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Foreword

Bridging the Classroom and the Workplace

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With the aim of preparing learners for academic, business, and other professional communications in today's increasingly globalized workplaces, the ESP approach to English language teaching has attracted extensive attention of researchers and practitioners in the past decades. What are our students' authentic and most immediate needs? How should we design needs-responsive instructional materials and methods? From May 30 to 31, 2015, the University of International Business and Economics, China, hosted a Conference on Teaching and Researching English for Professional Purposes to address these issues. The conference attracted attendees worldwide, especially from Asian countries, and facilitated communications among ESP researchers and practitioners.

This Special Issue contains six selected papers from the conference, which were refereed according to the journal's standard. The contributors are from a wide range of geo-linguistic locations, including Abu Dhabi (Roger Nunn, Caroline

Brandt, and Tanju Deveci,), China (Huiqin Zhang & Lily Ye, Liming Deng & Jing Liu), Taiwan (Yu-ju Hung & Robert L. Good), and Malaysia (Shamala Paramasivam & Muhamad Izzat bin Rahim). The academic and professional communities to which these researchers have devoted attention also range across engineering, arts, and business. While the first four papers center round ESP pedagogy and teaching materials, the last two papers focus on genre analysis, the research approach of which has long been feeding the ESP teaching practice.

Our first paper, contributed by Nunn, Brandt and Deveci, proposed project-based learning (PBL) as an approach to teaching academic literacy that can incorporate ten principles of critical reasoning and argumentation. They used extracts from video recordings of engineering students doing semester-long group projects and examples of the students' written work on the same projects to illustrate the benefits of PBL and the ways the principles function in practice. While PBL is a commonly used narrow-gauged teaching strategy to enculturate engineering students into the activities of engineering as also shown in a number of other studies (e.g., Parkinson, 2013), Nunn, Brandt & Deveci further argued for the "translatability" of the approach, that is, how PBL and the ten principles could be reapplied and reinvented in other courses or contexts.

As Belcher and Lukkarila (2011) point out, ESP teaching today needs to take into account "not just what learners want to be able to **do** in a language but also who they want to **become** through language" (p. 89, original emphasis). Again using PBL, Deveci and Nunn in their second paper shifted the focus from developing engineering students' academic literacy to developing their emotional intelligence (EI). Data included the survey of 100 freshman students using the Schutte Emotional Intelligence Scale (Schutte & Malouff, 1998) and semi-structured interviews with fifteen of the students. The study suggests that the holistic nature of PBL may have contributed to the increase in the students' EI scores, and therefore advocates incorporating more EI-specific learning experiences through PBL.

In the third paper, entitled *English teaching reform and practice in an Arts university in China: Meeting the needs of diverse English learners,* Zhang and Ye provided an introduction of the current college English teaching reform in China in general, and of the curriculum reform practice at an arts university in particular. Their article led us to see that the focus of English education at the universities has nowadays shifted from EGP to ESP, from teacher-centered to learner-centered with the purpose of addressing learners' specific needs. Their elaborative discussions of the reformed curriculum design and subsequent teaching methods can provide useful implications for universities that are also in the process of English education reform. Nevertheless, their claim that the curriculum reform has "aroused interests among learners" and "empowered and enlightened English teachers" would have been more convincing if empirical data such as interviews or surveys could have been provided.

While Zhang and Ye focused their discussions on curriculum design and teaching methods, Hung and Good examined the use of English textbooks in subject content courses in Taiwan. Through an extensive survey of 1,098 freshmen in six colleges at a comprehensive university, Hung and Good found a high level of English textbook use in Taiwan; meanwhile, they reported considerable difficulties Taiwanese students encountered in their use of English textbooks and compensatory strategies they adopted to deal with the difficulties. Based on their findings, Hung and Good call for a close collaboration between ESP teachers and subject specialists (Dudley-Evans & St. John, 1998) to develop ESP courses that can facilitate students' subject content learning.

Our final two papers are genre analyses of two business genres—job application letters and crowd funding texts. University graduates need to come to terms with these two genres sooner or later, when they want to either apply for a job or become an entrepreneur. Based on Bhatia's (1993) move schemes for job application letters and Grice's (1975) model for cooperation in communication, Paramasivam and bin Rahim examined 15 authentic job applications submitted to a Malaysian enterprise. The study found that while Malaysian graduates employed the conventional generic structure and exhibited fundamental generic competence, they lacked adequate linguistic competence to appropriately appraise and promote their skills and achievements as potential assets to the target enterprise. Their findings provide some useful pedagogical implications for ESP instructors.

Liu and Deng looked into a newly emerged fundraising activity—crowdfunding—and analyzed 30 web-based crowdfunding texts in terms of their rhetorical and linguistic features. Move variations in the corpus were identified and generic flexibility was thus discussed. Their study is one of the first few studies that have examined this new fundraising genre from the perspective of genre colony and colonization (Bhatia, 2004). Their generic descriptions have provided useful insights not only for genre analysts, but also for ESP instructors who are in the ongoing process of updating their teaching materials to prepare students for today's ever-changing business world.

Our Foreword is intended to provide useful background to this special issue so that our readers may have some knowledge of the Conference held at the UIBE, Beijing, and the articles it generated. This brief overview cannot do them justice, but hopefully provides some sense of their significance for ESP teaching and research. We would like to thank our authors for contributing their articles to this special issue, and we are also grateful to the reviewers for their insightful and meticulous reviews. We sincerely hope that this special issue will provide the reader with more recent progress and development of research on ESP pedagogy, curriculum design, design of needs-responsive teaching materials, and genre analysis.

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Project-Based Learning as a Holistic Learning Framework: Integrating 10 Principles of Critical Reasoning and Argumentation

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Abstract

In this paper, we outline and illustrate ten principles of critical reasoning and argumentation within a project-based learning approach to teaching academic literacy. We discuss project-based learning from a practical and theoretical perspective, outlining our view that some kind of holistic approach is needed to provide adequate coverage of the broad range of skills and knowledge that contribute towards academic competence. To illustrate the practical side, we use extracts from recordings of student teams in action doing semester-long projects, and examples from students' written work on the same projects to illustrate emerging literacy in relation to our own ten principles of critical reasoning/argumentation. Project-based learning is therefore proposed as an approach to holistic learning that is able to provide wide enough coverage of all 10 principles in a broad range of activities practiced in and out of class. We emphasize that students need real hands on experience of putting these principles into practice rather than just some kind of explicit teaching of principles. Paradoxically project-based learning can provide a framework that can also include explicit teaching of skills and knowledge. Although each of the 10principles can be considered independently, we believe that they are interrelated as a coherent 'whole' and also interact with other aspects of learning such as SLA. Our focus is on the holistic learning grounded in these10 principles, but we will also draw a brief analogy with Ellis's 10 principles of instructed second language acquisition. The holistic nature of these and other principles has implications for teaching in all contexts. Our notion of intercultural 'translatability' is based on our experiential assumption that no approach can be transferred directly from one local context to another. However, we also assume that we can all find something from an approach designed in one context that is 'translatable' to enhance our own local context.

Keywords: Critical thinking, Project-based learning, Translatability

Introduction

In this paper, we attempt to illustrate the benefits of adopting a holistic Project-Based Learning (PBL) approach to provide adequate coverage of the skills, knowledge and underlying principles needed to develop academic literacy. In particular, we outline and illustrate our own ten principles of critical reasoning/argumentation (labelled C1-10 from here on), which are intended to provide insights into the nature of academic literacy and the way it can be developed by students using a PBL framework through interaction, reasoning and argumentation. We support our discussion with two types of data. Extensive video recorded data extracts illustrate the interactive process that students engage in throughout the project. Extracts from final written reports illustrate the final project outcomes or products. The following brief extract from our video data provides an initial illustration of the way the principles function in practice. The extract illustrates the way one of our principles (C7: Instruction needs to develop the ability to synthesize output such as in group literature reviews or discussion sections of reports) is addressed through the interactive process of learning in small teams.

The extract highlights the ability to synthesize information in a team-written report which was collected individually. Here the students are working on a literature review:

Video Extract 1

D: My article talks about why it is important to have creativity in engineering courses because most of the time typical engineering courses don't offer any creative courses or something; so whenever they start [engineering graduates] applying for jobs, the job would expect them to have certain amount of creativity but unfortunately they will not have it. So that's why my article talks about the importance for universities to start establishing creativity in engineering education.

B: Actually that contradicts my article.

H: Contradicts?
B: Yes, because my article emphasizes [on] the university's education; it says that it produces the creativity in the students, mainly in engineering students. It says that creativity is very vital for an engineering student and university education *does* that for an engineering student; it develops the creativity in the student in order for the student to succeed
H: …, your [Binjab's] article contradicts his [Darwish's] article, which compliments my article. This [comparison] is what we're going to use for the synthesis.

Project-Based Learning as a Holistic Framework

PBL has been defined as "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed projects and tasks" (Markham et al., 2003, p. 4). Projects in this context are defined as:

> …complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision-making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; […] culminate in realistic products or presentations (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999)". Defining features include "authentic content, authentic assessment, teacher facilitation but not direction, explicit educational goals (Moursund, 1999), cooperative learning, reflection and incorporation of adult skills (Diehl, Grobe, Lopez, & Cabral, 1999).
> (Thomas et al., 1999, p.1)

Such projects therefore essentially combine thinking, knowing and applying knowledge (Blumenfeld et al., 1991; Krajcik & Blumenfeld, 2006) in real-world activities that parallel those that professionals in the workplace engage in (Krajcik & Blumenfeld, 2006). They provide a fertile context for active, interactive and situated learning that is supported by a range of cognitive tools. Active participation is also reflected in key features of PBL identified by the Buck Institute for Education (a "not-for-profit organization committed to expanding the effective use of Project Based Learning" (BIE, 2015)), who also emphasize the benefits of sustained inquiry and authenticity, student voice and reflection, considering equally both the process of learning and the public outcomes such as reports and presentations. Similarly, Krajcik and Blumenfeld (2006) identify five key features of PBL, namely: “driving questions, situated inquiry, collaboration, learning technologies, and artifacts.”

This approach resonates with our own context where a semester-long project is a framework within which learning principles are introduced and put into practice. Collaboration in our context is a critical feature of the experience for students, and so we argue that **interaction** is essential, whether provided by peers in a **team-based** project or by instructors or others involved in providing student support. In such an environment, the instructor’s role is to design and plan a flexible student-centred curriculum experience, build a culture of creativity, inquiry and problem solving, help manage activities (with full student involvement), support student learning, provide coaching and counselling and link assessment to learning.

Research in K-12 science education has shown that students who actively participate in project-based learning classrooms perform better than those in traditional classrooms (Marx et al., 2004, Rivet & Krajcik, 2004, Williams & Linn, 2003, in Krajcik and Blumenfeld, 2006; Barron et al, 1998; Thomas, 2000). Research on the effects of small-group learning on undergraduates in science, mathematics, engineering and technology (Springer et al, 1999) reported positive effects on achievement in standardized tests and noted also that there was an improvement in students’ attitudes. In engineering education, research has indicated that PBL is particularly effective in the development of a variety of professional skills and abilities in demand in the workplace, including communication, ethics, information literacy, lifelong learning, project management, and teamwork (Mills & Treagust, 2003; Bielefeldt, Paterson, & Swan, 2009). As the aim of our institute is to prepare engineers for employment in the national oil company, this strength of PBL is particular appreciated.

