected to be familiar with disciplinary and research publication norms; any problems encountered with citation in their articles can therefore be more reliably attributed to cross-linguistic factors.

The population studied is French researchers publishing in English. Like researchers in many other countries, they are under intense pressure to publish in English-language international journals and their academic success is largely conditioned by their ability to meet this requirement. The two authors of the present study have frequently been called upon by colleagues in other disciplines to correct their manuscripts before submission to ensure that they meet the increasingly stringent demands of journal editors and reviewers. We have therefore, over the years, amassed a corpus of pre-publication manuscripts by French researchers in various disciplines, in which we have noted a number of problems and anomalies in citation use.

These problems are detailed in the following section, in which we describe the cross-linguistic methodology adopted and provide some quantitative information concerning the overall frequency and type of citations in the corpus.

2. Methodology

Three subsets of articles were collected for this study. The first was drawn, as explained above, from our experience of editing research written in English by French academics and comprised the final versions of 40 research articles prior to their submission to journals and before correction of the English by the present authors (FWE). The articles covered several scientific fields (principally chemistry, physics and geology) as well as linguistics, and were written by experienced French researchers. We selected both hard and soft sciences with a view to making the results of the analysis useful for researchers from a range of disciplines. All these articles, once revised, were subsequently submitted for publication in international journals. The second subset consisted of a comparable corpus of 40 published RAs written by native English researchers [1] (NS) covering the same disciplines. The third subset consisted of a corpus of 40 published RAs written in French by French researchers (F), again in the same disciplines. The three subsets can therefore be considered fully comparable, following the principles laid down by Connor & Moreno (2005) for contrastive corpora, since the three main similarity factors, or *tertia comparationis*, are held constant: the genre (final versions of RAs), the writers' level of expertise (expert writers), and the subject matter (the same disciplines).

The corpus was structured in this way to enable us to adopt a cross-linguistic perspective. We first analysed all the in-text citations in the FWE corpus in detail in order to detect potential problems with citation and referencing. This analysis revealed three main categories of problems. The first concerns formal aspects related to the different citing conventions between French and English. Authors publishing in two or more different languages can on occasion confuse these details, resulting in hybrid forms of citation. The other two aspects have potentially more serious consequences on the efficacy of citation. The first is the ease with which the reader is able to identify the cited source. Citing the work of others requires a judicious use of referring devices, such as anaphora and deictics, so that the work or claim being referred to can be unambiguously identified and tracked by the reader, and distinguished from the writers' own study. A second source of ambiguity concerns the writers' stance with regard to the cited text. Both these aspects were found to cause recurrent problems in the corpus of pre-publication final versions by French researchers.

The second step was to check whether these problems also occurred in the NS corpus; if not, this was considered to indicate that it was perhaps a problem specific to French researchers writing in English. The corpus of articles in French was then used as a reference corpus to see which of the problems could be attributed to the direct interference of the French language or of French citation conventions, rather

[1] Three criteria were used to assign native-speaker status: i) the authors' institutional affiliations; ii) the fluency of the writing; iii) the preponderance of English publications in the references. In many cases, the authors' first and last names provided additional confirmation of their English L1 status. Although not completely watertight, these criteria were felt to be sufficiently discriminating with respect to the FWE authors, all of whom are affiliated to French institutions, live in France, and often cite publications in French. Any articles where we were unsure of the linguistic origin of the authors were discarded.

than to the idiosyncrasies of particular writers. When necessary the initial qualitative analysis was enhanced by corpus searches using the concordancer AntConc 3.2.1. [2], in order to systematize the searches and gauge the regularity of the features examined.

2.1. *Corpus breakdown and citation rates*

The size of the three corpora and their respective citation rates are shown in Table 1. Although the FWE corpus is smaller than the NS corpus in terms of word count – 190,000 words against 287,000 – the number of citations per 10,000 words is practically identical: 102 and 104. The frequency of citation in the French subset is also strikingly similar: 101.5. This suggests that whatever the language used there is a remarkable stability in the citation ratio among experienced researchers. It also seems to show that, quantitatively speaking, the French writers of English in our corpus may be considered to adopt the citation practices expected of expert writers.

Authors	Category	Number	Tokens	Citations per 10,000 words	Science*	Linguistics
French writers of English (FWE)	Uncorrected final versions	40	190,393	102	30	10
Native English writers (NS)	Published RAs	40	287,519	104	30	10
Native French writers (F)	Published RAs	40	243,910	101.5	25	15
TOTAL		120	721,822		85	35

* 'Science' is used here as an umbrella term to cover the three scientific disciplines (chemistry, physics, geology).

Table 1. Citation rates across the three corpora

2.2. *Referencing systems used in the three corpora*

The articles in these three subsets use the two main referencing systems prevalent in research articles today: the author-date and the number system. The vast majority (89%) of the linguistics articles but only 25% of the science articles use the author-date system, either integral as in (a) or non-integral (b):

(a) Goro (2004) provides a thorough investigation of the distribution of *to*-infinitives in child English (NS).
(b) *In situ* bubbling can be the major route of CH_4 flux to the atmosphere (McEnroe et al. 2009) (FWE).

The number system[3], again either integral (c) or non-integral (d), slightly predominates overall (56%), and accounts for 75% in the science and engineering articles:

[2] AntConc is a freeware concordance programme developed by Laurence Anthony of Waseda University, Japan. Available online at <http://www.antlab.sci.waseda.ac.jp>

[3] Also often referred to as the IEEE (Institute of Electrical and Electronics Engineers) system.

(c) Reference [8] shows the influence of the flow regime on performances for large tilting pads bearing (FWE).
(d) Recent work indicates that a very high resolution would be required [21, 22] (NS).

The number system raises some specific problems concerning anaphor and referencing, which are discussed below. Another characteristic feature of science articles is the almost total absence of verbatim quotation, confirming Dubois (1988). In the science part of our corpus there is only one full quotation and two brief one-line quotes. The absence of quotation obviously has an impact on the reporting verbs needed: verbs describing verbal processes (*say, remark, comment*, etc.) are not used in the science articles.

3. Results

3.1. *Formal features of FWE citing practices*

Although all the FWE authors adopted one of the two main international citing systems outlined above, there are some minor differences between the three subsets which suggest that citation knowledge is not completely culture-free. Whereas in-text references in English rarely use initials or first names except for disambiguation purposes [4], this is not the case in French (Memet 2001). Conventions appear to vary from one journal to another but initials and first names are common in French, e.g. *comme le dit Pierre-Marie Fayard; comme le souligne M-F. Mortureux* (as Pierre-Marie Fayard says; as M-F. Mortureux stresses). Some French journals also distinguish between the first and second mention of an author, with full first and last name being used for the first mention in integral citations, and subsequent references using only the initial or simply the last name (see for example the Instructions to Authors in the online version of the French interdisciplinary journal *Tracés*).

Several of the FWE authors in our dataset also followed these conventions in their English articles, resulting in a rather hybrid style of referencing, such as in the following examples:

(1) In keeping with prototype theory (Rosch, 1972; Taylor, 1989), **John Lyons** (1977) thus hypothesized…(FWE)
(2) The relevant criteria used for the description mainly come from the founding model put forward by **P. Brown and S. Levinson** (1987), but several remarks are inspired by more recent researches about impoliteness (viz. Culpeper, 1996; Bousfield, 2007) (FWE).

It would thus seem that some aspects of citation knowledge are implicitly linked to a particular linguistic culture. The FWE authors presumably reproduced these features without realizing their specificity. Whilst not serious ‘errors’, such citation patterns would undoubtedly be considered odd by English-speaking reviewers or editors unfamiliar with the details of French citation practices [5].

[4] See Harwood (2008), however, for a discussion of some occasional exceptions.
[5] It is interesting to note that citations in Spanish research articles also frequently use first names and initials (Sally Burgess, personal communication).

3.2. *Referential ambiguity*

Citation involves referring and therefore anaphoric and deictic pronouns and determiners can play a crucial role, creating cohesive ties so that the reader can make connections between parts of a text (Halliday & Hasan 1976). Writers of research articles need to attribute findings and claims unambiguously so that their own work can be clearly distinguished from that of the cited authors. Anaphors can frequently fulfil both external (inter-textual) and internal (intra-textual) functions. They can refer to previously mentioned external texts or be used as an intra-textual deictic reference to refer to the present text. However, if these cohesive links are not used appropriately, instead of making the text cohere, they can have an adverse effect. There are several examples in the FWE corpus where the inappropriate or imprecise use of deictics and anaphors, and the determiner *this* in particular, leads to a blurring of these textual planes and possible ambiguity about the attribution of claims and findings. It is often the case that *this* is associated with spatial or psychological proximity and *that* with more distal reference (Quirk *et al*. 1985: 374). In both the NS and FWE subsets the expression *this paper* is systematically used to refer to the citing writer's own paper. However in other combinations, such as *this work* or *this study*, the reference can also be to other external authors' research and it is thus vitally important that the co-textual environment should enable the reader to interpret the intended referent easily.

There are several cases in the FWE corpus where the identification of the referent is not immediately clear:

> (3) I take my inspiration of the semantic dimensions proposed by Mel'cuk and Wanner (1996) in the MTT framework on the one hand. However, there is a strong difference with **this kind of study** (Iordanskaia 1986, Mel'cuk and Wanner 1996, Grossmann and Tutin 2007). Firstly, the semantic dimensions in the cited studies are about the emotions. In my paper, the semantic aspects are about the BP (FWE).

It is difficult to know whether the expression *this kind of study* is being used intra-textually to refer to the writer's own study or inter-textually to the three external texts cited in brackets.

Likewise in the following example containing the similar expression *this work*, it is also difficult at first glance to see if the FWE writers are referring to their own article or to the study cited in the numbered reference:

> (4) The apparatus used was an evaporator AUTO 306 Edwards to joule heating. Its description and the sublimation process were detailed in a previous paper [1]. In **this work**, the process parameters of sublimation of GABA were optimized (FWE).

After consulting the authors, it turned out that the reference is in fact an intra-textual one to their own article, but the processing of this sentence could have been facilitated for the reader by further qualifying the noun group *this work* in order to clarify the identity of the referent or by introducing a paragraph break, thus signalling a change of direction in the text.

There are also occurrences of *this work* or *this study* in the NS corpus where the same ambiguity could arise. Interestingly, however, the NS authors frequently combine *this* with adjectives such as *previous, current* or *present.* In this way any ambiguity concerning the identity of the referent is dispelled:

> (5) It has been shown in work with model systems that this approach can be used to examine the interactions of solutes with HSA [22], making this method attractive for measuring drug dissociation rates from this protein. This **previous** work included a validation versus reference techniques (…) [5,7,9,10,16,22]. In this **current** study, the peak profiling method will be used to examine the binding of carbamazepine and imipramine with HSA (NS).

A concordance search focusing on the temporal adjectives *current, present* and *previous* revealed some differences between the NS and FWE subsets (see Table 2).

			FWE	NS
this/the	current	work / study	0	34
	present		31	39
	previous		16	27
TOTAL			47	100
Frequency per 10,000 words			2.4	3.5

Table 2. Use of qualifying adjectives with *this work/study*

Although it would be necessary to confront these results against a larger data set, the indications are that FWE writers have less recourse to these qualifying adjectives than their NS counterparts, suggesting that NS writers are perhaps more sensitive to the potential ambiguity of *this* when the noun group is used alone.

A similar problem with identifying the reference of the anaphor occurs with the expression *these authors*. In example (6) it is not clear exactly which authors are concerned:

> (6) Since the middle of the 90's, 3-D X-ray microtomography knew significant improvement. Thus, sandstones were largely characterized and the subject of many publications [6-8]. However, this technique is underused in the field of building conservation. Even so, X-ray computed tomography analysis allows to bring new information for this branch of research as shown recently [17-18]. **These authors** visualized bacterial weathering of concretes (FWE).