PBL and the development of core competencies

In our context, the Institute's communication courses aim to develop core competencies that include self-direction, team and interpersonal skills, time and project management, reflective and critical thinking, and the necessary language for success both as students and in the future workplace. PBL has much to offer in meeting these goals. Authentic team- or pair-based communicative situations require students to plan, organize themselves, make themselves understood, negotiate meanings, repair misunderstandings, reach consensus, identify and allocate tasks, deal with conflict, consult experts and make decisions about what needs to be done and when, and about how their work should be presented; all skills and abilities expected by engineering employers (Felder & Brent, 2003; Martin et al., 2005; Mohamed et al., 2014; Rugarcia et al., 2000; Sageev & Romanowski, 2001). Such requirements demand the effective use of language and the development of reflective and critical thinking skills, both of which are of particular importance in our context, the former because the majority of our students are using English as an additional language and the latter as many of the Institute's students come from educational backgrounds that privilege rote memorization (Farah & Ridge, 2009; Nunn & Langille, 2015) over critical thinking.

As PBL establishes a holistic learning environment, we believe that it is more than a teaching technique or method. Instead it provides a framework for teaching and learning within which students and teachers constantly make choices about techniques and methods appropriate to evolving situations. In all cases, a PBL environment promotes the co-construction of knowledge through which learners are able to develop according to their psychological readiness to acquire that feature, or their "zone of proximal development" defined as: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 6).It can accommodate more easily to individuals' differing degrees of psychological readiness, responding to the observation that classes in the Institute are usually composed of students of widely varying English language proficiencies and other core competencies including so-called 'critical thinking' abilities. Principles underlying learning and competence in critical reasoning and argumentation are therefore considered below, in relation to their PBL environment.

Ten principles of critical reasoning and argumentation

Learning principles do not come in isolation. Ellis (2005) for example lists ten principles of SLA, emphasizing that there are complex interactions between them when put into practice. This is true of all learning principles. In our context, we see project-based learning as *a holistic learning framework within which students, supported by teachers, do meaningful research, apply key learning principles, develop a variety of academic literacy skills and apply and improve their knowledge.*

We have recently identified ten principles (Nunn & Hassan, 2015; Nunn et al., 2015). We will provide a fuller explanation here and attempt to illustrate the way all ten principles are well supported by a PBL environment ('C' denotes *Critical Reasoning Principle*):

- C1. Instruction needs to provide opportunities for self-regulation through which learners develop their argumentation skills.
- C2. Successful instructed learning provides interaction opportunities promoting dialogue to enable learners to develop their reasoning ability inter-subjectively.
- C3. Instruction needs to ensure that learners focus on relevance by referring to known information from literature in relation to their own projects.
- C4. Instruction needs to ensure that learners have opportunities to explain their ideas and research choices.
- C5. Instruction needs to ensure that learners focus on their choice of words to express appropriate levels of confidence in relation to evidence.
- C6. Instruction needs to be directed at developing the ability to analyse issues and problems (such as by breaking a problem down into manageable components).
- C7. Instruction needs to develop the ability to synthesize output such as in group literature reviews or discussion sections of reports.

C8. Instruction needs to develop the ability to evaluate strengths and weaknesses of arguments, research approaches, and conclusions (in literature for example).

C9. Instruction needs to develop the ability to interpret findings from reading or from learners' own investigations.

C10. Instruction needs to provide opportunities for learners to critically examine their own written output in terms of coherent and balanced argumentation.

(Nunn & Hassan, 2015; Nunn et al., 2015, slightly reordered for this discussion)

In developing our principles, we have considered general critical thinking concepts commonly identified in the literature (Facione, 2011; Paul &Elder, 2009) which might apply across disciplines, alongside more discipline specific concepts which may also have broader applications such as pragmatics, systemic linguistics, the philosophy of language (Sperber &Wilson, 1996; Grice, 1989; Searle,1969; Austin,1962; Wittgenstein,2001 [1953]).Paul and Elder's (2009, p.2) definition summarizes and names some general critical thinking concepts that are relevant to this study:

> Critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

We have preferred to refer to principles of 'critical reasoning and argumentation' given our focus on holistic argumentation in relation to the development of academic literacy for holistic tasks such as project reports, presentations or discussions.

1.1 Principle C1: A superordinate principle?

Principle C1: Instruction needs to provide opportunities for self-regulation through which learners develop their argumentation skills.

As an individual ability to be developed and transferred to other contexts, we consider the ability to take responsibility for one's own argumentation and reasoning, what Facione (2011) calls 'self-regulation' to be central to so-called critical thinking (Principle C1). Facione's definition of self-regulation below led us to conclude that it is a superordinate concept that is inclusive of many other categories of critical thinking: interpretation, analysis, evaluation, inference, explanation (and metacognition):

> self-consciously to monitor one's cognitive activities, the element used in those activities, and the results educed, particularly by applying skills in analysis and evaluation to one's own inferential judgments and with a view toward questioning, confirming, validation or correcting either one's reasoning or one's results (Facione, 2011, p.6)

This is linked to the notion of 'self-efficacy' (Bandura, 1977, 1986). Pajares (n.d) summarizes the importance of Bandura's view that "cognition plays a critical role in people's capability to construct reality, self-regulate, encode information, and perform behaviors". Bandura and Pajares provide evidence to suggest that one's view of one's own ability is an important indicator of success. While self-efficacy is related to how capable one feels oneself to be, critical self-reflection helps root this self-belief in a mindset which both reflects reality and targets improvement. The ability to take personal responsibility for one's own learning is also a key concept of lifelong learning in that it encourages learners to develop the kind of abilities that can be transferred to future learning and developed within a new context without necessarily assuming that learning support will always be available.

A basic assumption is that the critical reasoning underlying our academic argumentation essentially has to be self-motivated and supported and cannot be 'learnt' as factual knowledge. This concurs with a phenomenological view (Husserl, 1960 [1931]) which proposes as a self-evident truth that all reflection is first processed through a subjective human mind. While subjectivity is seen as inevitable, phenomenology does not propose subjectivity as an end in itself. It is rather an inevitable path towards inter-subjectivity. In Nunn et al., (2015), we have developed a phenomenological interpretation of 'self-regulation' in relation to inter-subjectivity and objectivity (Husserl, 1960 [1931]; Ricoeur, 1992; Vessey, n.d).Table 1 below illustrates our perspectives of the way Principle C1 was used by students in team discussion, as exemplified by video data extracts that appear below the table.

Table 1 Principle C1: Self-regulation

Researcher's view	Teacher/researcher's view
The whole transcribed activity on video is a devolved activity in which they organize their own approach to completing the task. Thematic argumentation is addressed.	Prior to the discussion, the students were instructed to identify the main points of their texts and use them to develop their arguments regarding how their articles relate to their chosen project topic. Students seem to be able to do this effectively by comparing their texts. They find similarities and differences between texts. (see Video Extract 1below). Students also justify their own study (see Video Extract 2 below).

Video Extract 1: The importance of self-regulated contributions

D: My article talks about why it is important to have creativity in engineering courses because most of the time typical engineering courses don't offer any creative courses or something; so whenever they start [engineering graduates] applying for jobs, the job would expect them to have certain amount of creativity but unfortunately they will not have it. So that's why my article talks about the importance for universities to start establishing creativity in engineering education.

B: Actually that contradicts my article.

H: Contradicts?

B: Yes, because my article emphasizes [on] the university's education; it says that it produces the creativity in the students, mainly in engineering students. It says that creativity is very vital for an engineering student and university education *does* that for an engineering student; it develops the creativity in the student in order for the student to succeed

H: …, your [Binjab's] article contradicts his [Darwish's] article, which compliments my article. This [comparison] is what we're going to use for the synthesis.

Video Extract 2: Justifying their own choice of topic

H: if those 2 [collegiate and professional levels] already overlapped, we wouldn't have to do this research. We're trying to find out how to build a creative engineer in order to make better engineers; so if those 2 already overlap, then wonderful – we [industry] are getting what we're making [in universities] and no need to solve any problems.

As a superordinate principle, Principle C1 interacts with other principles. For example, PrinciplesC1 and C2 express two related sides of the same coin: self-regulation and inter-subjectivity.

1.2 Principle C2: The importance of interaction

Principle C2: Successful instructed learning provides interaction opportunities promoting dialogue to enable learners to develop their reasoning ability inter-subjectively.

We see interaction as a counterbalance to the more subjective ‘self’ regulation. Mercier and Sperber (2011, p.58) point out that “reasoning enables people to exchange arguments that, on the whole, make communication more reliable and hence more advantageous” (p. 60). Inter-subjective activity is then a means of helping to evaluate our own arguments (C1 and C2 in combination).In academic writing and presentation, the balance between referencing the work of informed ‘others’ and putting forward one’s own arguments and/or research contribution is central to what we mean by academic literacy. There is no totally neutral (‘objective’) stance that a writer can take. The choice of words and arguments is in itself some kind of position. Sometimes the position is made transparent, other times it is hidden in impersonal language.

Table 2 Principle C2: Interaction

Researcher’s view	**Teacher/researcher’s view**
The whole recorded dialogue appears to embody C2. H takes a lead role early on in this extract by negotiating for elaboration or for extending participation to all group members	Students engage in a dialogue to relate point to each other, exercising their reasoning skills One student encourages others to interact critically through questions: “Do you guys think creativity is more important for an engineer or the skills he has to have in order to become an engineer? What I mean by that is, do you think creativity are the fundamentals of an engineer or is it the skills that make him an engineer? Which one do you think is the base?”

This principle is illustrated by all video data extracts presented in this paper.

1.3 Principle C3: The importance of relevance

Principle C3: Instruction needs to ensure that learners focus on relevance by referring to known information from literature in relation to their own projects.

The central communication concept of 'relevance' (Sperber & Wilson, 1996, Paul and Elder, 2010), our third Principle (C3) appears to be subsumed under 'interpretation' and 'inference' in Facione's system, and in our view, is related to evaluation as well. It can be a sophisticated superordinate concept as in the relevance theory developed by Sperber and Wilson, who suggest relevance is "a single property … which makes information worth processing for a human being"(p.48). We nonetheless believe that principles are applicable at different levels and therefore relevant to all levels of education. At a basic pre-research level, students can underline or highlight information in a reading text that is relevant to their own topic and then list this information ready for citation. At a more sophisticated level, advanced students can evaluate the extent to which their own findings are 'relevant' to a wider academic community in that they contribute something significant to their field of study or research focus that was not known before. We do not normally need to communicate what is already known unless we are going to add something.

The "main thesis" or principle of relevance theory (Sperber and Wilson, 1996, p.49) is that an act of "ostension"(drawing something new to the attention of interlocutors) "carries a guarantee of relevance and that this fact – which we will call the *principle of relevance* – makes manifest the intention behind the ostension". This "guarantee" is not a guarantee that an assumption can ever be made "mutually manifest" or that the communicative intention will succeed, but the need to make something relevant available, something that the interlocutor does not already know, is essential in developing academic abilities and knowledge.

Principles C1 and C3in combination are well-illustrated in Engineer et al. (2014) below in the prestigious journal *Nature*. This extract illustrates a recent trend away from the traditional kind of impersonal writing which removed the agent from the text. Following *Nature* editors' instructions to authors, the authors of this paper use first person and active forms predominantly in the main body of their paper to indicate their own novel contribution very transparently. This instruction is matched by the journal *Science* and also by IEEE and the Chicago Style Manual indicating that the tradition of hiding agency in impersonal language is very much in decline. Agency is hence linked to self-regulation in that the researchers take clear responsibility for their own research choices in expressions (underlined in the extract) such as 'we characterized…', 'we identified…', 'our results identify…'. This also embodies a 'guarantee' of relevance in that it emphasizes the novelty of their finding.

> <u>We characterized</u> the mechanisms mediating this response and <u>identified</u> an extracellular signaling pathway involved in the regulation of CO_2-controlled stomatal development by carbonic anhydrases. RNA-seq analyses of transcripts show that the extra-cellular pro-peptide-encoding gene EPIDERMAL PATTERNING FACTOR2 (EPF2)[7,8], but not EPF1(ref.9), is induced in wild-type leaves but not in ca1ca4 mutant leaves at elevated CO_2levels.Moreover,EPF2isessentialforCO_2 control of stomatal development. Using cell-wall proteomic analyses and CO_2-dependent transcriptomic analyses, <u>we identified</u> a <u>novel</u> CO_2-induced extracellular protease, CRSP (CO_2RESPONSESECRETEDPROTEASE), as a mediator of CO_2 controlled stomatal development. <u>Our results identify</u> mechanisms and genes that function in the repression of stomatal development in leaves during atmospheric CO_2 elevation…

At the same time, the choice of less personal language (whether active or passive) is made when referring (concisely, using non-integral references) to the work of relevant others as in the sentence "RNA-seq analyses of transcripts *show* that the extra-cellular pro-peptide-encoding gene EPIDERMAL PATTERNING FACTOR2 (EPF2)[7,8], but not EPF1(ref.9), *is induced in* wild-type leaves…".

Table 3 Principle C3: The importance of relevance

Researcher's view	Teacher/researcher's view
This activity focuses on literature but they use this in support of their own project, developing subtopics/themes for research questions (see Video Extract 3) which help ensure that they have something novel – therefore relevant – to propose.	Students display the ability of identifying and summarizing relevant bits from their readings for their own research (see Video Extract 3).

Video Extract 3 illustrates the students' ability to focus on relevance to their research focus:

Video Extract 3: Focusing on relevance

H. I think **all our topics are related to the main theme**: "How to Build a Creative Engineer". We have:

1. How to empower engineers to think outside the box.
2. The importance of design.
3. Creativity in engineering education.
4. The obstacles towards creativity in engineering education.
5. Non-traditional teaching methods.
6. The variety of the skills.

1.4 Principle C4: The ability to explain one's thinking

Principle C4: Instruction needs to ensure that learners have opportunities to explain their ideas and research choices.

Meta-cognition (Facione, 2011) is another superordinate concept that helps us characterize the way individuals develop and demonstrate their ability to take control of their own argumentation. Metacognition for Facione (2011, p.6) is what 'raises thinking to another level'. We define metacognition in relation to practice as the ability to explain and be critical about one's own reasoning processes in relation to the completion of a given task or subtask. This principle is therefore closely linked to the superordinate Principle C1 in that it could assist in (self-) regulating/evaluating critical argumentation within students' task/project reports.

'Explanation' is directly related to communication, being the ability learners develop to "explain what they think and how they arrived at that judgment" (Facione, 2011, p.5). We see this as the kind of combination of meta-communication and metacognition that is at the heart of academic literacy development. Unless we are just blindly guiding students to complete tasks, we typically challenge students to reflect on and evaluate the way they are communicating and work out the way this reflects their thinking about communication. 'Explanation' links closely to 'speech act' theory (Austen, 1962) in that it requires us to articulate what we are 'doing' by 'saying' something, in this case when we attempt to make an explanation.

Table 4 Principle C4: Explaining one's thinking

Researcher's view	**Teacher/researcher's view**
This conversation has examples of how the team explains their thematic categorization for the literature review exemplified in extract 4 below.	The students' justification of their research (extract 5).

Video Extract 4 illustrates the way students have the opportunity to develop and explain their thinking. K. elaborates on H.'s classification below based on his knowledge of the text he read and reviewed before the discussion. While H. leads the discussion, the others do have opportunities to self-select and explain.

Video Extract 4: Opportunities to explain ideas and thinking

H: Notice that these 2 will be complementing each other: this one is about the expectations of the workplace, the obstacles, how much creativity is required of a graduate engineer, and…
K: Mine was not only about the blocks but also about how to improve or enhance the courses in a university [in order to] teach the students to be more creative. And, in my article, they gave us a lot of examples…
D: Yeah, that's exactly like mine. We have the same focus.
H: That's good; so we know what to expect. In return, this is what the universities can do to improve and empower and enhance.

Video Extract 5: Explaining the need for the research

H: Some [creative] people got together and they agreed on a set of skills and we use those skills and we completely forgot about creativity. Or, it could be the opposite. We won't know unless we do the research. We can use that in one of the research questions.

1.5 Principle C5: The importance of epistemic modality in relation to evidence

Principle C5: Instruction needs to ensure that learners focus on their choice of words to express appropriate levels of confidence in relation to evidence.

The relationship between research evidence and language choice is important as it illustrates the way that content and the communication of the content are inextricably interwoven. The quality of evidence supporting argumentation is a central component of any consideration of critical thinking in the field of academic communication. Models of critical thinking do not directly address academic argumentation as their focus is different. One aim of competent academic communication is to present convincing argumentation in support of conclusions reached by research or scholarship. Trelogan (2010, p.1) defines an argument as "a sequence of statements, one of which is being argued for on the basis of the others". In research or project reports, statements of evidence are influential in providing the basis for drawing conclusions.

As we do not deal with statements or propositions that are absolutely true or false beyond the realms of philosophy, the systemic notion of epistemic modality (Halliday & Matthiessen, 2004), which suggests the means for expressing an appropriate level of certainty in arguments, provides a useful extension of Grice's maxim of quality (Grice, 1989). This requires authors to avoid stating anything for which they lack adequate evidence. For our more practical research purposes, we translate this as a need to:

- consider the extent to which your statements/claims are supported by evidence.
- match the strength of the claims you communicate to the evidence you provide in support of them.
- not communicate a claim beyond what is supported by your evidence.

A systemic linguistic approach to communication can then lead us to suggest a range of linguistic choices for expressing different levels of claims. A systemic linguistics perspective is based on awareness of the choices available to competent language users and the ability to match an appropriate choice to a particular need in context. (See Nunn, in Brandt, 2009 for a more detailed discussion).

Table 5 Principle C5: The need to express appropriate levels of confidence in evidence

Researcher's view	**Teacher/researcher's view**
The students engage in a discussion about wording of the themes, as in Video Extract6. This is always directly linked to content. They also use epistemic modality – in my view appropriately – in the discussion section of their final report: "The results show that, for the given definitions of creativity, the subjects were equally divided between them in terms of authenticity. **<u>This could be because</u>** all definitions are equally viable and/or because the subjects were confused because of the slight similarity in their meaning."	Students use certain vocabulary items to avoid making definite statements regarding their understanding of the points covered in their texts (Video Extract7). Students provide alternative ways of acting using hedging language: "We **could** shorten it a little".

Video Extract 6: Discussing wording in relation to content

H: Yeah, this is from the teaching perspective, and this is from the professional perspective. So, what do we call this? What do you guys think?
D: Enhancing Creativity?
K: Shouldn't we include this in the literature review?
H: Wait… which one?
K: With this theme (not sure which one)
D: Techniques?

The bold script in Video Extract 7 below illustrates the way students exercise caution in their choice of wording.

Video Extract 7: Exercising caution – the importance of research evidence

H: Or, **it could be** the opposite. **We won't know unless** we do the research. We can use that in one of the research questions.
B: Whether this is "the fundamental" for an engineer, or that.
H: Yes; is an engineer a skilled person who applies his creativity, or a creative person who uses a set of skills? **I think it's mixed.**
D: **Maybe it's a combination of both? We'll find out.**

1.6 Principle C6: The importance of analysis

Principle C6: Instruction needs to be directed at developing the ability to analyse issues and problems (such as by breaking a problem down into manageable components).

The ability to think analytically in a purposeful and unbiased manner is central to most conceptualizations of critical thinking (Noone, Bunting, & Hogan, 2016; Halpern, 1998; Facione, 1990, 2011, 2013; West et al., 2008). Facione (1990), in his summary of expert consensus regarding the role of critical thinking in education, identified the ability to analyze as one of six core cognitive skills for good critical thinking. Thinking analytically is defined as the ability "to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express belief, judgment, experiences, reasons, information, or opinions" (Facione, 1990, p14). The experts included examining ideas, detecting arguments, and analyzing arguments as subskills of analysis.

It may be argued that examining ideas, detecting arguments, and analyzing arguments are not so much subskills of analysis as the purposes of analysis. Nevertheless, it cannot be denied that thinking analytically is essential for effective argumentation, in which arguments are conceptualized as claims to knowledge (Toulmin, 1958). The development of an argument and its reasoned defense lie at the heart of all scientific and socio-scientific processes. A sound and defensible argument is one that is “appropriately moved by reasons” (Siegal, 1988, p.23). For students to be able to form such an argument, therefore, they should be able to identify “reasons”, that is, what supports and justifies their argument, and, as ideas are at least in part defined by what opposes them, they also need to be able to recognize counterarguments (Toulmin, 1958). With counter arguments in mind, students need to be able to provide undermining evidence and they should aim to elicit concessions from those expressing opposing views (Walton, 1989).Doing this involves thinking analytically, as it is necessary to recognize, for example, logical fallacies, to identify implicit and stated assumptions, isolate variables, and find relevant information (Abrami, 2008). However, thinking analytically is required not only in response to knowledge, but in its creation. It is needed, for example, in identifying problems to investigate, defining and refining research questions, identifying stakeholders, relevant sources and background, establishing facts, categories, values, principles and content along with their strengths and weaknesses. It is also consequently needed in more practical matters related to research processes, such as in identifying what needs to be done, by when it should be done and what resources are required. At a more basic level, it may simply involve breaking down what appears to be a major problem into smaller components.