The number system prevalent in the majority of science papers in our corpus also appears to compound the deictics problem. As the citing writer cannot refer back by reusing the exact name of the cited author(s), it obliges him/her to use anaphoric referring devices *(these authors, this study, these works*), which in turn lead to more potential ambiguity than a named reference would.

Other examples with *these authors* in the FWE corpus that are perhaps less confusing but also infelicitous or awkward to process are illustrated in (7) and (8). In (7) the use of *the authors* would arguably have been more appropriate than the rather emphatic *these.* In (8) likewise the third person anaphoric pronoun *they* or the repetition of the names of the authors 'Dabros and Fyles' would have been more appropriate choices:

> (7) Recently Rudz et al. [11] have shown that the positions obtained after applying the image processing method are as reliable and accurate as those obtained after applying the heat flux approach. **These authors** highlighted the possibility to couple both methods for designing a new metrological tool which allows to calculate average geometrical… (FWE)
> (8) Recently, based on litter bag experiments, Dabros and Fyles (2010) studied the impact of OTCs on OM decomposition followed by elemental analysis (C, N, P, Ca...). In contrast to the study of Dorrepaal et al. (2009) on C respired, **these authors** have shown that higher air temperatures reduce (i) the temperature of the peat as a result of increased evapotranspiration (the paradox of "colder soils in a warmer world"; Groffmann et al. 2001) and (ii) Sphagnum decomposition (FWE).

Whereas anaphoric pronouns are generally used as a signal to continue the existing attention focus established (or assumed to be so established), deictic pronouns and determiners serve prototypically to draw the addressee's attention focus to a new object of discourse or to a new aspect of an existing one (Cornish 2008). However, in both examples (7) and (8) we have cases of constant theme progression. The theme/topic has already been established. In each case, the subject and theme of the sentence and the immediately preceding one have the same referent and thus sufficient textual salience; the use of the deictic determiner *these* is rather disconcerting as a result. The lexical head in this NP, *these* ***authors,*** does not add any new information to what we already know about this referent. For this reason too, the third person pronoun (*they*) or a definite NP (*the* authors), where the relation denoted by the head noun is understood as presupposed/given information, would have been more appropriate.

It is worth noting that there is only one example of the expression *These authors* in a citation context in the NS subset. The definite determiner *the* is more frequent, or, if there is a risk of ambiguity, the name of the cited author is repeated. What explanations can one give for the use of *these authors* by the FWE? There is possibly once again L1 language interference. The French determiner *ces*, in which the proximal/distal distinction is merged, has arguably less impact than the English *these*. In the citation contexts above *these authors* is perhaps to be seen as the equivalent of the much stronger *ces auteurs-ci*.

However it is also possible that this is not just a linguistic but also a cultural issue. Repetition in French is generally frowned upon (Corblin 1995). As Lundquist (2005, 2007) has shown, French writers often use a variety of lexical noun phrases to maintain co-referential chains rather than using pronominal anaphors or repeating the same formulation, which in the case at hand would have entailed repeating the names (or citation numbers) of the authors. This preference for what Lundquist terms "unfaithful anaphors" (2007: 40) can naturally lead to potential referential ambiguity. In examples (6) and (8) above, the repetition of the cited authors' names, instead of the expression *these authors* would have successfully removed any possible misunderstanding. Although a wider corpus search would be necessary to confirm the trend, repetition of the authors' names in our NS subset appears to be a perfectly acceptable feature, as illustrated in (9):

(9) Prominent in this area is the work of **Yalkowski [41]** who has published a series of papers describing the prediction of solubility using LogP (the logarithm of the octanol /water partition coefficient) and a term describing the energetic cost of the crystal lattice disruption. However **Yalkowski's work** is largely based on the prediction or estimation of the solubility of halogenated aromatic and polycyclic halogenated aromatic hydrocarbons [42], due to their great environmental importance (NS).

3.3. *Reporting structures*

In addition to problems of referential ambiguity, a second area where linguistic and/or cultural differences appear to impact on citation is the use of reporting structures. As well as attributing findings and claims unambiguously, writers of research articles also need to indicate their stance, or degree of commitment, to the cited sources in order to weave the cited work convincingly into their argument. Among the linguistic resources available to accomplish these functions the most common devices are reporting verbs (Thompson & Ye 1991; Hyland 2002; Charles 2006), reporting nouns (Charles 2007), and introductory adverbials such as *according to*. This section examines how these three resources are used by French researchers writing in English.

As Hyland (2002: 116) points out, "The use of a reporting verb is one of the most explicit ways of attributing content to another source, and represents a significant rhetorical choice. The wide range of verbs that can be used to introduce reports allows writers to convey both the kind of activity reported and whether the claims are to be taken as accepted or not." Two types of verb patterns are conventionally used: V-*that* (e.g. *Wexler claims that*…) and *it be* V-*ed that* (e.g. *It has been suggested that*…). The equivalent structures exist in French: V-*que* (e.g. *Salthouse et al. (1995) considèrent que)* and *il est* V-*pp que* (e.g. *il est admis que*). The occurrences of these two patterns were detected using the concordancer AntConc 3.2.1. with *that* as the search term in the NS and FWE subsets and *que* as search term in the F subset. As noted by both Biber *et al.* (1999: 680) and Charles (2006: 312), *that*-deletion is very rare in academic prose: this was confirmed by carrying out a back search on the eight reporting verbs most frequently used in the corpus (*argue, assume, conclude, demonstrate, find, note, show* and *suggest*) which revealed only six occurrences of *that*-deletion. No back-checking was necessary in the French subset, as *que*-deletion is not possible in modern written French. Reporting nouns also play an important role in indicating the writer's stance towards the cited sources (Charles 2007). The corpus was therefore searched for reporting nouns with a clausal complement (N-*that* e.g. *Bach's argument is that*; N-*que* e.g. *Ding et al. (2003) partent de l'idée que*), following the same procedure as for the reporting verbs. For both verbs and nouns, we excluded cases where no specific reference was made to a published work, author, or school of thought (see example 10) as these can be considered to be statements of general knowledge rather than citations:

(10) Indeed, **it is well known that** small modifications to the chemistry model can result in significant changes in the lift-off height of diffusion flames (NS).

The results are given in Table 3.

	Number of occurrences	As % of all citations	Number of different verbs/nouns used
Reporting verbs+that			
NS	393	13.2%	49
F	130	5.3%	25
FWE	112	5.7%	30
Reporting nouns+that			
NS	66	2.3%	12
F	11	0.4%	4
FWE	7	0.4%	4

Table 3. Reporting verbs and reporting nouns with clausal complements

If we compare first of all the figures for the two groups of researchers writing in their respective native languages (English: NS vs French: F), it can be clearly seen that these types of structures are not used with the same frequency in French and in English: the frequency of reporting verbs as a percentage of all citations is 13.2% in the NS subset as opposed to only 5.3% in the F subset. Mur-Dueñas (2009) likewise found a greater proportion of reporting verbs in American English business RAs than in business RAs in Spanish. Table 3 also reveals a similar strong contrast for reporting nouns in our data, with respective frequencies of 2.3% (NS) vs 0.4% (F). The same is true for the lexical variety or range of reporting verbs and nouns used in the two languages: the number of different verbs used in the French RAs is only half that of the native English RAs (25 vs 49), and a very limited range of reporting nouns (4) is used in French compared to a greater variety in English (12 different nouns). Looking now at the FWE subset, Table 3 clearly shows that their reporting behaviour is almost identical to that of the writers in French, and therefore very different from that of the NS set. In both the verb and noun frequencies (respectively 5.7% and 0.4% of all citations) and the verb and noun lexical variety (respectively 30 and 4), the French researchers writing in English follow the practice of their native language, not that of the L2. The ensuing lack of lexical variety suggests that certain nuances of stance are perhaps less explicitly communicated than in the NS articles.

The figures cannot, however, be taken to mean that French writers, whether writing in French or in English, do not attribute findings and claims to the cited sources, or that they do not indicate their own stance towards the sources, but rather that they rarely use reporting verbs and nouns to do so. We therefore investigated the use in the three subsets of another attributive structure frequently used in RAs to cite other researchers, namely introductory adverbs such as *according to / selon*, commonly referred to as evidential adverbials since they indicate the source of the information, or evidence, used for asserting a proposition (Pietrandrea 2007). The prevalence of introductory evidential adverbials such as *D'après X, Pour X et al., Selon les travaux de X* to frame propositions in French has been observed by several analysts (e.g. Charolles & Péry-Woodley 2005). A search for these terms and their English equivalents yielded the figures shown in Table 4, which confirms their frequency of occurrence in French (64 occurrences in the F subset compared to only 24 in NS).

Adverbial	NS	FWE	F
According to/selon, d'après	23	26	36
For/ pour	1	1	28
Total	24	27	64
Per 10,000 words	0.8	1.4	2.6

Table 4. Evidential adverbials

A typical example from our F data is (11):

(11) Plusieurs hypothèses ont été proposées afin d'expliquer l'accélération de la décomposition de l'O_3 en présence de CA. **Selon Valdes (2006),** cette accélération est principalement due à l'interaction entre l'O3 et les groupements oxygénés acides de surface. **Pour Faria (2006),** ce sont principalement les fonctions basiques du CA qui sont concernées par l'interaction (F).
(Several hypotheses have been proposed to explain the faster decomposition of O_3 in the presence of CA. According to Valdes (2006), it is mainly due to … For Faria (2006), it is the basic functions of CA that…).

Table 4 shows that FWE also make greater use of the structure than NS, though not markedly so (1.4 vs 0.8), and certainly not to the extent that it might compensate for the paucity of reporting verbs and nouns. A closer examination of how *according to* is used by FWE, however, revealed another problem due to cross-linguistic differences in the degree of writer commitment that can be expressed by English *according to* and French *selon*. These adverbials are often considered to be equivalent in meaning, but there are in fact certain subtle differences in their respective values. With *according to*, the enunciator attributes entire responsibility for the proposition to the source cited as evidence or authority, and does not commit herself as to the validity of the proposition; this source must be distinct from the enunciator herself. Example (12) illustrates this neutral stance:

(12) *According to Kaplan* (1989), a semantic theory must be grounded in speakers' intuitions about what is said (see Cappelan and Lepore, 1997 for critical discussion of this claim) (NS).

Selon is frequently used neutrally, like *according to,* to attribute the proposition to an external source. However, unlike *according to*, it can also be used self-referentially with first person pronouns (*selon moi, selon nous*), in which case it expresses full writer commitment to the proposition [6]. And it can be used, as in other Romance languages, with a reportive conditional (Squartini 2008), in which case it may express a double enunciation, that of the cited source and the writer's marking of distance towards this source (Rowley-Jolivet & Carter-Thomas 2014). In our FWE subset, the latter two values of *selon* appear to have been transferred into the writers' use of *according to*: self-referential use in (13) and double enunciation in (14):

(13) Given the scantiness of the documentation, the conclusions must be considered as partial and provisional. However, *according to me,* the evidence allows some hypotheses.

[6] Similar in this respect to the Italian *secondo me* (Pietrandrea 2007).

> (14) *According to Pinker (1984)* semantic bootstrapping is the mechanism that allows children to determine which words fall into the category of noun or verb in their mother language. The discovery of noun and verb categories *would depend* on word meaning (...). Children *would thus start* by constructing semantically appropriate representations of the linguistic items they are producing (...).

Since *according to* necessarily implies single (or homogenous) enunciation – the entire responsibility for the proposition is attributed to the cited source, namely Pinker in (14) – this attempt by the French writer to also mark his distance from Pinker's theory by using a reportive conditional does not work in English. The passage is not only wrong from a linguistic viewpoint but the double (redundant) marking of writer distance also makes the writer's intended stance less clear.

This cross-linguistic analysis of reporting structures clearly shows, therefore, the influence of the French writers' native language, with a much lower use of reporting verbal and nominal structures, and a French-influenced use of evidential adverbials. The resulting effect on the reader of the English text can be that findings and claims are insufficiently attributed, or in some cases ambiguously attributed, by the FWE.