Project-based learning provides ample opportunities for students to experience and apply all of the above through their responses to knowledge and the expectation of knowledge creation. Project-based learning can scaffold the development of students’ analytical thinking skills by providing them with frequent opportunities to identify and develop their own arguments, and explain, justify, modify and discuss them with their peers. It has been suggested that engaging in collaborative discourse (related to C2) focused on justifying claims can strengthen students’ analytical thinking and reasoning abilities as well as their understanding of concepts (Osborne, 2010).

In our context, our project-based learning practices, which include among their course learning outcomes the development of students' ability to think critically, expressed in the syllabus and through assessment rubrics, represent what Abrami et al (2008, p.1121) refer to as an "infusion approach" in which critical thinking skills are "embedded into the course content and explicitly stated as a course objective". While Abrami et al's meta-analysis of critical thinking instructional interventions concluded that infusion approaches are associated with moderate success in relation to the development of students' critical thinking skills, they noted that greater improvement was observed in cases where critical thinking requirements are a clear and important part of course design, such as through its inclusion in course learning outcomes and, therefore, assessment rubrics. Such course documentation, as in use in our context, is clearly expected to play a key role in communicating critical thinking expectations to students, but it can also be used at a very early stage in the course to exemplify and initiate analytical thinking. For example, a rubric that describes different degrees of analytical thinking can serve to focus a discussion and establish expectations. Likewise, a syllabus statement can be used to illustrate and elicit analytical thinking. For example, the statement "A collaborative, team and project-based learning approach is applied in COMM101" gives an instructor the opportunity to discuss with his/her students what that will mean for them in practice over the forthcoming weeks, by prompting them to deconstruct the statement, breaking it down into components and making explicit its assumptions. Such work in the early stages of a course is key to establishing a classroom culture in which students feel secure in the development and application of their critical thinking skills.

In the three extracts from data below, the students demonstrate analytical thinking in their concern with comparing, grouping, contrasting, balancing contributions and categorizing. In the last extract (Video Extract 10), by connecting their ideas through logical development, the students demonstrate preliminary awareness of the need to complement analysis ultimately with synthesis. The need for students to be able to synthesize output is Principle C7, discussed next.

Table 6 Principle C6: Analysing issues and problems

Researcher's view	Teacher/researcher's view
There is frequent evidence of stopping to analyze the task, but mainly instigated by the team leader H (as in extracts 8- 10)	Students' discourse provides evidence of their skills in breaking task into manageable/cohesive parts. In doing so, they ask each other for opinions rather than dictating one particular student's choice (Video Extract 8). Students attempt to have more or less equal discussion/evidence for the points identified for their team literature (Video Extract 9). Students also attempt to categorize relevant info so that it is more manageable (Video Extract 10)

Video Extract 8: The ability to analyze

H: Do we start grouping them or do we start comparing them [by seeing] how they relate or contradict?

B: We group them [each theme] with one another. No, I think we should find contradictions between them. We can start off with our [Binjab's and Darwish's] articles. As I said, my article emphasizes the importance of university education to develop creativity in a student. On the other hand, Darwish's article says that…

Video Extract 9: Ensuring equal contributions

H: We want the themes to be equally as heavy. If we put 3 articles here, 2 articles here and 1 article there. But I have 3 articles here, so if one theme ends up with 3 sources, that doesn't matter.

Video Extract 10: Categorizing

H: We first just need to group things together, and then we put in all the necessary information. It's because we want our [team] literature review to be cohesive – we don't want it to be segmented; one second you're reading about the workplace, then suddenly you're reading about universities. So, these 2 (refers to material) we'll blend them, and then we'll try to connect them to all the others. There will be places where they connect, that's the whole point.

1.7 Principle C7: The importance of synthesis

Principle C7: Instruction needs to develop the ability to synthesize output such as in group literature reviews or discussion sections of reports.

If analysis refers to the skills needed to deconstruct arguments or claims to knowledge in a purposeful and unbiased manner, then synthesis is its complement, referring to the ability to construct arguments, equally purposefully and from an equally unbiased perspective. The skills required to synthesize information may be explained in terms drawn from areas of cognitive science that are concerned with models of human learning, as "chunking" (Gobet, et al, 2001, p.236), a postulated mechanism whereby the human (and animal) brain assembles pieces of information from the environment into a single unit, referred to as a "chunk". The authors argue that "researchers in cognitive science have established chunking as one of the key mechanisms of human cognition, and have shown how chunks link the external environment and internal cognitive processes" (Gobet, et al, 2001, p.236).While such information collecting may be deliberate, conscious and goal-oriented, or automatic and continuous, as during perception, the writers suggest it is nevertheless possible to arrive at a common definition: "a chunk is a collection of elements having strong associations with one another, but weak associations with elements within other chunks" (Gobet, et al, 2001, p.236).

The concept of association underpins the skills of synthesis, which may be defined as the deliberate, conscious and goal-oriented collecting of associated information into "chunks". This definition may be enhanced by adding a critical dimension and our discussion may be aided by replacing some terms with those used above, to give us the following definition: synthesizing involves the deliberate, *self-regulated*, goal-oriented and *unbiased* collecting of *relevant* information into "chunks". Analysis, therefore, is the precursor to synthesis as one must first identify what can be associated and then consider how it should be associated. A key aspect of assisting students to see the "what" and "how" of association therefore is expressed in part by Principle C3 above, namely the need to "ensure that learners focus on relevance by referring to known information from literature in relation to their own projects". Referring to literature requires students to identify what information is worth processing and not already known to the reader or interlocutor (Sperber & Wilson,1996, p.49), to identify and convey the appropriate level of confidence in the argumentation being re-presented, and to relate this new information to their own (See also C5).

Making associations requires students to find a common thread within different information in different sources. Students must search for similar elements, foundations, characteristics or features, and integrate this information in such a way that enriches their own arguments without distorting those of others. While skills of synthesis are clearly required specifically to support argumentation, they are also essential more broadly for effective learning. Synthesis is a "complex and creative process, in which two or more ideas or skills are brought together to create a new whole; in this form of integration, students combine knowledge to enhance understanding and gain new insights (Barber, 2014). Such integration of learning is "the demonstrated ability to connect, apply, and/or synthesize information coherently from disparate contexts and perspectives, and make use of these new insights in multiple contexts" (Barber, 2012, p. 593).

The project-based learning environment at our institute requires students to identify a real-world problem that is feasible to research with the available resources; find, relate, write and present relevant background information from different sources; combine this information with their own experience to inform the development of data gathering instrument, which they can explain and justify; administer this instrument (supported by explanation of what they are doing and why); analyse and discuss the results of their research and compare them with the information referred to in their background reading, integrating the whole; make recommendations to address the problem they identified that are accommodate the context by being realistic and practical. In doing such work, students are developing:

> the ability to connect the domain of ideas and philosophies to the everyday experience, from one field of study or discipline to another, from the past to the present, between campus and community life, from one part to the whole,

from the abstract to the concrete, among multiple identity roles – and vice versa.
(Barber, 2012, p. 593)

Several verbs used above are closely associated with such work, namely: *relate, combine, explain, justify, connect, integrate, compare, discuss.* To this list we may add: *construct, refer, develop, examine, support*. The positon of synthesis as a core critical thinking skill explains why these words are among those most frequently used in student assessments (Brandt, 2009, p.205). They are also exemplified in the data extracts below, along with others that contribute to the students' negotiation of what and how to synthesize, such as *blend, meet, cross, lead, overlap* and *compliment,* as well as the adjective *cohesive* and the noun *link*.

Table 7 Principle C7: Synthesizing output

Researcher's view	**Teacher/researcher's view**
This activity provides evidence as to how interaction can encourage synthesis. The students clearly state their aim is to synthesize individual literature reviews into a common version. Their discussion indicates a strong understanding of synthesized writing (Video Extract 11).	Students display skills of synthesizing information from different sources. Specific examples are highlighted in bold in Video Extract 12 below.

Video Extract 11 (continuation of Video Extract 10 above): An example of developing a synthesis through interaction

H: We first just need to group things together, and then we put in all the necessary information. It's because we want our [team] literature review to be cohesive – we don't want it to be segmented; one second you're reading about the workplace, then suddenly you're reading about universities. **So, these 2 (refers to material) we'll blend them, and then we'll try to connect them to all the others. There will be places where they connect, that's the whole point.**
B: For engineering students.
H: Alright, in engineering students. OK, the last 2 are actually related to skills. We have here the creativity in the teaching level, and here we have the expectations in the professional level. And these (refers to material) are all the different skills – training and skills and everything – that an engineer would require.

B: So basically, this is basically in the workplace but can also be [found] in a university.
H: Yes, it goes both ways. So, what do we call this? It's a part of skills and all the necessary skills you'd need so that in the workplace you don't need training all over again.
N: Basics for an Engineer?
H: No, it's not just the basics. Everything.
D: Extra assets?
H: Assets… We can say these are fundamentals and…?
B: And the…?
D: Actually they're not fundamentals.
B: They're both fundamentals and what comes after them.
H: So… it's comprehensive. It's just the basics and the extra.
D: But, they're not like necessary. They're just extra assets.
B: They are necessary.
D: Okay they are, but not like [creativity]…
H: But we're not willing to drop 3 whole sources. Because here we talk about the techniques to enhance, and there we talk about the expectations. Where do they meet? If you don't have that "link", you'll have 2 separate reviews. We want one cohesive literature review. So… engineering skills, or the variety of engineering skills.
B: You can say this one talks about creativity – how engineers need it. And this one right here talks about why it is needed. But if you think about it, without those skills, a student – an engineering student – can't be an employee. Without those skills. So this does go in the middle. With creativity, you do need those skills – they are vital to become an engineering employee. This [creativity] does make you a better engineer and a better employee, but without the necessary skills, you cannot cross this to the workplace.
H: Yes, it's basically just the link.
B: Yeah.
D: Yes.

Video Extract 12: Discussion of synthesis (highlighted in bold)

H: I had 2 articles; one of them was pretty long and the other was very, very short. But, **they almost lead to one another**. One of them was about spatial skills that engineers in general – or in order to become an engineer – you will require some spatial skills; you'll need to be good in dimensions, vectors and all these. Between different engineering disciplines (Mechanical, Electrical etc.) you either need more spatial skills, or less. **The next article builds upon the first article by** explaining the importance of design, **I think this occurred more**

than once. We have engineering: the ways it's taught, good and bad. So [one relationship is] "The way engineering is taught". What else? These are the "gaps". **Our literature reviews, the points where they meet, we'll need that for the synthesis. For now [we'll look at] where they overlap**. I think **they overlap over** the creativity topic. How to build a creative engineer

J: It's about how to make courses for students, when they graduate, to enter the workplace without traditional training from the university.

B: **This kind of relates to the third [individual literature review] theme**, which is the workplace and what they expect; how to prepare you for the workplace.

…

H: Notice that **these 2 will be complimenting each other**: this one is about the expectations of the workplace, the obstacles, how much creativity is required of a graduate engineer, and… **Where do they *meet*?** If you don't have that "link", you'll have 2 separate reviews. **We want one cohesive literature review**. So… engineering skills, or the variety of engineering skills.

1.8 Principle C8: The importance of evaluation

Principle C8: Instruction needs to develop the ability to evaluate strengths and weaknesses of arguments, research approaches, and conclusions (in literature for example).

Defined as the ability "to assess the credibility of statements or other representations which are accounts or other descriptions of a person's perception, experience, situation, judgement, belief, or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions or other forms of representation" (Facione, 2013, p. 6), evaluation can be regarded an essential focus of critical argumentation. Evaluation is of particular importance due to the fact that the vast amount of information we are constantly exposed to is of little use if we do not know how much of it is incomplete or misleading (Hughes & Lavery, 2008). Although false assertions can be intentionally made to deceive people, they are also made out of carelessness, exaggeration, approximation or a rough guess, which require us to have an inquisitive mind to evaluate the validity and reliability of assertions made (Butterworth & Thwaites, 2013).

When students on a project-based course examine multiple causes of a certain phenomenon, they are asked to evaluate their relative importance and identify the most important reason, giving them the chance to brainstorm causes, form and test hypotheses (Mergendoller, 2014). Such meaningful discussion opportunities (our Principle C2), in which students employ debate and questioning skills, expose them to viewpoints and assumptions different from their own (Meyers, 1986). Their engagement in this process teaches them to reason different perspectives, identify bias and experiment new ways of thinking (Meyers, 1986). In the case of academic writing, evaluation involves decision making skills on how useful a certain source is, and which particular information (not) to use when drafting research papers. In doing this, students are required to provide reasons for their decisions. When students engage in evaluation of arguments and/or texts within their teams (Principle C2), they need to verbalize their thoughts which may be challenged by their peers, which provides opportunities for meaningful discussion as also suggested by Meyers (1986).

Project–based learning in the holistic sense outlined in our paper embeds constant opportunities for students to practice evaluation skills. They are encouraged to use evaluation skills starting from the very initial stages of their projects when they need to decide on what particular issues they would like to address in their project. This helps students converse with each other on various potentially disorienting dilemmas that either they themselves or people around them might have. The very fact that they work in teams leads them to evaluate topics suggested by team-members. This requires them to put the issues in order of importance evaluating how severe they are. Our projects also require students to review literature on the issues they identify as worth investigating. They are also asked to consult their instructors and significant others to help them make a decision. Students meet to discuss and evaluate the information they have gathered individually. This helps them make a final decision on their project topic. This is followed by the stage where each individual student further delves into the literature trying to identify sources to read and annotate. This requires them to first decide where to search for texts (physical or online library, google scholar etc.). They also need to evaluate sources in terms of validity of information by investigating the publication date, authors' credibility etc. Having identified useful and reliable sources, they annotate them with a critical eye. Then, they hold a meeting to compare their sources trying to make a decision about how they relate to or contradict each other, an example of which can be seen in the data below.

Table 8 Principle C8: Evaluating arguments

Researcher's view	Teacher/researcher's view
The students (here not the team leader) were able to identify contradictions in arguments across the literature (Video Extract 13)	-

Project-based courses also engage students in evaluation skills when they need to select the method(s) of data-collection they need to use. In our second term course (COMM151) in particular, students are asked to triangulate their data in order to test consistency between data from different data-collection tools, which helps evaluate the reliability and validity of their data.

Video Extract 13: Identifying contradictions in the literature

B: Industry? My article talks about why it is important to have creativity in engineering courses because most of the time typical engineering courses don't offer any creative courses or something; so whenever they start [engineering graduates] applying for jobs, the job would expect them to have certain amount of creativity but unfortunately they will not have it. So that's why my article talks about the importance for universities to start establishing creativity in engineering education.

H: Actually that contradicts my article.

B: Contradicts?

H: Yes, because my article emphasizes on the university's education; it says that it produces the creativity in the students, mainly in engineering students. It says that creativity is very vital for an engineering student and university education *does* that for an engineering student; it develops the creativity in the student in order for the student to succeed.

K: Alright, we'll compare between articles later after we're done with this step, because your [Binjab's] article contradicts his [Darwish's] article, which compliments my article. This [comparison] is what we're going to use for the synthesis. Who else did [work on] industry expectations? Khalifa?

1.9 Principle C9: The importance of interpretation

Principle C9: Instruction needs to develop the ability to interpret findings from reading or from learners' own investigations.

Facione (2013) defines interpretation as the ability "to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria" (p. 5). He states that categorization, decoding significance, and clarifying meaning are the subskills of interpretation. He adds that we use interpretation skills in variety of situations such as identifying a problem and describing it without bias. Other examples include identifying a main idea embedded in subordinate ideas in a text, paraphrasing others' ideas, clarifying what a chart or graph means, identifying themes in a text and an author's reason for writing a particular text. Considering it to be perceptual judgment, Stratton (1999) states that interpretation helps us gain meaning from things we read and listen. He notes that meaning making is affected by our early life experience, expectations and cultural background.

In their projects, our students engage in variety of interpretation skills, one of which takes place when they write a literature review first individually using a limited number of texts and then as a team combining information from multiple texts annotated by all team-members. Parts of the task descriptions for these assignments are as follows:

> *Individual literature review:*
> The purpose of this task is to extract relevant information for a team literature review. This reading should help you understand important variables, concepts and theories that are relevant to your topic, tell you about research already done and help you compare and evaluate what has been done by other researchers. This may help you work out what has not yet been done, give you ideas about the most appropriate and original contribution

your team can make, select an appropriate research method for your topic and allow you to summarize important background information.

Team literature review:
You will provide important background information and summarize any relevant previous research on your topic. You are advised to do this theme by theme rather than structuring your review article by article. This section could be a synthesis of relevant parts of individual source evaluations already written by team members. It should also attempt to outline what research, if any, has already been done on this topic and might include other kinds of documents such as background interviews with specialists in the field.

As can be seen in the task descriptions above, students are required to use various interpretation skills identified by Facione (2013), examples of which include identifying and describing a problem based on earlier research, identifying and categorizing main themes in different texts, and paraphrasing authors' statements when they draft a team literature review.

Our students' choice of project topics involving a challenge with real world relevance requires them to use primary sources by collecting data using a variety of data-gathering instruments such as surveys, interviews, direct observations, experiments etc. Using such sources "provide[s] students with unique opportunities to interpret meaning for themselves and to relate what they are required to learn in school to their own lives and the world" (Ferenz, 2010, p. 2), which allows for authentic learning experiences.

Our students also use interpretation skills when they write the results and discussion sections of their project reports. They are asked to use a combination of charts, figures and/or tables in their presentation of findings. However, they are required to integrate these into their documents with a summary in words (see also C7). They make interpretations of the meaning and significance of their data in the discussion section. This shows that they are engaged in clarification of what a chart or graph means, a subskill of interpretation identified by Facione (2013).

Students' previous experiences often influence students' choice of project topics in our context. This helps them reflect on their experiences, which raises their awareness of them and helps them make meaning out of them. The team we investigated in this research, for instance, opted for creativity in engineering as their research topic mainly because of certain team-members' family background in engineering. These students seemed to have been exposed to much discussion on what it means to be an engineer (see Extract 16). They oftentimes referred to their talks with their parents during their team meetings where they discussed what it means to be creative engineers. In doing so, they appeared to make sense of what they heard in the light of what they read for their individual literature review assignment (see Extract 14). In their initial discussion on the topic, the students also seemed to have certain expectations regarding what to find in their readings and data they were to collect. However, their expectations were challenged by what they read and found in their data, which they dealt with effectively in the discussion section of their report. They also discussed expectations identified in the literature, and made sense of what it meant for their own project during their team-discussions (see Extract 15). We also encourage students to challenge cultural assumptions when conducting projects. To this end, they are encouraged to read texts from a variety of sources mirroring cultural perspectives. We also instruct them to construct meaning out of their own data with a view to identifying cultural assumptions. Taken together, these opportunities allow students to use a variety of interpretation skills.

Table 9 Principle 9: Interpreting findings

Researcher's view	**Teacher/researcher's view**
Students frequently do this throughout their discussion (see Extract 14 below).	Students interpret their readings in relation to their knowledge of requirements for engineering students in general. (Video Extract 14). Another example illustrates interpretation of their reading in light of what they already know/expect to happen (Video Extract 15). Another example illustrates interpretation of their reading in light of their own experiences (Video Extract 16).

Video Extract 14: Interpreting findings

B: This one right here talks about why it is needed. But if you think about it, **without those skills, a student – an engineering student – can't be an employee.** Without *those* skills. So this does go in the middle. With creativity, you do need those skills – they are vital to become an engineering employee. This [creativity] does make you a better engineer and a better employee, but without the necessary skills, you cannot cross this to the workplace.

Video Extract 15: Interpreting using prior knowledge

H: This is a quote [from my own literature review] from the second article about technological innovation – this is actually an expectation of an engineer: "As [2] states clearly, the most significant role of the engineer of the future is deemed to be innovation through the creation of new products or process or services, and that role stresses systems integration – which is synthesis and analysis". What they're trying to say is that potential engineers need to make a transition from analyzing things to building things. And later on they [the aforesaid source] tell you that you'd expect innovation – inventions and new stuff – from a lonely genius, some guy who lives alone or in his parents' basement and, somehow, creates something new.

Video Extract 16: Interpreting based on experience

D: Actually, my father told me that when you start working as an engineer, first, you'll be relying on the math and the engineering you were taught. But as you go on – as you get promoted – you'll start going to marketing and communication and management instead of engineer. So as your engineering [level] goes up, the other things go down.

1.10 Principle C10: Examining the coherence and balance of written output

Principle C10: Instruction needs to provide opportunities for learners to critically examine their own written output in terms of coherent and balanced argumentation.

In a sense Principle C10 combines the use of the previous nine principles, with a focus on the need to assess large written reports prior to submitting them.

Proofreading a document then usefully includes evaluating it against critical reasoning principles.

At the heart of the competence of holistic argumentation in a large document with its complex sequences of arguments is the need to present “reasons for thinking that some statement or statements are true” (Trelogan, 2010, p.1). In Trelogan’s view, conclusions are *inferred* from *premises* – “the statements being argued from.” A set of statements that form the whole or part of an example of academic argumentation is “logically consistent” (Trelogan, 2010, p.12) “just in case it’s possible for all its members to be true”. In the same way, “A *single* statement is logically consistent just in case it’s possible for it to be true”. Assessing argumentation includes examining the way data may have been represented (or misrepresented). It is also important to assess whether enough (or too much) data is provided at different stages of a holistic argument. Further issues to identify include circular arguments, inconsistencies, interpreting correlations as causal.

Grice’s theory of *conversational* implicature (1989) is referred to briefly to provide a different angle which is consistent with our principles to reflect on the holistic competence of argumentation in large scale academic writing documents. Using Grice’s maxims as evaluative criteria allows the reader to further examine critically the quantity, quality and relevance of information and the manner in which it is expressed (Grice 1989, pp. 26-27). Key factors of any writing are the:

- quantity of information at different stages of the argumentation
- quality of evidence used to support statements and levels of commitment to the evidence supplied
- relevance of statements at the stage where they occur in the argumentation
- manner of expressing the content such as intelligibility, clarity of expression, orderly organization and concision.