4. Conclusion

Our analysis suggests that citation practices are not an entirely culture-/language-neutral aspect of academic discourse. Although expert French researchers publishing in English show a clear perception of the overall role of citation in research writing, they also have some specific problems using citation efficiently. On the basis of our data, some of these problems seem to be more culturally bound and others more language bound. We have noted, for example, several problems revolving around an infelicitous use of referring devices in the case of inter- and intra-textual reference. These problems appear to be linked to an insufficient perception of the potential ambiguity of deictic determiners such as *this*+N and *these*+N in English. If, however, the reader is unable to easily identify the cited source and track the intended referent, communication is hampered and the FWE text becomes less rhetorically effective. The number system prevalent in the majority of science articles in our corpus also possibly compounds the problem, obliging writers to further resort to anaphoric referring devices rather than named references.

The relative underuse of reporting structures and the reliance on a very restricted range of verbs or nouns can also appreciably diminish the efficacy of citation by the French researcher. The position or degree of commitment of FWE towards the cited sources is often less explicit and arguably less nuanced than in the NS subset. Reliance too on formulations that are strongly influenced by French such as the use of *according to* and the conditional can be confusing for readers.

The borderline between language and culture is notoriously difficult to draw, and some of the language issues shade off into problems of a more cultural nature. What is seen as a sign of good style in one academic culture, such as the avoidance of repetition of authors' names in French research discourse, can in fact create ambiguity or unwanted emphasis when transposed into English. For example, the meaning of a deictic is highly co-text bound and it could be argued that a French writer, operating in a reader-responsible culture (cf. Hinds 1987), expects the reader to work harder than an English reader is generally expected to do in order to discover the intended meaning. We also encountered cases of hybrid referencing styles which can be attributed to different citation conventions in French and English academic discourse.

Whilst some of the differences we have observed, such as referential ambiguity, are subtle and can only be detected by a qualitative analysis over lengthy stretches of text, others, such as reporting structures, reveal major quantitative differences in the preferred citation practices of the language groups. Given the importance of citation in research writing, in our view the study of citation by different national groups warrants considerably more attention. We hope that the present study may generally contribute to raising the profile of these issues and in particular increase awareness amongst language professionals working as authors' editors of some of the potentially damaging pitfalls of citing for L2 writers.

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CONVENTIONAL AND CULTURE-SPECIFIC METAPHOR IN SINGAPORE FINANCIAL DISCOURSE

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Abstract
Interest in the use of metaphor in business and economics has been growing both in the field of business communication and as a methodological component of Language for Special Purposes (LSP) teaching. Nevertheless, interest in metaphors in LSP is still too marginal, confirming Cameron & Low's (1999: 91) statement that "the whole area of metaphor in use in ESP situations remains under-researched". The present paper attempts to further advance this research by looking at metaphor in the language of economics, in particular the way changes and movements in the financial markets are presented in the Singapore press and local forum discussions. It will be demonstrated that metaphors form a significant part of these discourses and that this has implications for understanding economics discourse. In addition to conventional metaphors, an attempt is also made to identify and discuss culture-specific metaphors in the local press and forums. The paper argues in favour of enhancing students' metaphoric awareness by drawing their attention to the figurative expressions they come across in their reading of economics and business texts as well as through classroom activities that promote their metaphorical competence. Understanding the significance of metaphor would not only enrich ESL/EFL students' understanding of economics discourse but also improve their ability to read critically through a deeper understanding of how metaphors can be used to shape perceptions of financial trends.

1. Introduction

Metaphor is a basic cognitive ability that enables us to express ourselves as well as formulate our thinking on abstract concepts and phenomena (Lakoff 1987). Certain metaphors are so deeply entrenched in human thought that they have been termed "conceptual metaphors" or, very aptly, "metaphors we live by" (Lakoff & Johnson 1980: 3-4). These conceptual metaphors are reflected not only in our everyday language but also in specialized discourse.

Research has shown that there is a significant variation between native and non-native speakers of a language with regard to figurative language and it poses a problem for English for foreign language (EFL) and English for second language (ESL) learners (Littlemore 2001; Danesi 1994). Native speakers process conventional expressions in a rapid, automatized way, without much thought about basic meanings and concepts. However, non-native speakers are unaware of standard meanings of figurative multiword expressions and attempt to decipher these metaphorical phrases word by word. This leads to longer reading time and misinterpretations as the literal meaning of each word is usually different from the default meaning of metaphorical expressions. The problem is compounded in the understanding of discipline-specific discourses which make use of metaphorical expressions to convey technical concepts in the discipline (Charteris-Black 2000; Henderson 1994; Smith 1995).

Despite the centrality of metaphor in language use, the ability of L2 learners to use metaphors is often still not seen as a core ability. In language teaching, little importance is given to metaphorical language which refers to a person's ability to understand and produce metaphors (Littlemore & Low 2006). In the context of disciplinary fields, learning metaphorical language becomes even more relevant for students as the interpretation of metaphorically-based technical and semi-technical terms is dependent on the L2 learner's background knowledge of the field. While a disciplinary expert would readily understand discipline-specific metaphors by access to a stock of prefabricated phrases, a non-expert or novice learner would find it challenging due to his/her unfamiliarity with the conceptual system of the discipline. In such situations, students would benefit from complete immersion in their discipline through the explicit learning of discipline-specific metaphor (Caballero 2003).

In the context of English for Specific Purposes (ESP), application of the conceptual theory of metaphor has been particularly successful as professional discourse abounds in jargon that is rich in metaphors. This is especially true of the field of business and economics where the metaphorical approach has proved to be a useful cognitive tool to teach abstract concepts in the field. Specifically, vocabulary-based instruction that focuses on lexis in relation to underlying metaphors provides undergraduate students with insight into the conceptual domain of their subject while at the same time facilitating their acquisition of metaphorical concepts. According to Charteris-Black (2000) and Smith (1995), this approach focuses students' attention on the conventional as well as innovative metaphors underlying financial discourses and has a positive effect on their understanding of the subject matter.

Although there has been overwhelming interest in financial language among economists and linguists in recent times, most of the studies to date have concentrated on specific metaphors (White 2003; Alejo 2010), variation of metaphoric usage between different languages or varieties of a language (Charteris-Black & Ennis 2001; Charteris-Black & Musolff 2003; Van der Yeught 2007; Fukuda 2009; Lopez & Llopis 2010) and comparison of metaphors in different business genres (Sznajder 2010) or unrelated genres (Deignan 2006). Although interest in metaphors in ESP is growing (e.g. Henderson 1982, 1994; McCloskey 1985; Boers & Demecheleer 1997; Boers 2000; Charteris-Black 2000), it is still marginal in the teaching of language in the field of business and economics. This is unfortunate as these fields are characteristically rich in the use of metaphorical language which is essential for grasping key economic concepts.

The present paper attempts to advance existing research by looking at metaphor in the language of economics and business, in particular the way changes and movements in the financial markets are reported in the Singapore press and local online forums. It will be demonstrated that metaphors form a significant part of these discourses and that this has implications for understanding economic discourse. Apart from conventional metaphors, an attempt is also made to highlight and discuss cultural metaphors in newspaper articles and forum discussions. The paper argues in favour of enhancing students' metaphoric awareness by drawing their attention to the figurative expressions they come across in their reading of economics and business texts. Means of achieving this include classroom tasks for raising students' awareness of both conceptual metaphors as well as their linguistic realizations. It is believed that understanding the significance of metaphor would not only enrich ESL/EFL students' understanding of economics discourse but also improve their ability to read critically through a deeper understanding of how metaphors can be used to shape perceptions of financial trends.

2. Method

2.1. *Definition of metaphor*

Metaphorical competence involves knowledge of metaphor as well as the ability to use metaphor effectively in specific situations (Littlemore & Low 2006). Specifically, successful metaphorical comprehension and production involves the ability to understand an entity in terms of another apparently unrelated one (Lakoff & Johnson 1980). For example, if the local government of a country imposes taxes on the import of foreign goods in order to create "a level playing field" for the local manufacturers, the local market is treated as a place where competitive sports are played. In this example, two domains or semantic fields are brought together, with the local goods market representing the target domain and the competitive sports metaphor representing the source domain. The sports metaphor (the source domain) in this instance is used to describe, understand and/or evaluate the local goods market (the target domain) in terms of the place where competitive ball sports are played.

In addition to this definition of metaphor, a distinction will be made between conceptual and linguistic metaphors in this paper. In conceptual metaphors, prominence is given to the abstract underlying relationship between two concepts or entities whereas in linguistic metaphors the words expressing this relationship are of the utmost importance (Lakoff & Johnson 1980; Lakoff 1993). In the former, the concern is with how people perceive abstract concepts such as time, emotions and feelings in terms of concrete entities such as places, substances and containers, while in the latter emphasis is on the choice of words themselves. For instance, in the phrase "level playing field", the word "level" is used instead of "flat" and the three words are singular even though several situations are involved. Linguistic metaphors are particularly relevant in ESL/EFL settings where focus is not only on comprehension but also production of these metaphors in speech and writing.

The third aspect of metaphors relevant to this paper is that of cultural variations in metaphors. Although most cognitive linguists have been mainly concerned with universal metaphors, none would deny that there are cross-cultural variations in conceptual metaphors. In fact, Kövecses (2005: 67) points out that these variations are "almost as natural and obvious as the variation of metaphors at the level of metaphorical linguistic expressions". The point of contention seems to be on the nature and relationship between the cognition-culture interface (Wee 2006). There are several types of cross-cultural variations but the most common ones are congruent metaphors in which the generic schema has a unique cultural realization at a specific level. For instance, the conceptual metaphor THE ANGRY PERSON IS A PRESSURIZED CONTAINER at a general level does not specify the location of anger or its form. Although English and other languages share similar metaphors for anger, there are many expressions that are unique – in Japanese, anger originates from the belly or *hara* (Lakoff & Kövecses 1987) and in Chinese, excess *qi* is not a fluid as in English but a gas (Yu 1998). An attempt will be made to describe the metaphors in the sample from a generic as well as a cultural-specific perspective.

Following Kövecses (2005), other cross-cultural variations will also be identified depending upon the unique use of source or target domains, preference for certain conceptual metaphors and use of unique metaphors. In our analysis, metaphors will be classified as conventional or culture-specific. The conventional metaphors will be those that are universal or near-universal whereas the culture-specific metaphors will be those that exhibit variation in the following ways:

– Different conceptualizations of source and target domains
– Different relationship between the source and target domains in terms of range of target or scope of source
– Different sets of mapping for the same conceptual metaphor
– A shared source domain with different metaphorical entailments
– Blending, which involves going beyond conceptual metaphors to construct elements that cannot be found in the source or target domains.

A more detailed description of these metaphorical variations can be found in Kövecses (*ibid*.: 118-129). A description of some of these variations will be provided in the results and discussion section of this paper depending upon the types of culture-specific metaphors identified in the corpus.

Furthermore, to highlight cultural differences in some of the corpus examples, conceptual metaphors will not always be listed as primary or generic metaphors (e.g. THE ECONOMY IS AN ANIMAL) but at a more specific level of realization (e.g. THE ECONOMY IS A PREY/PREDATOR) or as culture-specific instantiations (e.g. Investments are like the tortoise). This is not done to diminish the importance of primary metaphors as cognitive entities but in order to highlight the cultural role of metaphors in the study sample.

2.2. *Data collection*

The data for this study were extracted from two different sources: the business pages of the national newspaper and online forums that are popular with local traders. These two genres were chosen to compare metaphor usage in formal and informal channels. Intuitively, we believed that there would be variation in the choice of metaphors in the two genres with a propensity for conventional metaphors in newspaper articles (representing the formal channel) and for culture-specific ones in online forums (representing the informal channel). This was confirmed in our analysis as newspaper articles are targeted at both local and overseas readers whereas the local online forums are usually visited by Singaporeans or Singapore residents. The metaphors were identified manually by both researchers, with one concentrating on newspaper reports and the other on online discussion forums. The data were then double-checked by both researchers to ensure consistency in the selection of metaphors for the study.