While some sub-maxims may appear to be over prescriptive, sub-maxims such as “be brief”, “avoid ambiguity” are subordinated to the principle itself which is very flexibly worded: “Make your [conversational] contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the [talk] exchange in which you are engaged." (Grice, 1989, pp. 26-27) What is "required" in terms of "quantity", "quality", "relevance" and "manner" is context dependent and therefore requires the reader and writer to engage in critical analysis to determine what is 'required' at each stage of the report.

Table 10 Principle C10: Examining the coherence and balance of written output

Researcher's view	Teacher/researcher's view
In this task they have to critically examine each others' individual literature reviews in order to create a common one. The discussion leads into another activity, which is a team written team-written piece, as evidenced in extract 17.	In light of their findings from literature review, students decide to make alterations to their original ideas/decisions. "I think **we'll have to shorten this [the title] later".**

Video Extract 17: Working on coherence by looking for connection

H: Did you conduct the study in the workplace or in the university?
J: University
H: So these 2 focused on the way the workplace sees it. Well, one of my articles has it from the university's perspective, so I think we can group… no, these are 2 skills. Let's try to "cross" them: Empowerment and Critical Thinking, Non-traditional teaching methods and Variety of Skills – Innovation, actually – and then we have Design. What other aspects do we have in design?

Discussion

Our ten-principle model is based on what we call general critical thinking skills and on concepts that are closely related to academic argumentation. In the first instance, the target audience was teachers but the principles have also been adapted for students (see Appendix 1). They are holistic in the sense that each principle can be investigated and taught separately only as a matter of temporary convenience. They do not exist in isolation but rather in relation to each other, and there may be other principles to add to our list. We have assumed that the different but inter-related concepts discussed above and in our ten principles are not all inclusive. They provide a rational system which is not for example directly concerned with affectivity and human values but is not incompatible with them. They would all be related to so-called higher order thinking skills (Bloom et al., 1956) although they may all operate at different levels of sophistication. From our pedagogical perspective we need then to consider task difficulty in relation to a number of factors, one of which is cognitive difficulty. We can approximate this by calculating the complexity of the task in terms of the range of principles involved in the task and the level of sophistication required. When the task is very complex such as writing a full research report, all the principles listed above are relevant, but different principles may be emphasized in different sections of the report. Synthesis for example (Principle C7) may be relevant throughout a research report but is particularly important in drafting a discussion section.

Links to SLA: Examples of transitivity use as self-regulated discourse

As briefly illustrated above, critical argumentation principles are not divorced from other learning principles such as Ellis's (2005) ten principles of instructed SLA. These also form a holistic set which operate in combination. (See Nunn, 2011& 2013, for a fuller discussion). The importance of focus on form for example is related to 'focus on meaning' although each has its own principle (Ellis's principles 2&3).These principles are also closely related to critical reasoning in academic text in that writers make choices at each stage of their argumentation. Grammatical transitivity for example is the means of indicating one's own self-regulated contribution to the research being reported or of avoiding it in an impersonal passive such as 'is induced' (or indeed in an impersonal active – "transcripts show") construction. In the main text of the paper cited above, in 70.5% of all clauses the authors chose an active verb. In approximately 25% of all clauses some kind of first-person construction was used. The passive was chosen in only 17.9% of clauses, the remainder being clauses in which 'be' was the main verb (11.6 %). However the stage of communication was significant in that the passive voice dominated in descriptions of an experimental process.

Further illustrations from practice

We have provided detailed examples of interaction to illustrate the process of learning through interaction. As a contrast between the process and the products of learning, in this section we examine extracts from a final research report produced by students towards the end of this same semester-long process in another class.

As part of their project, the freshman students created their own experiment for a workshop activity using teams within their own class (Principle C1). A project-based approach allows instructors to 'zoom in' on relevant language issues such as transitivity choices in academic writing. We underline first-person uses that indicate the students' agency. The purpose of their experiment was to investigate appropriate team-size in relation to their project on 'the effect of teamwork on academic performance'. They explain their method and provide an explanation of their results (PrincipleC4) and, we believe, also demonstrate emergent awareness of Principles C5 (the choice of words to express appropriate levels of confidence in relation to evidence), C8 (the ability to evaluate strengths and weaknesses of arguments, etc.) and C10 (to critically examine their own written output).

Final Research Report Extract 1

Purpose and background
The purpose of this workshop was to investigate whether team size and leadership affect the teamwork in the teams <u>in our own class</u>. The workshop was an egg experiment. The goal was to protect the egg from breaking when it was dropped. <u>We divided</u> the students into 3 teams of different sizes. Some materials like tape, an egg, sheets of white paper, balloons, scissors, a rubber, and glue were provided for each team. The winning teams were the two largest teams (9 students and 4 students) because the egg did not break when it was dropped. In the smallest team, the egg was broken (2 students).

Final Research Report Extract 2

Results based on observation
We believe that the best team size was between 4 to 5 members, because the second team (4 students) was more efficient than the other teams. They had different ideas, all of them worked hard, and they were cooperating with each other. We think this was also because the second team chose a leader, the team members worked together and collaborated with each other. We did not expect the first team (9 students) to win because we believe that teamwork can be ineffective in large teams. Even though they won, we noticed that not all of them worked hard and participated. Only 3 to 4 students worked and shared opinions, which is similar to the second team (4 students). In our view, we think that the quality of a large team can be lost because students in large teams face difficulties to participate and communicate. Finally, we noticed that the teamwork in a small team like the third team (2 students) was not of good quality, and it might have been hard to achieve a high level of performance, because they did not have enough different opinions.

In Final Research Report Extract 3, from the discussion section of their report, we observe them applying principles in combination, such as Principles C2 (interaction) and C7 (synthesizing results from three methods and the literature review.) They also attempt to interpret their results (Principle C9), explain inconsistencies in results between methods (Principle C4) and reach their own conclusion (Principle C1). The use of the first person indicates that they are willing to take full responsibility for the supported views expressed (Principle C5).

Final Research Report Extract 3

Discussion
The results that we found, from our three methods about team size, were inconsistent with each other. According to our three methods, team size *has been considered* an "important structural variable determining team processes" [2]. Our survey indicated that size of the team depends on how large the project is [5]. Almost all of Arzanah students believed that there is no rule to determine if large or small teams are better [7]. Most of them preferred large teams because they believed that members of large teams will not face difficulties to contribute their knowledge, experience and skills. On the other hand, both interviewees preferred to work with a small team because small team shows definitively better teamwork [2]. From the results of our workshop, we believe that a small team (from 4 to 5 students) is the best, because the small teams in the workshop were more satisfied, participated more, and cooperated more. We also found that the teamwork quality in a large team is lost, because members of large teams faced difficulties to contribute their knowledge, experience and skills. The results of our third method suggested that small teams show much better teamwork [2].

Conclusion

In this paper, we have outlined our rationale for project-based learning as a holistic learning platform. A course built around a semester-long project allows the skillful practitioner to cover a range of learning principles, addressing the diverse needs of active learners. The role of curriculum planners and teachers is to ensure that the practice embodies the principles of learning that lead to improved academic literacy in each context in which PBL is used. A constructivist approach through which the students interact regularly and purposefully both with the teacher and with other students is highly compatible with project-based learning. We have also argued that the philosophical field of phenomenology supports a much needed in-depth understanding of the relationship between individual learning (emphasizing the self) and learning with and from others (possibly in teams).At the same time, we have explained our own ten principles of critical reasoning/argumentation and illustrated how activities that require students to use these principles – supported by regular interaction with and between students – do result in the principles being put into practice.

We have provided our commentary on video recorded evidence of the principles being addressed in project-team discussions. A team-based project provides opportunities for self-regulation (Principle C1), for example, by understanding others' ideas, students learn to modify their own. By locating and evaluating relevant background reading, students focus on relevance (Principles C3, C8). By being guided rather than directed, students have to explain and justify their choices (Principle C4). By gathering primary data, students have opportunities to express their evaluation of their evidence (Principle C5). By focusing research questions and identifying project tasks, students develop abilities to analyze issues and problems (Principle C6). By reporting on research findings, students are required to synthesize information gleaned at different stages of the project (Principle C7). By working on projects in a team, students are given opportunities to interact, developing their reasoning capabilities (Principle C2); and by requiring written output at key project stages (literature review, proposal, progress report, final report) which is drafted and redrafted after instructor feedback, students have many opportunities to critically examine and revise their own written output in terms of the quality of its argumentation (Principle C10). Such activities and expectations can begin to address and compensate for any habits of rote memorization that local students might have acquired prior to beginning degree studies (Farah & Ridge, 2009).

We do not assume that our own ten principles are automatically transferable to other contexts or other courses. The notion of 'translatability' best represents our view. In other words, the principles – whether for critical reasoning or for SLA- will need reinventing in every new context in which they are used. Similarly, it should not be assumed that students will automatically reapply these principles in other courses even in the same institution. Transferability is more complex than that. In other disciplines, concepts such as analysis have something in common but have subtly different meanings, possibly even radically different meanings. Skills gained in one context can soon lie dormant if not needed and emphasized in others. They need reinforcing, reapplying and reinventing within a framework that both requires and encourages their use.

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Appendix

Principles C1- C10 adapted for students in our context

C1. Look for opportunities for self-regulation to develop your own argumentation skills.

C2. Seek out opportunities for interaction with peers (and teachers) to develop your reasoning ability through dialogue.

C3. Focus on relevance by referring to known information from literature in relation to your own projects.

C4. Explain your ideas and research choices.

C5. Focus on your choice of words to express appropriate levels of confidence in relation to your evidence.

C6. Develop the ability to analyse issues and problems (such as by breaking a task down into manageable components).

C7. Develop the ability to synthesize output such as in group literature reviews or discussion sections of reports.

C8. Evaluate the strengths and weaknesses of arguments, research approaches, and conclusions (in literature for example).

C9. Interpret findings from your reading or your own investigations by selecting and explaining what is most significant.

C10. Critically examine and proofread your own written output not just for language but also for coherent and balanced argumentation.

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Development in Freshman Engineering Students' Emotional Intelligence in Project-based Courses

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Abstract

It is no longer argued that technical skills alone are sufficient to be a successful engineer; certain softskills are also now considered to be essential. Engineers are expected to possess interpersonal skills and be able to work efficiently in teams. This is facilitated by their intrapersonal communication competencies, one of which is skillful use of emotional intelligence (EI). Engineering education, therefore, needs to devote time and energy to improving students' EI. To this end, this study was aimed at identifying engineering students' development of EI as a result of their participation in project-based courses at the Petroleum Institute in Abu Dhabi, UAE. One hundred freshman students participated in the study, with a mean age of 18. Data were collected using the Schutte Emotional Intelligence Scale (Schutte & Malouff, 1998) and semi-structured interviews with fifteen of the students. Results revealed that almost half of the students (46%) increased their EI scores at a statistically significant level, which was mainly caused by enhancement in their perceptions of emotion, utilization of emotion, and managing others' emotions. Gender was not found to be a significant factor predicting EI development. We found that the holistic nature of project-based learning in the

courses appeared to be the main reason for the increase in the students' EI scores. We therefore recommend that instructional design (especially for engineering education) should incorporate more EI-specific learning experiences and we argue that project-based learning is an effective approach for integrating a range of useful experiences into one course.

Key Words: *Emotional intelligence, project-based learning, engineering education, softskills.*

"I don't want to be at the mercy of my emotions. I want to use them, to enjoy them, and to dominate them"

Oscar Wilde (1891)

Introduction

The above quote from *The Picture of Dorian Gray* by Oscar Wilde (1891) exemplifies how strong a person's desire to master his/her emotions can be. However, it is also important for people to be informed about others' emotions so that they can be more tolerant towards psychological and physical manifestations of these emotions. This also enables them to exert control over their own emotions which have been triggered by experiences with others; this is essential for a balanced life and general well-being. Therefore, it seems essential to consider opportunities for emotional engagement and development in educational settings, where the principal aim is to prepare youth (in the case of higher education) not only for academic and professional success but also for a satisfying and enjoyable professional and private life. This requires educational interventions to cultivate emotionally intelligent individuals. Among various approaches to achieving this is project-based learning (PBL). Defined as "a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an engaging and complex question, problem, or challenge" (Buck Institute for Education, n.d.), PBL allows students to immerse themselves in real-life and experiential learning experiences, which easily provides emotional stimuli.

Considering the fact that students often engage in such learning activities in collaboration with peers, students have ample opportunities for using, enjoying and dominating their emotions with an overall result of emotional growth and enhanced emotional intelligence. Despite this life-enhancing effect of PBL, there has been a lack of research interest in this aspect of PBL in engineering education settings at the expense of academic skills. This current research is an attempt to bridge this gap in the literature.

Emotional Intelligence

The term 'emotional intelligence' (EI) first emerged in the 1960s in Van Ghent's literary criticism and Learner's writings on psychiatry (Mayer, Salovey & Caruso, 2004). However, Mayer, DiPaolo and Salovey (1990), influenced by Gardner's multiple intelligences theory, were the first scholars to adopt a systematic approach to the concept; defining it as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). The term was popularized by Goleman in the1990s through his writings on how EI increases one's success at work. Goleman (1995) defined the term as "abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathize and to hope" (p. 34). More recently, Mayer et al. (2004) added the concepts of social, practical and personal intelligences to their initial definition.

We would argue that a separation of cognitive and emotional intelligence has never been a simple or a 'true-to-life' distinction, even in philosophy. In her comparison of Bakhtin and the phenomenologist, Max Scheler, for example, Wyman (2008) underlines the relationship between understanding and emotion within the concept of 'active understanding'. She reminds us of Bakhtin's concept of ‘active empathy’ (vzhivanie) which she discusses in relation to Scheler’s earlier concept of ‘active empathy’ (Mitgefühl). With reference to Husserl’s seminal work on phenomenology as a response to Kantian views of pure reason, Theodorou (2012) emphasizes the importance of a whole, lived experience that includes the affective side of experience. Nunn and Brandt (2016) also underline the importance in phenomenological reflection of the way affective and emotional perceptions of experience precede and interact with attempts at rational understanding. The relationship between the ‘self’ and the ‘other’ is closely related to this discussion as our perception of ourselves and of others is an essential and interrelated component of emotional intelligence.

Since Mayer and his colleagues’ first systematic approach in the 1990s, a voluminous literature has been devoted to EI, with discussion centering upon what it really means to be emotionally intelligent. Four competencies have been identified as the main components of EI (Schutte, Malouff & Thorsteinsson, 2013). The first one is ‘the competence of perception of emotions’, which is related to our awareness of others’ emotions by observing their use of facial expressions and voice, and our own body’s emotional responses. The second one is ‘the competence of understanding our own and others’ emotions.’ This involves being able both to understand the reasons for our own and others’ emotions and to differentiate between various emotions and their effects. The third competence is ‘utilizing emotions’, which is about how we tackle the effects of emotions, as in the case of using positive thinking. The last competence is ‘managing emotions.’ This is related to the regulation of our own and others’ emotions, which allows us to meet our individual goals and/or the requirements of a given situation.

Emotional Intelligence and Work Performance

EI is said to have various positive effects, one of which is on job performance. Goleman (2011) states that high EI helps employees to empathize with others, and this helps develop healthy relationships with colleagues. Enhanced workplace relationships reduce stress and improve potential for leadership roles as well as for promotion and income prospects (Lopes, Grewal, Kadis, Gall & Salovey, 2006). Likewise, increased EI levels have positive effects on companies' businesses at large. A positive correlation has been found between employees' EI and job satisfaction levels, predicting strengthened organizational citizenship, reduced absenteeism and improved turnover (Ealias & George, 2012). Also, Pesuric and Byham (1996) report that emotional competencies training, offered to supervisors in a manufacturing plant focused on listening effectively and helping employees deal with problems on their own, resulted in reduced lost-time from accidents and fewer grievances. The productivity goals of the plant were also exceeded by $250,000. Another EI training effort at PepsiCo helped the company reduce executive turnover by 87%, and increased productivity by 10% (McClelland, 1998). Taken as a whole, these studies clearly support the view that that higher levels of EI predict greater success at work.

Emotional Intelligence and Academic Performance

It is now argued that a cognitive approach to learning alone is inadequate and that students need to be emotionally engaged too (Ledoux, 2002). Only in this way can students achieve the psychological well-being (Cherniss, 2004) which is essential for academic success. Cherniss, Extein, Goleman and Weissberg (2006) note that programs capitalizing on students' emotional skills contribute to their developing bonds with peers, and create a positive learning environment. They also state that students try harder when they gain self-awareness and confidence. This in turn has positive effects on their motivation, goal-setting and problem-solving skills. On the other hand, students who lack EI are more likely to have problems adjusting to school and, therefore, to fail to meet their personal goals including academic success (Oyinloye, 2005).

The transition from high school to university can be a formidable challenge for young people and can be detrimental to their academic success unless approached carefully. Emotionally intelligent students can deal with this challenge more effectively without serious negative repercussions on their academic achievement, which influences retention positively (Fayombo, 2012). Jaeger and Eagan (2007) also observe that first-year university students' academic performance can be affected greatly depending on their interpersonal, stress management, and adaptability skills. Students who effectively face tests, deadlines and personal crises remain in control. Those who are adaptable are good at understanding problematic and emotional situations; therefore they can apply more effective solutions to problems.

In a study investigating psychology students' EI and academic performance, Fayombo (2012) found that six components of EI, i.e. attending to emotions, positive expressivity, empathic concern, emotion-based decision making, responsive joy and responsive distress, predicted greater academic achievement. Fayombo (2012) argues that students' awareness of and attendance to their emotions lead them to understand the causes of their emotions. This helps them engage their emotions more intelligently, as a result of which their academic performance improves. Students' positive expressiveness, on the other hand, allows them to build healthy relationships with others which has a positive effect on their studies. Fayombo (2012) also points out that students' inclination to pay attention to their own and others' emotions when making decisions can make them more academically oriented. A similar study found that students' self-awareness skills increased their EI scores, and that students with a higher Grade Point Ratio had higher EI scores (Brandenburg, Zhou, Bell & Skipper, 2011). Students using self-awareness skills may be more likely to focus on personal and academic success.

Enhancing Emotional Intelligence

Given the results of the above-mentioned studies, it is difficult to doubt the positive effects higher levels of EI can have on performance at work and school. Therefore, it seems important to consider the extent to which EI can be enhanced. One argument suggests that genetic factors and our early childhood experiences influence our ability to identify and manage our own and others' emotions, and this ability does not change much over time unless realistic, long-term improvements are planned with dedication and guidance (Premuzic, 2013). Thus, a considerable amount of literature has been devoted to investigating ways of increasing EI.

At the individual level, we can increase our self-awareness, which is a central, perhaps *the* central, factor that contributes to the enhancement of EI. Crompton (2010a) asserts that those who gain an awareness of their emotions are better at identifying the causes and physical symptoms of their emotions. He recommends that people check in with themselves. This involves assessment of their emotional state by asking questions such as "What am I feeling?", "What is the source?", and "How are these feelings manifesting themselves in my body?" He also suggests that individuals should 'label emotions', which requires them to note down the sources of emotions on paper with their labels such as 'anger', 'fear', and 'passion'. His last recommendation is 'being in the moment'. This requires people to listen to their emotions to gain insight and guidance in tackling issues.

Crompton (2010b) also offers strategies for management of emotions, which refers to the way in which the behaviors triggered by emotions are tackled and how efficiently it is done. The first strategy for being in control of emotions, he suggests, is remaining aware of feelings. He also suggests that people keep a journal containing a list of negative emotion triggers and possible strategies for dealing with them. The third strategy is paying attention to self-talk. This involves people telling themselves what it is like to be under control, focused and composed. The final strategy for managing emotions is knowing that people have a choice to respond to situations.

Abe et al. (2013) investigated the immediate and long-term effects of a half-day workshop about mental health and well-being on medical students' EI development. The workshop was based on how listening to the feelings of others and expressing one's own feelings affected the participants' EI. The results showed that the immediate effect of the training on the emotional awareness was more in favour of male students than female students. However, female students benefited more from it in the long term. The researchers suggest that students' development of EI can be promoted through emotion-driven communication exercises.

More evidence showing that EI can be enhanced through training comes from a study conducted with university students (Nelis, Quoidbach, Mikolajczak & Hansenne, 2009). The experimental group in the study participated in two-and-a-half hour sessions over the course of a month learning various EI enhancement techniques informed by a four-branch model: a) perception, appraisal, and expression of emotion, b) emotional facilitation of thinking, c) understanding and analyzing emotions, and d) reflective regulation of emotion. The training sessions included lectures, role-plays, group discussions, pair work and reading. Students were also required to keep a diary of daily emotional experiences. The researchers found that the intervention had a positive effect on a student's identification and management of their own and others' emotions. They also found that positive changes were persistent in the long-term, although they were not evident in the short-term, indicating that traits which are relatively stable over time can actually be modified by training. The researchers warn, however, that modified traits can regress unless they are kept in practice.

Freshman students' development of EI was also investigated by Bond and Manser (2009), who modified a Technology Career Essentials course to incorporate emotional and social competencies and then tested its effects in an experimental study. The modified curriculum included the following emotional and social competency dimensions: self-awareness, self-management, social awareness and relationship management, and creative, adaptive and responsible decision-making. The results of the study indicated that the students in the control group enjoyed raised levels of self-awareness in particular.