2.2.1. *Newspaper reports*

The "Money" section of the national English language newspaper in Singapore, *The Straits Times,* was examined for metaphors during a one-year period from January to December 2008. *The Straits Times* is the newspaper with the highest circulation in Singapore with a readership of 1.38 million. The period of data collection coincided with the period when there was considerable upheaval in the financial and business sectors, and this state of the economy was reflected in the metaphors gathered. A total of 52 reports in the "Money" section of *The Straits Times* were examined during the period studied.

A variety of metaphorical expressions were encountered during the period of data collection. These metaphors can be categorized in the following metaphorical domains: War, Health, Sports, Navigation, Journey, Weather, Mechanics, Hunting and Animal. Typical examples of metaphors in each of these domains are listed in the table below:

METAPHORS	EXAMPLES
Business is War / Warfare	(1) Amid the stock market *carnage* … (ST, 9/1/08) (2)This week, the Irish airline, Ryanair, began a renewed *assault* on Aer Lingus (ST,30/11/08) (3) Traders liken the current market conditions to *knives falling* on them and *slashing* them if they fail to *take cover* (ST, 9/1/08) (4) Rising oil prices soon *had* traders *by the throat* (ST, 9/1/08)
The Economy is a Patient	(5) ST Index gains 40 points as market *springs back to life* (ST, 5/1/08) (6) The *bleeding* had not stopped for some component stocks (ST, 9/1/08) (7) Its financial system is *on life support* (ST, 18/11/08) (8) The *continued weakness* of the US dollar (ST, 4/7/08) (9) This *injection* of liquidity gives the financial sector *a shot in the arm* (ST, 18/11/08)
The Economy is like Sports - Investing is Playing Sports	(10) First Resources, listed only last month, is *off to a flying start* (ST, 5/1/08) (11) A short-term propensity for prices to *overshoot* (ST, 5/1/08) (12) Banking counters *bounced back* (ST, 5/1/08)

	(13) There is a perception that in the stock market turmoil so far, the analysts are *behind the curve* when it comes to analyzing what is going to happen (ST, 9/1/08) (14) Many analysts are *playing catch-up* and trying to make sense of the situation (ST, 9/1/08)
- Investing is Gambling	(15) All Asian bourses, except Chinese mainland markets, continued their *losing streak* yesterday (ST, 4/7/08)
The Economy is a Ship	(16) The market seemed to be *on an even keel* and *rising* above 3,000 (ST, 9/1/08) (17) US blue chips had *sunk* by more than 20 per cent (ST, 4/7/08) (18) There is a strong determination to keep inflation expectations *anchored* (ST, 4/7/08) (19) The government had succumbed to strong political pressure to keep AIG *afloat* (ST, 18/9/08) (20) GE Capital continued to be *tossed by the storms* in the market (ST, 3/12/08)
The Economy is a Journey	(21) Market sees prices *going further north* (ST, 5/1/08) (22) Bourses took the hint and *headed south* (ST, 5/1/08) (23) Investors continue to *take a back seat* here (ST, 9/1//08) (24) The *road* to recovery is still nowhere in sight (ST, 9/11/08) (25) The market *lacked direction* (ST, 5/8/08)
Economy is like the Weather	(26) Investment bank Lehman Brothers expects more *turbulence* ahead (ST, 9/1/08) (27) One of the most *bearish forecasts* out in the market currently (ST, 9/1/08) (28) Singapore is *encountering global headwinds* (ST, 9/1/08) (29) Despite the growing optimism, *storm clouds* remain (ST, 1/12/08) (30) *Dark clouds* ahead as Singapore's exports slide 13.8% (ST, 18/9/08)
The Economy is an Engine	(31) Easing growth in oil guzzlers like China and India could *suck off some of the steam* (ST, 8/10/08) (32) The global liquidity squeeze has *put the brakes on* regional merger and acquisition activity (ST, 1/12/08) (33) The buying trend was *fuelled* by Beijing's recent massive stimulus package (ST, 27/11/08)

	(34) The government has promised to *pump* more money into the banking system (ST, 18/9/08)
The Economy is Prey/Predator	(35) *Market stalked* by fear of recession (ST, 30/11/08) (36) With the cost of insuring its debt rising, it is hard to see it *hunting aggressively for prey* (ST, 3/12/08) (37) China has *acted aggressively* to counter the crisis (ST, 2/12/08) (38) Key GK Goh investors *tighten grip* on firm (ST, 9/1/08) (39) Speculators *played a cat and mouse game* with stocks rallying one minute and falling the next (ST, 29/10/08)
The Market is a Bull/Bear	(40) *Bears were in the market* on Monday (ST, 9/1/08) (41) Asian bourses tumble as *bear trap snares* Wall Street (ST, 4/7/08) (42) The STI *entered bear territory* on Jan 16 after it plunged 96.09 points (ST, 4/7/08) (43) With the US *locked in a bear trap*, any hopes of a lift in the Singapore market might be dashed (ST, 4/7/08) (44) *Bears were left feeling like turkeys* as Wall Street charged up 9.7 per cent, despite the shortened trading week, due to the Thanksgiving Day holiday with turkey the main course for dinner in the US (ST, 1/12/08)

Table 1. Metaphors and examples from news reports

2.2.2. *Online forums*

The data were gathered from two specific sources, ShareJunction (http://www.sharejunction.com/sharejunction/index.html) and ShareInvestor.com (http://www.shareinvestor.com/), which are online stock portals open to the public for the latest information on the financial market. The participants of these forums are mainly local traders who share information about their investments, their gains and losses as well as their speculations about the market. The data for the present study were extracted from the discussion forums of these portals during the period of March 2012. A list of conventional metaphors (Table 2) and conventional metaphors with culture-specific connotations (Table 3), retrieved on 15 March 2012 from a number of discussion threads, is provided in the tables below. The topics of the discussion threads are given in brackets for each example but the names of the forum participants have been removed for reasons of confidentiality. To maintain the authenticity of the data, no attempt has been made to correct spelling or grammatical errors.

In our corpus, conventional metaphors in online forums show variation in their meaning in that they exhibit a slightly "different relationship between source and target domains in terms of range of target or scope of source" (Kövecses 2005). For instance, the range of the source metaphor THE ECONOMY IS A PREY is limited to that of

CONVENTIONAL METAPHORS	EXAMPLES
The Market is a Bull/Bear	(1) ... missing the *bull* run (UPSWING @ 3rd Elliot wave) (2) Now only 70+... *bear trap*! (STI to cross 3000 boosted by long-term investors) (3) ... the stock is ***bearish*** ... (Gallant)
The Economy is like Sports	(4) Still not too late to *jump in*. (Lord of China Prop) (5) *Nice catch* (Lord of China Prop) (6) ... *over the hurdle* of 1.39 (Cruising with the ship ... Yangzijiang)

Table 2. Conventional metaphors in online forums

killing as in "… see who gets *killed* first". This and other examples of metaphor which exhibit variation in meaning are listed in Table 3 below:

CONVENTIONAL METAPHORS	VARIATION IN METAPHOR	EXAMPLES
The Economy is Prey/Predator	Investing is killing	(1)... see who gets *killed* first (UPSWING @ 3rd Elliot wave) (2) If a BB want to buy and *make a big kill* all they need to do is just approach ... (Cruising with the ship .. Yangzijiang) (3)... a few time people shout *what target what target* in the end no one in sight (Gallant) (4) ... the counter *killing you softly* ... (Gallant)
Economic Activity is Gambling	(a) Investing is Horse Racing (b) Investing is Playing Cards	(5) Once this *horse* breaks below 0.27... (Gallant) (6) Hopefully operator *punt* this stock again for faster revival (Gallant) (7) ... this is sign of bad feng shui for this *colt* ... (Gallant) (8) I learned to *play* shares (9) The danger of *playing* investments is always there ... (STI to cross 3000 boosted by long-term investors) (10) Company directors seldom *play* their own shares ... (STI to cross 3000 boosted by long-term investors)
The Economy is an Engine	Investing is like Driving a Car	(11) Wah [exclamation] *U turn* ... (STI to cross 3000 boosted by long-term investors)

		(12) ... *park* their cash in this share ... (Cruising with the ship .. Yangzijiang) (13) ... if they *park* more than get even more within 2 months ... (Cruising with the ship .. Yangzijiang) (14) .. if this level clear I will *fasten my seat belt*... (Gallant)
The Economy is a Ship	Investing is Sailing	(15) ... many shares *floating* ... (New Lease of Life) (16) ... the price seemed to *sink* ... (STI to cross 3000 boosted by long-term investors) (17) ... *cruising* with the ship (Cruising with the ship .. Yangzijiang) (18) ... *cruising* towards 50 cents (Gallant) (19) ... so now *look see until coast is clear* (Gallant)
The Market is an Animal	The Stock Market is a Bull	(20) ... the *bull died*... (Gallant) (21)... then the *bull magical dance* starts (Gallant) (22)... *a magical bull dance* at PSL (Gallant) (23) If fail ... then most likely joint the rests and *eat beef steak* ... (Gallant)

Table 3. Variation in conventional metaphors used in online forums

3. Results and discussion

3.1. *Metaphors in the local press*

The metaphors in the corpus include both fossilized (or "dead") metaphors and novel (or "living") metaphors. Henderson (1982) pointed out that fossilized metaphors such as *bear(ish), depression, slump, liquidity* are metaphors which have become conventionalized in the language of economics and as such can be considered to be technical terms. Novel (or "living") metaphors are creations of individual writers and may be used in one particular instance and no more. An example of such an idiosyncratic metaphor is "*Bears were left feeling like turkeys*" (44). This could be interpreted as the loss suffered by those taking a bearish position when share prices start rising instead of falling. They are thus "roasted" as turkeys are in the US during Thanksgiving. In the corpus, there was only one such occurrence of a novel metaphor. However, as has been observed (Henderson 1982; Lakoff & Johnson 1981), the boundary between what is a fossilized or dead metaphor and what is a living or novel one is far from clear-cut.

The most common metaphor in the *animal* domain is the *bear*. In the corpus, there are five different occurrences, (40) to (44) of the use of *bear* or terms derived from it (e.g. *bearish*) as a metaphor. The *bear* and *bull* metaphors may have initially been used symbolically as stockmarket metaphors but the underlying comparisons have been lost over time and they are now considered to be fossilized metaphors (Sperandeo 1991). According to experts in the financial market, these fossilized metaphors are typically used with reference to market trends rather than to represent the state of an economy. Routinely, if the trend is up, it is a *bull* market. If the trend is down, it is a *bear* market. Not surprisingly, only *bear* metaphors were encountered as during the period of this study the economy was in a downturn.

A weak economy is in a state of poor *health* or is an ailing patient in (5) to (9). As Charteris-Black (2000: 157) noted, “the underlying notion that THE ECONOMY IS A PATIENT implies that the economy is a passive entity whose condition can be influenced by the right decisions”. He added that “this perception permits the economist to present himself as a doctor or a surgeon who can take an active role in influencing economic events”. In the corpus, “the economy as an ailing patient” metaphor occurs in (8) *continued weakness* of the US dollar, and a financial system (7) *on life support*. To revive the ailing patient-economy, remedies can include an (9) *injection... shot in the arm*. Successful remedial action revitalizes the market which (5) *springs back to life*.

THE ECONOMY IS LIKE SPORTS metaphors appear in (10) to (15). Smith (1995: 46) observed that sporting activities involve gravitational force. Stocks or the market in general, however, appear not to be seen as passive to the forces at work but are depicted as actively involved in the struggle to go higher, faster, farther as in (10) *off to a flying start* or (11) *overshoot*. However, most of the sports metaphors in the corpus convey negative outcomes as in (13) *behind the curve*, (14) *playing catch-up*, reflecting the negative state of the economy. The dismal state of the economy is also reflected in the gambling metaphor (15) *losing streak*.

In THE ECONOMY IS LIKE THE WEATHER metaphors, (26) to (30), market behaviour, like the weather, is seen as something uncontrollable and unpredictable. Weather metaphors such as (28) to (30) *headwinds, storm clouds and dark clouds* warn of dangers ahead and the need to be vigilant. As Charteris-Black (2000: 161) pointed out, an analysis of the conceptual structure of metaphors creates underlying expectations as to the role of the expert in terms of what s/he can or cannot predict. Thus the financial analyst cannot be blamed for making inaccurate predictions, for getting it wrong when s/he *expects more turbulence ahead* (26) or *makes bearish forecasts* (27).

The turmoil in the market is conveyed by metaphors, not just of war, but of its destructiveness and ferocity as in (1) *carnage,* (2) *assault,* (3) *knives falling…slashing* or (4) *had traders by the throat.* Underlying these metaphors as well is the sense that the battle is being lost. This perception of the state of the market by the financial analyst is likely to influence the perception of the reader-investor and likely to contribute to pessimism about the economy.

Interestingly, confidence in or lack thereof in the market is also conveyed by a metaphor whose conceptual relationship is that of the hunt. In hunting, there is the predator and the prey. Thus the prey is a market (35) *stalked by fear* of recession, while the predator, a corporate raider, is (36) *hunting aggressively for prey*. Elsewhere, speculators are described as (39) *playing a cat and mouse game* with stocks.

A common metaphor for referring to the economy is that of the engine, as in "engine of growth". In a depressed economy, however, engines falter as action is taken to (31) *suck off some steam* or (32) *put the brakes on*. On the other hand, deliberate action can also be taken to provide momentum to a faltering economy as in (33) the massive stimulus package by Beijing which *fuelled* a buying trend or (34) a government's effort to *pump* more money into the banking system.

The economy is also often likened to a ship in financial reporting, suggesting that the economy needs to be handled or managed skilfully to escape being wrecked. A stable market is described as being (16) *on an even keel*. The situation of companies caught by the turmoil in the market is compared to that of ships (20) *tossed in the storms*. Just as ships are anchored to stop them drifting away, action must be taken to (18) *keep inflation expectations anchored* or to (19) keep companies such as AIG *afloat*. Failure in managing the market results in a situation where even (17) *blue chips had sunk*.

The dynamic nature of an economy is captured in the metaphor of a *journey*. Economies, like journeys, are not static but are constantly in motion. For the successful completion of a journey, directions are vital. However, the economy, like a traveller, can lose its way because it (25) *lacked direction*. Similarly, the economy, like a traveller, is either heading in the right direction or in the wrong direction. Thus in the corpus, market movement is either (21) *going further north* or (22) *headed south*.

In summary, the majority of the metaphors in the newspaper reports are conventional metaphors and are similar to those reported in related studies such as Smith (1995), Henderson (1982) and Charteris-Black (2000). The fact that there is just one example of a novel metaphor in this corpus suggests that financial reporters in Singapore by and large confine themselves to conventional metaphors.

3.2. *Metaphors in online forums*

A comparison of the metaphorical expressions found in the online forums with those from newspapers revealed a distinct difference in both type and usage. As pointed out in the previous section, almost all the metaphors in the newspaper articles are conventional business metaphors. In newspapers, the metaphors were also used with little variation in their meaning. This pattern of usage suggests a particular way of writing characteristic of *public discourse* in the Singapore speech community which uses Standard Singapore English.

Online forums can be considered to be (relatively) private, informal discourse among members of an online community who share a common interest in making money through investing. The variety of English used in the local online forums is Colloquial Singapore English (Gupta 1998) commonly referred to as "Singlish". This is expected as the discussion in online forums is more free-wheeling, emotionally expressive, and spontaneous. Singaporeans tend to switch between the standard and colloquial varieties of English depending on the context – Standard Singapore English in professional and public domains, and Colloquial Singapore English in private, informal domains. The informal and personal nature of discourse in online forums appears to encourage, firstly, a more creative use of conventional metaphors on the one hand and the inclusion of culture-specific metaphors on the other. Conventional business metaphors when used show variation in their meaning as illustrated by the examples in Table 3.

As Kövecses (2005) observed, the issue of variation in metaphorical use applies to the production of metaphors in settings where English is not a first language. In these settings, a large number of metaphors, for instance those related to physiological experiences such as anger, time and self, are probably universal in nature at a generic level. However, when embedded in specific cultures, these metaphors are coloured by cultural nuances and their specific realizations tend to vary across different cultures. According to Kövecses (*ibid.*), the variations can be at several levels – a culture could use a set of different source domains for a particular target domain or a particular source domain for a set of target domains; a culture could show a preference for particular conceptual metaphors; and finally, some of the conceptual metaphors could be unique in a particular culture.

The metaphors listed in Table 3 show different types of variation. As examples (1) to (4) show, the source domain of THE ECONOMY IS PREY/PREDATOR is restricted to killing a prey rather than the more general sense of hunting. Similarly, the conceptual metaphor ECONOMIC ACTIVITY IS GAMBLING in examples (5) to (10) specifically refers to horse racing and playing cards.

The variations in the conventional metaphors used in online forums are evidence of metaphorical creativity as noted by Kövecses (2005: 267-270), in particular 'creativity through blending'. Metaphors in online forums often blend different source domains for the same target. An example of blending can be seen in example (19) *look see until coast is clear*. In English the figurative expression "the coast is clear" means "there is no danger of being observed or caught" (*The Concise Oxford Dictionary*, 1995: 251). However, the metaphor used in the online forum combines the conceptual metaphors THE ECONOMY IS A SHIP and DANGER IS A HIDDEN REEF to give the meaning "to suspend trading till market conditions improve".

Evidence of figurative creativity is seen even when the fossilized metaphor, THE STOCK MARKET IS A BULL, is used in the online forums. The metaphor is conventional at the generic level, but at the culture-specific level the bull is endowed with physical attributes such as the ability to dance in (21) "the *bull magical dance* starts" and to die (20) "... the *bull died*". Furthermore, if a stock bought during a bullish phase in the market turns out to be disappointing, then the source also has the attribute of "the bull as food" as seen in the metaphor (23) "If fail ... then most likely will joint the rests and *eat beef steak*".

The corpus from the online forums also includes metaphors where the source is based on cultural models. These are metaphors specific to Chinese culture. Table 4 presents the clearest examples from our data. Kövecses (2005) has identified and discussed some of these culture-specific metaphors in his study of metaphors in Chinese. An example of a culture-specific metaphor in our corpus is the reference to "*tortoise stock*" (1) made by an online forum writer. In Chinese culture, the tortoise is a symbol of longevity and endurance. Thus "*tortoise stock*" has the target meaning of stock which requires a long time span to appreciate in value.

The metaphor of paper money in example (2) is grounded in the Chinese cultural

METAPHORS	EXAMPLES
Investments are like the tortoise	(1) ... *tortoise stock* ... (Gallant)
Investments (shares) are paper money	(2) ... *fire cannot wrap paper* (STI to cross 3000 boosted by long-term investors)
Investing is like practising geomancy	(3) ... this is sign of bad *feng shui* ... (Gallant)
Investing is practising magic	(4) ... *now magic become black magic* (Gallant) (5) Once this price is cleared... then the bull *magical* dance starts (Gallant) (6) ... there is a *magical bull dance* at PSL (Gallant) (7) We will have a *magical break dance* here. (Gallant)
Investment is gold / Investing is gold mining	(8) This chart very cute 0.41 is a *golden point* set up... (Gallant) (9) The *golden* set up is there ... (Gallant) (10) This 1 [one] like *golden printing non-stop* (Gallant) (11) ... dig up *gold mile* [mine]... (smart fund going long long this undervalue gem)

Table 4. Culture-specific metaphors

practice of ensuring the material well-being of a deceased family member in the after world by burning fake banknotes during his or her funeral. “Fire” in this example represents “unknown forces” whose actions can affect the value of a stock just as fire can transform paper money into money in the spiritual world.

Many of the culture-specific metaphors in the data from the online forums reflect belief in the supernatural among many Singaporeans. The risky nature of investing certainly encourages investors to view it as something which requires supernatural intervention for a positive outcome. The conceptual metaphor INVESTING IS PRACTISING MAGIC reflects the belief that magic can be used to influence outcomes as in example (4) “*now magic become*[*s*] *black magic”*. Colours as noted by Philip (2011: 27) have “symbolic value” and “culture-bound associations”. In many western cultures, white and black are usually associated with virtue and evil, respectively. However in Chinese culture, white symbolizes death and funerals. Black, on the other hand, is neutral and is symbolic of heaven, dormancy, and stability. In Chinese culture, black and white are opposing yet complementary principles, *ying* and *yang*. In the example mentioned above, when shares dropped in value, magic morphed into “*black* magic” reflecting the ups and downs of the share market.

The Chinese system of geomancy “feng shui” (literally translated as “wind-water”) is commonly used in metaphorical expressions by the Chinese. In Chinese thought, “feng shui” is “a system of laws considered to govern spatial arrangement and orientation in relation to the flow of energy (qi), and whose favourable or unfavourable effects are taken into account when siting or designing buildings (*The Concise Oxford Dictionary*, 1995: 496). In example (3), "this is sign of bad *feng shui* ", the poor performance of the stock is attributed to "bad *feng shui*", a metaphor used generally to mean setbacks arising not from one's own direct actions or decisions but from inauspicious circumstances.

Finally, the metaphor INVESTMENT IS GOLD or INVESTING IS GOLD MINING reflects the symbolic importance of gold to the Chinese. In Chinese culture, gold symbolizes prosperity and monetary gain. In Chinese, the metaphorical expression "to scoop up gold" refers to situations where money can be made easily. Several examples of gold used with this metaphorical meaning were encountered in the data from online forums. Among these are (10) "this 1 [one] like *golden printing non-stop*", (8) ...0.41 is a *golden point* set up, and (11) ... dig up *gold mile* [mine]. Apart from Chinese culture, there are other Asian and Western cultures in which gold is symbolically significant for historical reasons. For instance, Indian history is replete with stories that revolve around gold as it was the official currency in ancient times. Although sharing a common metaphorical meaning in many different cultures, it would be interesting in future studies to trace the various cultural origins of 'gold' along with its culture-specific realizations in different domains.

4. Pedagogical implications

As metaphor plays an important role not only in everyday language but also in specialist disciplines, ESP courses should make it "an important component in the learners' enculturation process and gradual insertion in their chosen disciplinary community" (Caballero 2003). In addition, materials production and teaching should also take into consideration culture-specific variations in the use of metaphors so that students can begin with familiar metaphors in their own culture before extending their knowledge to include those that are specific to English. Therefore this section draws on the use of metaphor in the genre of financial reporting in the local newspaper as well as local online forums and suggests ways in which it might be useful in creating ESP materials for students of business and economics. Although explicit teaching of metaphor might prove to be difficult in a general language course, this is not the case in ESP teaching as the focus is on a more packaged version of the language in the particular discipline.

The metaphors in the corpus of the present study clearly have implications for tertiary level educators, highlighting ways in which undergraduate business students can be introduced to the particular ways of thinking which characterize the content domains of the subject. The examples from the local press articles clearly demonstrate how key economic concepts can be described by the use of conventional metaphors. For example, market competition can be described in terms of warfare (e.g. the fight for market share) or in terms of a race (e.g. the race for market share). At the same time, parallels can also be drawn with typical culture specific metaphors of market competition such as horse racing.

To begin with, ESL students majoring in business and economics could be introduced to basic metaphoric concepts and meta-language required for identifying and discussing the role of metaphor in texts. Questions that could be posed include those that probe their understanding of the concept of metaphor, examples of metaphor that they are familiar with in their first and second language as well as terms such as source domain, target domain and mapping in order to discuss metaphors meaningfully. The next step would be to identify metaphors in newspaper articles of financial reporting given that they are a rich source of conventional business metaphor. The following exercises would be a good starting point:

Which metaphor, i.e. which source domain and which target domain, can you identify in the following expressions: (a) economic growth (b) corporate disease (c) a price war (d) a bear market (e) cash flow?
What linguistic expressions can you collect from financial news reports as examples of the conceptual metaphor BUSINESS IS WAR?
Source: Adapted from Kövecses (2002:13)

Table 5. Exercises on metaphoric analysis

To give students a broader picture of the discipline of economics, the metaphors they identify could be framed within the three most important root metaphors currently used in economics – 'mechanistic', 'auction' and 'biological' (Henderson 2000). A more detailed classification of these metaphors could be provided to achieve a lower level of abstraction in economics that novice ESP students would be able to grasp. To give an example, students could be made aware of the 'watery metaphor' in relation to the model of Circular Flow or the concept of equilibrium in economics.

It is important to note that the conceptual metaphors used in economics are not restricted to the 'root metaphors' (mechanistic and biological) identified by economists. Over the years, linguists have identified the most relevant conceptual metaphors in relation to economics based on corpora that is mainly journalistic in nature but which has an obvious correspondence to the root metaphors. It would be worthwhile to make ESL students of economics and business aware of these conceptual metaphors so they can apply these to their readings to gain a deeper understanding of the texts. The key metaphors identified by previous studies as well as the present one include the following: THE ECONOMY IS A MACHINE, THE ECONOMY IS A LIVING ORGANISM, BUSINESS IS WAR/TRADE IS WAR, BUSINESS IS A JOURNEY/THE PATH METAPHOR. Simple mapping and matching exercises can be devised to raise the metaphoric awareness of ESP students in relation to their readings (Table 6).

In addition to employing metaphors in concept formation, a content-based approach can be used for teaching lexis and collocation patterns to ESP students. There are

<table>
<tr><td>
What mapping characterizes the ECONOMY IS AN ORGANISM metaphor? Indicate the set of correspondences between the elements of the source and target domains:

Possible Response:
Source: AN ORGANISM Target: ECONOMY
1. A growing organism > economy is going up
2. A changing organism > economy is changing
3. A decaying organism > economy is going down
4. A healthy organism > economy is in a good state
5. A sick organism > economy is in a bad state
</td></tr>
<tr><td>
Match the following expressions of conceptual metaphors THE MARKET IS AN ORGANISM and the MARKET IS WATER (indicated by numbers) with their meanings (indicated by letters):

1. The market has grown (a) supply exceeds demand
2. The market is depressed (b) the market is in a good state
3. The market is flooded (c) the market is in a bad state
4. The market is buoyant (d) the market is bigger than it used to be
5. The market has suffered (e) the market is smaller than it used to be
6. The market has dried up (f) the market is undergoing a gradual process

Source: Adapted from Powell (1966: 28)
</td></tr>
</table>

Table 6. Mapping and matching exercises

terminological chains that are clearly linked to the use of key economic models. Students could be asked to trace the lexical chains in relation to the model of Circular Flow (liquidity, floating exchange rates, flotation, flows, circulation, leakages, injections, trickle-down effects, sunk costs) or the equilibrium model (market forces, equilibrium, impact, shocks, elasticity, balance, levels, gravitation of prices, velocity of money, the accelerator, expansion, inflation). This would enrich their vocabulary in relation to key concepts in economics as well as lead to better understanding of overarching metaphors in texts. The instruction of lexis can be extended to collocational patterns of conventional metaphors which are particularly useful for classroom instruction. To take an example from the sports metaphor, students can be exposed to the phraseological variations of metaphors:

> Player: *key player, global player, local player, tech player,* etc.
> Game: *play the game, management game, two-stage game, four-stage game, rules of the game, hidden game, power game,* etc.
> Playing field: *level playing field, to level the playing field,* etc.

These collocational phrases can be usefully exploited for instructional practice to familiarize students with the linguistic variations of key business metaphors. While specialist vocabulary instruction through conceptual metaphors is necessary to enhance student understanding of a discipline, the linguistic dimension focusing on metaphorical collocations is equally important in the ESP context for learners of Business English.

As Economics is a subject that students find difficult to read because it is rich in metaphors, it becomes necessary to provide ESL students with specific instruction in the metaphorical use of language in this field. It is not only important to raise students' awareness of the conceptual metaphors which connect two unrelated semantic fields but also to focus their attention on the linguistic realizations of these metaphors. A lack of awareness of metaphor in the discipline may lead to literal interpretations of texts and, in some instances, render the text unintelligible to non-native students.

As for the pedagogical implications of cross-cultural metaphors for ESL students, we can expect differences in the way metaphors are conceptualized in different cultures to affect both production as well as understanding of key economic concepts. Research in ESL/EFL settings has shown how conflicting core values such as individualism versus collectivism (Littlemore 2003) and differential salience of concepts across cultures (Boers & Demecheleer 1997, 2001) can have an impact on second and foreign language teaching. In an informal experiment (Boers & Demecheleer 2001), the meanings of unknown English idioms involving the concepts of SLEEVE and FOOD were easier for French-speaking students to guess in comparison to those involving HAT and SHIP as the former concepts were more closely related to the idioms in their own language and culture. Such culture-specific insights on metaphors could not only aid language instructors to design materials but also help ESL/EFL students to infer the meaning of unfamiliar idioms in Business English. Through this approach, the teaching of English idioms and metaphors could be informed by a knowledge of culture-specific metaphors.

5. Conclusion

This paper shows how change and movement is expressed in financial news reports in the Singapore Press by means of a range of conventional business metaphors. On the other hand, the local forum discussions on the stock market provide an insight into the use of metaphors that are specifically related to the Singapore context. A case is made for designing ESP materials for undergraduate students of business and economics based on common metaphors used in the discipline to enable them to better understand key concepts. To accelerate learning, it is also suggested that materials production and teaching be informed by knowledge of culture-specific metaphors. A metaphorical approach to teaching Business English to ESL/EFL students is essential as economics discourse, more than most other disciplinary discourses, "moves back and forth between real and hypothetical worlds in setting out its models" (Charteris-Black & Ennis 2001: 252) and the non-literalness of economics discourse is mainly due to its dependence on metaphors to explicate these models. Therefore, grasping the use of metaphors in the study of economics facilitates and enhances understanding of the discipline as metaphors do not merely play a decorative and stylistic role in the discourse. Rather than only being a literary device, metaphors in economics provide the cognitive basis of the discipline and are essential for the understanding of business concepts, especially for undergraduate ESL students being initiated into this discipline.

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ENGLISH FOR LINGUISTICS AND MULTIMODAL PEER-ASSESSMENT AT UNIVERSITY POSTGRADUATE LEVEL

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Abstract

Is English for Linguistics (EL) a domain of interest for EAP? Is the metalanguage for linguistics (e.g. lexical precision, semantic and pragmatic appropriateness) sufficiently taught at university level? Which strategies are most appropriate when developing presentation skills with regard to language competence in the field of linguistics?

This paper sets out to address these questions, adopting the viewpoint that competence in EL is probably taken for granted at university level and less researched than it should be. Strategies to encourage the development of this particular metalanguage, with reference to specific lexical items and semantic areas, are investigated in peer-assessment procedures, which would seem to be particularly effective at postgraduate level when integrating syllabus content and language skills to negotiate and reflect critically on this aspect of EAP.

Despite general agreement over the usefulness and impact of peer-assisted educational strategies (Topping 1988; Falchikov 2001), there is a striking lack of experimentation on peer assessment, especially when it comes to formal recognition and inclusion in university syllabuses within EAP practice. The rationale of this paper builds on a pilot project carried out at the University of Messina (Italy) in 2010, in a course of English Linguistics for postgraduate students in Foreign Languages and Literatures in which systemic-functional and cross-cultural socio-semiotic approaches to multimodal studies (Baldry & Thibault 2006; Kress & van Leeuwen 2006) were the major focus of analysis. Part of the course consisted in the development of individual projects, assessed both by the teacher and their peers with the ultimate goal of developing reflective, linguistic, metalinguistic and presentation skills.

Related issues are discussed, such as students' development of assessment grids, the integration of contents and metalanguage, and the consistency between peer and teacher evaluations. This approach helps expand students' language autonomy in articulating evaluative decisions and priorities regarding their own and their peers' learning outcomes. The mastery of a specialized language is targeted both as regards discussing syllabus contents and as regards expanding expertise in the field of linguistics.

1. English for Linguistics and peer assessment: the rationale for an EAP course

Starting from the consideration that *English for Linguistics* (EL) may be considered as a specific area of English, including a highly specialized lexicon and other preferred structures for a specific target audience (e.g. university students of Arts, Humanities and Education and prospective teachers of all levels in English as a Foreign Language), it may well be argued that the gap between experimentation and research in EL needs to be filled. Furthermore, if we take into account the crucial importance of teaching and assessing future teachers in the field of EFL, EL becomes a significant, though neglected, area of investigation. The far-ranging impact of communicative approaches in teaching and learning foreign languages has placed more emphasis on strategies for effective and fluent communication, putting aside such thorny areas as formal grammar descriptions, with their specific and sometimes complex labelling. Such formal descriptions are, more often than not, considered as the Achilles' heel for both teachers and students, but they need to be taught and learnt especially in the context of university training programmes for future teachers of EFL.

A second fundamental consideration in the present discussion is the observation that university students in the areas of Arts, Humanities and Education often lack sufficient training in the fundamental area of testing and assessment. In Italy, where the experiment discussed in this paper has taken place, prospective teachers of EFL lack specific training in both teaching and assessing skills. Postgraduate degree courses often fail to provide practical training programmes. Moreover, courses in linguistics usually focus on theoretical issues, requiring students to develop theoretical expertise to be used typically for an oral exam, a written paper or a final dissertation. EL will be thus considered as an overall domain of investigation for the development of a specific metalanguage used to teach, but also to assess. It is, as such, mainly targeted at encouraging students to recognize the value and usefulness of using this metalanguage effectively. This paper is an attempt to put together the two strands of EL and peer assessment within a vocational context, also considering how to develop presentation skills.

In the last two decades considerable academic and educational effort has been devoted to the exploration of a wealth of learning and assessment orientations and procedures which have been steadily shifting from a rigid teacher-led perspective to a student-centred approach (Alderson & North 1991; Falchikov & Goldfinch 2000; Falchikov 2001; Boud & Falchikov 2007), also in the field of ESP (Hutchinson & Waters 1987; Douglas 2000).

Different educational theories converge on the general consideration that forms of self learning, self assessment, peer monitoring, peer pairing and peer assessment greatly enhance the experience of learning, improving conditions, strategies and outcomes. Many approaches hold that peers can boost the conceptual, emotive, intellectual, cognitive and metacognitive development of their partners, encouraging a more student-centred classroom (Stiggins 1994). Methods for peer learning range from cooperative learning (Johnson & Johnson 1987) to collaborative learning (Brown & Campione 1994) and peer tutoring (Cohen, Kulik & Kulik 1982; Greenwood 1997). These methods vary in the application of peer learning, but they generally agree about its usefulness and positive backwash in educational achievements. O'Donnell & Topping's (1998: 259) early claim that research literature on the use of peers for assessment was "quite sparse" proves still valid in relatively recent studies (Liu & Carless 2006; Callahan 2007; Frankland 2007) and also very recent studies (Kaufman & Schunn 2011; Jin 2012; McConlogue 2012). Why, if peer learning is so commonly held to be effective and positive, is there a striking lack of experimentation regarding peer assessment, especially when it comes to its formal inclusion in the syllabus and curriculum and in particular in EAP contexts?

A central issue concerning the partial lack of systematic use of peer assessment in EAP contexts lies in the distinction between formative and summative peer assessment. The former deals with the process of learning and may be better defined as peer monitoring, that is, helping the partner/s with critical feedback and providing support in terms of advice and *in itinere* group work response and evaluations. In other words, formative peer assessment is more concerned with the process and gives the opportunity to revise the product to be assessed before handing it in, and this is particularly relevant within EAP evaluation. Summative peer assessment is instead concerned with the final outcome, i.e. the product of learning after a period of instruction. Summative peer assessment is typically designed as a way to grade peer work (e.g. essays, presentations) and is connected with achievement. Whereas summative peer assessment is not based on purely "objective" marking criteria (e.g. univocal answer cloze questions or correcting grids), students may feel uneasy about their own grading or suspicious about their peers' grading. Moreover, teachers may have more than one reason to fear peer assessment, being wary of their students' lack of expertise, training and of other more covert issues, such as giving away a part of their institutional power to students. A partial reversal of institutionalized roles is perhaps what makes teachers (and curriculum planners) so resistant to formalized summative peer assessment. Educational planners in general are cagey about formalizing peer assessment, whereas self and peer learning constitute a common ground of investigation and experimentation, for example in language planning, and have been thoroughly institutionalized at European level (see the European Language Portfolio).

Students can in effect be controversial assessors. If placed in the role of evaluators, reliability and validity may be at risk. Pond *et al.* (1995) listed many controversial issues, such as *friendship grading* (i.e. students assigning high grades to peers because of friendship), *collusive grading* (i.e. lack of differentiation between peers, especially frequent with high stake assessment), *decibel grading* (i.e. students assigning the highest grades to the most active peers). In the experiment discussed in this paper, other controversial factors were the very competitive environment where peer assessment was implemented, non-existent experience as regards peer assessment and a low degree of familiarity with EL outside the oral exam context. However, peer assessment within EAP courses is experimented less often than it should be, even in undergraduate and postgraduate university contexts, where some of the possible problems could be countered by the students' (hopefully) highly developed critical skills.

However, experimentation needs to be carried out further, especially at university where students are required to improve their negotiating and evaluating skills in EL, particularly in the Humanities, where a significant number of students need to develop vocational skills for future teaching careers. In Italy, many teachers complain about the poor quality and virtual lack of practical teacher training at postgraduate level. A solution is more and better teacher training, of which peer-assessment is a small part. However, experimentation and research into peer assessment within EL is needed to enhance university students' learning experience and to equip them with practical tools to become assessors in (future) real life educational contexts.

The quality of design is deemed essential in any curriculum or syllabus where self or peer learning or assessment is involved, including ESP courses (Dudley-Evans & St. John 1998; Boud & Falchikov 2007). This is particularly true about peer assessment in EAP contexts, as students need to be clearly instructed in what they are supposed to do, given transparent and unambiguous criteria to assess their peers, trained to peer monitoring, and given both positive and critical feedback regarding their peers' work. Development of assessment grids and negotiation of assessment values has proved to be a crucial factor in many case studies (Liu & Carless 2006), and this is particularly true in the case of ESP testing and assessment (Dudley-Evans & St. John 1998).

Another crucial factor in designing the course is how to measure the success of the experiment. The usual measurement of success in similar experiments was the degree of agreement between teacher and student ratings (Falchikov 2001). However, in keeping with what Falchikov (*ibid.*: 272) herself claims as regards success in peer assessment, "agreement between student and teacher marks may not be the most important aspect of successful self- or peer assessment. Real success should follow from the enhancement of student learning that results from participation in the process". Measurement of success cannot be exclusively equated with the agreement of grading between students and teacher for a number of reasons, such as the consideration that no grading may be believed as a pure or neutral benchmark. Teachers' grading is more subjective and evanescent than we, as teachers, are willing to admit, and especially so when it comes to marking via complex and non-univocal criteria (e.g. essays, presentations, oral exams). Another reason for the need to expand our notion of success in peer assessment experimentation lies in the ideological consideration that empowering students and fostering their reflective skills with regard to the complex arena of EAP assessment is a task well worth undertaking.

2. Multimodal peer assessment within EAP testing

Peer assessment is a neutral label, since it may be defined as a method that needs to be complemented by a theory of ESP assessment. Assessment, in turn, is part of an EAP testing process. Dudley-Evans & St. John (1998) claim that assessment does not stand alone, but is part of a process where needs analysis, course and syllabus design, teaching/learning and evaluation interact and affect one another. In principle, any ESP test can be defined as a performance test, assessing the skills needed to perform successfully in the interplay between language knowledge and specific purpose content knowledge (Tratnik 2008). Douglas (2000: 10) argues that ESP tests are "contrived language use events" in which the test takers' specific purpose language skills and knowledge of the specialist field are measured. ESP tests are related in content, themes and topics to particular fields of studies and, as such, measure the degree of development of language specificity skills. Specific lexical, semantic, syntactic, pragmatic and cross-cultural features need to be taken into account in assessing EAP.

From this standpoint, lexical precision is of special relevance in EAP testing and assessment within EL discourse practices. As ESP testing is generally constructed around the demands of specific workplaces and language situations, tests should include tasks that reflect those needed by ESP test takers. In this specific case, students needed to develop and consequently be able to show awareness and competence in their use of the metalanguage to teach EL and to assess in and through EL, foregrounding presentation skills. The definition of EL tries to capture the complexity of the language used by teachers of EFL: it is something more than the mere knowledge of grammar, vocabulary, etc. as it encompasses a broader approach to language and communication, taking into account different theories of grammar, in this case systemic-functional approaches to grammar and the semiosis of cross-cultural communication from a multimodal standpoint.

2.1. *Course design, planning and implementation*

These observations led to the development of an EAP peer assessment project at the University of Messina, Faculty of Arts and Humanities, in a postgraduate course on English Linguistics. Preliminarily a survey was developed and administered to students to gather information for a needs analysis. When prompted about their needs and *desiderata*, students complained about the alleged lack of practical training with regard to teaching and assessing EFL at university at both first and second level degree courses.

The course was accordingly designed to provide theoretical tools and to put students in practical hypothetical future target situations, e.g. teaching EFL with multimodal texts. My own experience of testing and assessment (Sindoni, Cambria & Stagno d'Alcontres 2007; Sindoni & Rizzo 2008; Sindoni 2009; Sindoni & Rizzo 2009; Sindoni & Cambria 2010) revealed the need to constantly re-think and re-engage with assumptions, ideas, even theoretical frameworks, if we aspire to keep high stake tests in tune with a constantly changing learning environment and students' vocational needs. We should not content ourselves with the bare basics of testing and assessment. There are also ethical implications (Sindoni & Cambria 2010) regarding the impact that tests and exams play on individuals' lives and on society in general, not to mention other preliminary factors, such as what to measure and what to consider as evidence of "learning" in an EAP course specifically dealing with EL.

Quantitative and qualitative methods have been developed within testing theories, serving the purpose of evaluating test rationale and formats via different criteria, such as the classic notions of validity, reliability (cf. Hughes 2003 [1989]) and examining *a priori* and *a posteriori* validity evidence (Weir 2005). However, experimentation on peer assessment in an EAP context may shed light on critical issues such as, to put it simply, the embedding of form and content, that is, the incorporation of specialized language with course contents. A crucial factor in encouraging and developing the required expertise in students is likely to be found in de-mythicizing the teacher's role, which may be, on the one hand, uncritically internalized or, on the other hand, resented or rejected by university students. Both positions imply a somewhat passive acceptance of pre-established teaching roles and need to be contested in the positive dynamics of teacher-student negotiation.

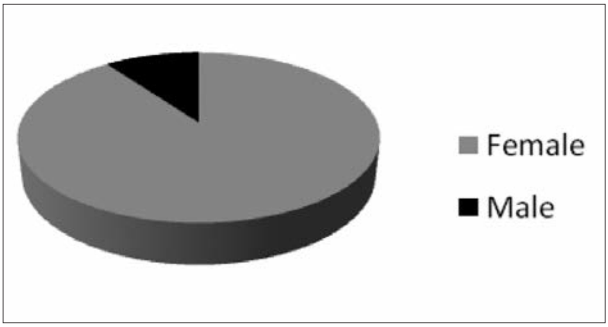
Moreover, students take for granted that they are completely passive when it comes to evaluating the results of their learning. Peer assessment experimentation was an attempt to counter all these problems. In addition to this, the relationship between content and language is strengthened and made more relevant and significant within classroom practices accordingly.

As the course was on systemic-functional grammar and multimodal studies, as developed within the theoretical frameworks by Baldry & Thibault (2006) and Kress & van Leeuwen (2001, 2006), there was a need to put a multimodal lens in front of the students' eyes, also focusing on cross-cultural hybridization made possible by the intersection of such theoretical approaches. The idea was then to integrate the content of the course with methods echoing the complex nature of the texts analysed (e.g. music videos, adverts, written texts, website homepages, trailers) highlighting the importance of the *contexts* where these texts originated, in compliance with notions of "context of culture" and "context of situation" (Malinowski 1923; Halliday 1978; Halliday & Matthiessen 2004) and considering texts as specific examples stemming from specific cultural contexts. To counter potential essentialist views on texts and genres, devoid of cultural implications, students were encouraged to critically think of text or genre differences across different cultures and report on their reflections in their presentations. Furthermore, crucial semantic areas were targeted during the course and students were prompted to pay attention to their peers' competent use of those areas during assessing sessions. These areas included specialized lexicon drawing from systemic-functional grammar labels and multimodal definitions. Students were encouraged to use precise definitions and accurate systemic labels in order to get the message across to the audience. Moreover, they were also encouraged to embed the notion of register, presented as a kernel notion of the course, into their presentations and to use what they knew about register and context to use the appropriate register while delivering presentations.

Students were enrolled in the university postgraduate degree in "Foreign Languages and Literatures", and the course on "English linguistics" was compulsory for first and second year students. Table 1 provides details with regard to the course. However, they had the opportunity to enrol in the experiment on a voluntary basis. The project involved the development of a presentation on a topic which revolved around the course syllabus, namely multimodal text analysis, preferably exploring contemporary text genres and comparing them across different English-speaking cultures. Students were informed that the project was on peer assessment, and that meant assessing and being assessed for their class presentations. Twelve students participated in the project out of the 60 attending. They were aware that they were also responsible for a part of their peers' final and formal assessment, with their average marks accounting for 30% of their peers' final mark out of a maximum of 30. But what about the rest of the class? Since it was unlikely that all students would be willing to participate, a partial solution to the potential risk of marginalizing those who would not join the project was found in their involvement in the development of the assessment grid. In other words, all students participated in the assessing procedures, but only those who did the presentations had a formal role in assessment, i.e. their average mark was computed in their peers' final course mark.

Number of students	80
Number of attending students	60
Age	22-26
Participation in the project	20% of attending students
Participation in the Facebook discussion group "Our old friend Halliday"	100% of attending students
Agreement between teacher and students grading	84%
Course duration	30 hours with teacher plus 50 hours of English language skills with language tutor
Course	English Linguistics
Language level	Advanced to proficient (C1-C2)
University level	Postgraduate degree in Foreign Languages and Literatures

Table 1. Background information on the course



Graph 1. Gender of participants

Since students had no previous experience either in peer learning or assessment, ample class discussion was devoted to debating the implications of such an experiment. Students expressed doubts and felt challenged by the peer assessment undertaking. Their main perplexity concerned their lack of training and the underestimation of their ability to get to grips with anything that involved assessment. Preliminary work was then focused on the following areas:

– explaining the syllabus design and the ideological and theoretical rationale underlying it
– building trust and eroding the culture-bound competitive learning environment
– setting clear purposes, e.g. providing quality feedback to be acted upon, empowering and challenging oneself, assessing and being assessed on collectively negotiated criteria
– developing assessment grid in and outside class with the help of teacher and language tutor
– creating a Facebook discussion group "Our old friend Halliday", where all the issues could be debated and collaboratively addressed, with constant teacher monitoring.

The development of specific competence in EL was thus fostered via the identification of the following areas:

– lexical: encouraging students to use specific labels from systemic-functional grammar, such as "experiential, interpersonal and textual metafunctions", "transitivity patterns", "material, mental, relational, attributive, existential processes", "theme", "rheme", "modality", "appraisal", "field", "tenor", "mode".

- semantic: helping students focus on specific semantic areas in their presentations related to the course contents, such as functional grammar and multimodality;
- pragmatic: highlighting how communication is much more successful when a specific metalanguage is used appropriately during class presentations;
- cross-cultural: comparing how different texts or genres are constructed in different English-speaking countries.

As each presentation dealt with a different text and a related text analysis, students soon learned to be flexible and highly responsive to each of their peers' performance in customized terms. The assessing grid was rather flat and did not allow specific observations; this role was thus played by the comment section which was used extensively to express specific concerns about lexical, semantic and pragmatic issues. What was previously perceived as a rather passive reception of teachers' contents was then appreciated as an active construal of texts and peer performances according to 87% of students.

2.2. *Discussion of results*

As research literature attests (Falchikov 2001), students generally report that they are facilitated when involved in the discussion and elaboration of the assessment criteria. Students in the project discussed here were no exception. All students engaged in the design of the assessment grid. Since the course was focused on systemic-functional linguistics and multimodal studies, they had been previously trained in expanding their notions regarding language and communication. For example, among the selected and to-be-assessed criteria, special attention was placed on visual aspects (i.e. in their presentation) and communicative skills which, they were well aware, are not exclusively based on verbal abilities or in the mastery of the foreign language (i.e. English), but rest on a wide range of resources, such as the ability to involve the audience. Students were comfortable with traditional and "measurable" criteria of assessment, for example those related to traditional language skills (e.g. *Is the presenter using a fluent, correct, appropriate language?*) or covering the proposed topic in a more or less exhaustive way (e.g. *Is the presenter covering the topic with enough examples? Is the point clear? Is the presenter using both practical examples and theory to pinpoint her/his discussion? Is the presenter satisfactorily answering the audience's questions?*). Points related to language skills, coverage and general "knowledge" of the presented topic were both maximally valued and easily recognized by students.

Less measurable criteria were not only hard to identify, but also hard to assess. For example, the general ability to deliver a presentation, which nonetheless was perceived as fundamental in the overall appreciation of it, proved hard to pin down and identify. The same may be said about notions such as register, which risked being too evanescent to be measured.

As the course progressed and core concepts were introduced (e.g. language as a system, meaning potential and behaviour potential, the grammar of visual communication, the meaning compression principle), students soon became aware that language and communication are much more complex than they had thought. The multimodal study of a wide range of texts required fine-grained theories and ensuing descriptive models. A multimodal analysis was thus complete and meaningful only if it implied the use of a multimodal lens with which to read textual phenomena and if it was studied and discussed "multimodally". The link between syllabus content, methods of lectures and assessment left students at a loss at the beginning. They were not used to establishing a connection between what they learned, how they learned it and how and about which acquired skills they were assessed. For example, they found it hard to identify the qualities of a presentation which are not optional but an integral part of communication and, as such, come into play in assessment. However, they soon started pondering about "delivery" resources, which are communicative and produce meanings as much as verbal communication. The identified "delivery" resources included gaze (e.g. eye-contact with audience), body language in the broadest sense (e.g. voice control, audibility), management of space and effective use of visual resources (e.g. *is the presentation readable?*). Sometimes very good presentations are difficult to follow due to purely visual factors, e. g. non-readability, bad colour matching, or due to a wrong combination of visual and verbal (excess of writing per slides, tautological/pedantic or useless repetition by speech of what is already written in the slide). Students were less trained in recognizing whole ranges of basic communicative strategies which, if poorly used, hinder successful communication. As regards lexical, semantic and pragmatic precision, they started thinking about the importance of precision when tackling linguistics, which requires clear, unambiguous and appropriate use of the metalanguage which was at the core of the course. Integration of content with language was addressed and discussed both during the development of the assessment grid and during peer assessment sessions.

In keeping with the aims of the course, students were encouraged to pay special attention to the integration of verbal and non-verbal modes, which are especially relevant when analysing cultural features. Students are usually much better trained in interpreting verbal (i.e. written or oral) texts: they attend classes, lectures and produce written and oral texts for assessment purposes. They very rarely or never assess their peers and are not frequently trained in identifying which non-verbal modes come into play in contemporary communicative events. However, after an initial trial period at the beginning of the course, they were eager to participate in such a peer assessment experiment. The cross-cultural dimension surfaces in the selected sample titles of presentations listed below:

– Gender and sexuality in ethnic-biased advertising
– Visual grammar and the body. Karate between East and West
– Different trailers in different cultures: *Alice in Wonderland*
– A multimodal text analysis of Harvard and Cambridge homepages
– How do we "read" colours? Semiotic "colour-readings" across cultures
– Theme and rheme in Eastern and Western cultures

Students elaborated the assessment grid after eight hours of class and group discussion. Quality feedback was provided and the grid was constantly revised to keep up with the group's reflections and feedback after mock assessing sessions. Two cohorts of students tested the same assessing grid in separate sessions, whose final version is shown in Appendix 1.

Students found it very complex to squeeze into a single assessing grid the whole plethora of criteria they had identified during their mock assessing sessions. The final grid includes three macro-categories with three sub-criteria each, for a total of nine different marks to be awarded during each presentation, ranging from most to least satisfactory marks (i.e. A-D). Both cohorts of students (made up of 25-30 students each) claimed that it had been very complex to reduce categories and sub-categories (which formerly amounted to more than 20) and that "assessing is very hard, especially paying attention to different things at the same time!", as one student wrote in a comment posted in the discussion group.

Agreement of grading between students and myself amounted to 84% at the end of the scheduled presentations. The bottom part of the grid, which I thought at the beginning would have been left empty in the majority of cases, due to the students' admitted difficulty in "paying attention to many things at the same time", was the most successful part. They provided quality feedback, giving detailed and expert advice on a number of different aspects related to their peer performances, noting with striking accuracy a large quantity of details, such as how to improve presentational skills, manage time, be more effective and successful communicators and also specific comments related to lexical and semantic targeted areas.

What happened outside the class is also worth briefly reporting here. They were prompted to create a Facebook discussion group, which they called "Our old friend Halliday", a tool to monitor their activities *in itinere*, check their fears, doubts and enthusiasm about their progress. The discussion group was teacher-monitored and qualitative analysis of posted comments allowed interesting insights into the students' learning process from their own point of view.

Gender-related differences were evident in posts, but the small sample does not really permit generalization, even though my data agree with what has emerged from research literature (Hutchinson & Waters 1987; Topping 1988; Falchikov 2001). From a manual lexical survey on all (232) posted comments, it emerged that girls felt more insecure *before* the peer assessment procedures and felt threatened (cf. "fear", "anxiety", "scared", "mistake"), while boys (who, incidentally, *all* joined the experiment) showed more confidence and buoyancy ("great", "interesting", "power"). However, when it came to discussing final results, the boys were eager to show their penchant for competitive verbal behaviour (e.g. "disappointment", "offended", "criticisms", "anger"), while the girls were much more conciliatory, devoting a considerable amount of posts to appeasing conflict (e.g. "wonderful", "best", "happy", "excellent", "accept"). Competitive verbal behaviour was also evident in the number of posts devoted to debating the fairness of peer assessment results (about one-third of the total), for example challenging some aspects of the experiment design (e.g. alleged unfairness about the scheduling of presentations, as the first "icebreakers" were considered to be at a disadvantage compared to the subsequent presenters). These considerations also point to the fact that *any* experiment in EAP teaching/learning needs to take into full account cultural dimensions that may significantly alter course planning, design, implementation and evaluation.

From an informal survey carried out at the end of the experiment, 78% of students reported beneficial results, showing an overall agreement over the positive effect of having the responsibility of assessment. Among the side-effects of their increased sense of responsibility towards their peers, they claimed they had been more focused on course contents and peer presentations and more active in the evaluation of their own and their partners' work.

3. Conclusions

As is evident from the previous discussion, this experiment is not focused on quantitative data. It is not easy to pin down how students assessed their peers in practical terms, as each presentation brought out different issues and different ways of integrating language use and content. As learning is more a process than a product, the development of the assessing grid has been the central focus of interest of this study. Sections devoted to the specific use of EL were discussed by students in class and in digital environments (i.e. Facebook discussion group). They developed awareness on the specific competence in EL, here considered as both a metalanguage and as an umbrella skill to teach and assess in EL and through EL. This double aim was reached via the identification of target areas (i.e. lexical, semantic, pragmatic) and the appreciation of how an inappropriate use of language and metalanguage may be detrimental to successful communication in their future target context, i.e. a class.

Students analysed a number of different text genres in their presentations, such as *Youtube* music videos, website homepages, visual grammars (e.g. karate visual manuals), children's educational videos and film trailers. Akin to the complexity of contemporary digital and non-digital text genres, they practised an approach which integrated content, methods and assessment procedures, refining their analyses with the help of cross-cultural reflections. Class discussion emphasized the ideological implications of such an approach, which broadens mainstream notions of language and communication and maximizes students' interest in providing critical prompts, elaborating "signs of learning" (Jewitt & Kress 2003) and turning them into signs of personal growth which is socially negotiated, culturally moulded and never acquired in isolation. However, it needs to be remarked that what was successful for a group of motivated second-level students is not necessarily deemed to work in another context.

The shift from authority and authorship to peer irradiating knowledge is central in our contemporary age and is instantiated in everyday systems of producing, exchanging and distributing information. Despite the expertise in the taught field, the teacher may and should be contested by appropriately trained students, whose critical approach to any subject needs to be encouraged via daring educational choices. The concept of the "wisdom of crowds", as developed by Surowiecki (2004), may also be applied to the assessing domain, even though it may destabilize our notions of authority in the educational domain and traditional systems of handing down knowledge and teaching skills and abilities in specialized contexts. The bottom line of this experiment is that accepting that our students may express wiser opinions (formulate judgements and possibly evaluations) than ours nonetheless undermines well-trodden certainties. However, a corresponding shift from notions of reliability in testing to the more blurred and challenging pedagogic assumptions underlying the peer assessment realm within EAP contexts is well worth exploring across the fruitful but conflicting lines which this paper has attempted to outline.

Appendix 1

UNIVERSITA' DEGLI STUDI DI MESSINA
FACOLTÀ DI LETTERE E FILOSOFIA
Corso di Laurea magistrale in Lingue e Letterature Straniere

Lingua Inglese: Prof. Sindoni

PEER ASSESSMENT

Name: **Date:**

1	LANGUAGE SKILLS				
1.1	**Communication** (is the presenter using a correct and fluent language? - - e.g. correct grammar and understandable pronunciation)	A	B	C	D
1.2	**Range of vocabulary** (is the presenter using both general and technical terms and a good range of specific lexical items ?)	A	B	C	D
1.3	**Register** (is the language appropriate to the context?)	A	B	C	D
2	TOPIC				
2.1	**Coverage** (is the presenter covering the topic satisfactorily? Is the general point clear?)	A	B	C	D
2.2	**Informativity** (is the presenter providing enough examples? Is s/he linking theory and practice effectively?)	A	B	C	D
2.3	**Structure** (is the presentation well-organized? – e.g. title, introduction with explicit aims and methodology, data presentation, analysis and interpretation)	A	B	C	D
3	FEEDBACK				
3.1	**Interaction** (is the presenter involving the audience with questions? Is he/she satisfactorily answering the audience's questions?)	A	B	C	D
3.2	**Body Language** (is the presenter effectively using interactional resources, e.g. eye-contact, audibility and voice control?)	A	B	C	D
3.3	**Visual Resources** (is the presentation readable? Is s/he using an effective combination of verbal and visual resources?)	A	B	C	D
4	COMMENTS				

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