Project-based learning and Emotional Intelligence

The early conceptual foundations for project-based learning (PBL) can be found in the writings of John Dewey (1938) who emphasized experiential learning and the quality of experiences for learning to be meaningful. Influenced by Dewey and other scholars such as David Kolb (1984), project-based learning (PBL) is based on the idea that 'learning by doing … increases student motivation while improving students problem-solving and higher-order thinking skills' (Boss & Krauss, 2014, p. 16) and it engages students in investigations of open-ended questions and applying knowledge to produce authentic products (Boss & Krauss, 2014). In a PBL environment, students are required to take on various tasks to complete a final product (Prince & Felder, 2006). They are normally put in teams where individuals with a variety of skill, personality and intelligence types work together.

In order to function as a successful team, it is essential that team-members tolerate differences among team-members. They need to work through challenges to be able to meet their objectives. To this end, they are required to use both interpersonal and intrapersonal skills. If they learn how to recognize challenges and their own as well as their team-mates' emotions in the face of these challenges, they can exert more control over the situation and facilitate the process of achieving success (Russel & Todd, n.d.). The very nature of PBL, therefore, allows students to use and enhance their emotional intelligence. The experiential nature of PBL also engages students in communication with others providing them with the opportunities of debriefing and re-application, which in turn supports the development of self-awareness and results in active participation as well as heightened motivation (Riemer, 2003).

Empathy is also enhanced by PBL experience. This occurs mainly because of feedback tutorials where students give and receive feedback and frequent collaboration throughout the course (Rasoal & Ragnemalm, 2011). Naturally, team members' interpersonal relationships are affected positively by this. Increased awareness of their own and others' emotions will help build emotional bonds. When team members show care for each other emotionally and professionally, they will be more successful in achieving their goals (Luca & Tarricone, 2001). In a study conducted at the University of Edinburgh, medical students in a PBL class were asked to hold student-peer appraisals providing structured, constructive feedback to each other and to conduct peer evaluations considering how well their peers performed during their PBL engagement (Evans, 2009). Students with higher grades were identified to have higher EI, suggesting a correlation between PBL experience and use of EI. There is also empirical evidence that PBL increases students' confidence and stress tolerance ability (Russel & Todd, n.d.). Taken together, it can be argued that if PBL is used for training engineers, they will work in teams and lead project groups more effectively (Rasoal & Ragnemalm, 2011).

Emotional Intelligence and Gender

There have been pockets of interest in investigating whether or not gender makes a difference in individuals' use of EI. It seems that there is not an easy answer to this question. Considering the four aspects of EI (self-awareness, managing emotions, empathy & social skills) men and women may be expected to differ from each other in their use of certain skills. Women are generally considered to be better at empathy, especially in terms of understanding how others feel and in showing concern, while men are argued to be more skillful at managing distressing emotions (Goleman, 2011). Some biological explanation for such differences is offered by neuroscientists who attribute this difference to 'the insula' (a particular region in the brain allowing the female brain to better mimic and stay with feelings), whereas the male brain only senses the feelings momentarily and switches to other brain regions to produce a solution to the perceived problem causing the tension (Goleman, 2011). In addition, it has been found that women have a larger hippocampus than men, and that they have a higher density of neural connection into the hippocampus, allowing them to absorb more sensorial and emotive input (Jantz, 2014).

There are also social explanations offered to account for the differences between men's and women's EI skills. It is suggested that children's interaction patterns with their parents play an important role in the development of their EI. Brody and Hall (2008) note that parents are more inclined to speak to their daughters about emotions, which results in girls being more skillful in expressing feelings. On the other hand, boys are generally taught to avoid expressing feelings as a sign of a manly model (Naghavi & Redzuan, 2011).

Empirical research appears to offer some evidence suggesting that women are emotionally more intelligent than men. For instance, McIntyre (2010) found that female participants' overall EI score was higher than that of male participants, and that they were also more skillful in perceiving, facilitating and understanding emotions. Similarly, in their study of university students' and adults' use of EI, Berrocal, Cabello, Castillo and Extremera (2012) found that the female participants received an overall higher score. They also scored better in facilitating, understanding and managing emotions. More evidence in favor of women comes from a study conducted on tenth grade adolescent students in India (Katyal & Awasthi, 2005). The researchers of this study link female students' relatively higher overall EI scores to the upbringing of children in a society where they may be expected to be more sensitive towards their relationships with significant others around them.

Despite the evidence in favor of women's more skillful use of EI in comparison to men, there is also at least some evidence suggesting otherwise. For instance, Ahmad, Bangash and Khan (2009) found that the male participants in their research obtained a higher EI score as a result of having more self-awareness, self-recognition, independence and management skills. The researchers reason that emotional intelligence is primarily concerned with managing and expressing emotions and social skills, which may account for the male participants' comparatively higher scores in their study. Male students' comparatively enhanced skill of managing stress was also echoed in a study carried out by Nasir and Masrur (2010) with a hundred and thirty-two university students at the International Islamic University of Islamabad in Pakistan. However, no statistically significant difference was found between the male and female students' overall mean scores.

It is noted in the literature that men have been found to do better at self-reported EI measures although they may not necessarily perform better in performance tests (Nunez, Berrocal, Montanes & Latorre, 2008). Men's tendency to overestimate their EI skills, therefore, may be one of the factors showing higher EI scores in some of the above-mentioned studies. Evidence for potential gender-bias in self-report measures was also obtained in research conducted on two-hundred and sixty Spanish undergraduates by Zafra and Gartzia (2014). It was revealed that the participants' opinion of gender stereotypes played a role in their perceptions of EI attributes for men and women.

Our Teaching Context, Emotional Intelligence in Engineering and the Rationale for the Study

We undertook this research in our local context of the Petroleum Institute (PI) in Abu Dhabi, UAE. The PI is a university and research center offering graduate and undergraduate studies in different engineering disciplines such as Chemical Engineering, Electrical Engineering, Mechanical Engineering, and Petroleum Engineering. The College of Arts & Sciences (CAS) at the university offers various courses required by these engineering programs. Among the various departments CAS hosts is the Communication Department (CD), where we teach. CD offers two courses, COMM101 and COMM151, that aim to furnish students with effective communication skills as well as the creative and critical thinking skills which they will need as engineers. Both courses are project-based courses requiring students to work in teams to carry out term-long projects about topics relevant to their studies as freshmen. One important characteristic of COMM151, for which COMM101 is a prerequisite, is the communication topics, i.e. effective listening, small group communication, interpersonal communication, intrapersonal communication, and cross-cultural communication, which are all covered in the course. These topics are discussed at length in student-led seminars where students continually engage in reflective thinking followed by reflective writing examinations at intervals (see Nunn and Brandt, 2016). Although touched upon in various seminars, emotional intelligence is one of the central themes, particularly in the intrapersonal communication seminar. At the same time, project-based learning revolving round a semester long project in the COMM151 course acts as a holistic framework for developing both academic and non-academic abilities such as teamwork and empathy.

In addition to its intrinsic value, there are also instrumental reasons for EI training. Being accredited by the Accreditation Board for Engineering and Technology (ABET), the PI strives to meet certain criteria set by the Board. Criterion 3, which outlines student outcomes, lists various hard and soft skills students need to acquire. Among these are: 3(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, 3(d) an ability to function on multidisciplinary teams, 3(f) an understanding of professional and ethical responsibility, 3(g) an ability to communicate effectively, 3(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context, and 3(j) a knowledge of contemporary issues (ABET, 2013).

These criteria appear to mandate that the engineering programs cultivate EI in students for several reasons. First, being able to design a system, component or process to meet desired needs requires students to be sensitive to the needs of others. In doing so, they need to consider the cultural, political and ethical contexts in which they will operate. Second, engineers' success largely depends on their effective communication with others from different disciplines, which requires teamwork. Those who lack EI skills may not exhibit team skills. Our research has indicated that emotionally intelligent students tend to be more satisfied with teamwork (Deveci, 2015). Other research has revealed that members of work groups with high EI are respectful to each other, which in turn enhances the positive energy in teams and enables systematic teamwork (Aslan, Ozata & Mete, 2008). Third, effective communication, whether people work in a team or individually, necessitates EI skills. Being aware of the effects of our communication style on others affects the success of our interpersonal relationships. Our successful communication within ourselves, on the other hand, can affect our confidence level, which is essential for an engineer to be and remain employable (Saravanan, 2009). Therefore, it can justifiably be suggested that students, as future engineers, need both scientific and emotional intelligence to be able to "achieve inner stability and to function successfully in society" (Deveci & Nunn, 2015). Taken as a whole, emotional intelligence seems to be a very important factor which will enable engineering students to succeed in life.

The above mentioned role of EI in students' academic and social lives requires engineering programs to embed EI-friendly content and learning activities in their curricula. The Communication Department at PI does aim to address this need. However, it is our observation that the effects of such teaching and learning experiences in the department often go unnoticed in the absence of a focused investigation into the extent to which the department contributes to students' EI development, and particular aspects of the PBL experience students engage in. As a result, this may inhibit efforts to enhance curriculum development in the immediate context of the department itself and other programs at the university at large. We also observe a lack of energy devoted to research on the effects of PBL on students' emotional growth in engineering education at the expense of other academic skills such as report writing and oral presentations. Although we do not underestimate the value of such skills, any academic skill devoid of emotional attachment may lose its meaning and therefore the principles of PBL may be jeopardized. We also believe that identifying the aspects of PBL that contribute to students' emotional growth may encourage other (engineering) programs to consider ways of embedding such interventions in their teaching, which would result in course-enhancement across the university.

Research Questions

Given the central role of EI in determining students' success at university and in future employment, this study aims at answering the following questions:

1) Does Communication Department students' emotional intelligence improve over the course of an academic year?
2) Is there a difference between male and female students' EI scores over the course of an academic year?
3) Which aspects of project-based courses contribute to students' EI development?

Methods

The Respondents

A total of 100 freshman students from PI participated in this study. Of the participants, 62% were female, and 38% were male. The students that participated in the study were from gender-segregated campuses. The ages of the participants varied from 17 to 21, with a mean age of 18.

The Data-Gathering Instruments and Procedures

Two instruments were used to gather data in this study:

a) The Schutte Emotional Intelligence Scale (SEIS). Developed by Schutte and Malouff (1998), SEIS is a 33-item self-report questionnaire assessing one's ability to process information about his/her own as well as others' emotions. Some of the items are "I know when to speak about my personal problems to others.", "When my mood changes, I see new possibilities.", "I like to share my emotions with others.", and "I am aware of the nonverbal messages other people send." (See Appendix A for SEIS).

The assumption of this approach is that the higher the scores from SEIS, the higher the emotional intelligence. The scale has been found to be reliable (with 0.90 internal consistency) and valid (Schutte, cited in Simmons & Lehmann, 2013). Respondents' profession and/or their stage of life determine the mean score to be used in establishing their EI levels. Different mean scores are used to determine respondents' EI levels. A mean score of 126 with SD 12 is assumed to be appropriate for first-year university students (Schuttle & Malouff, 1998).

SEIS was administered to the participating students twice in the 2014-2015 academic year. The pre-test took place during the second week of COMM101 at the beginning of the academic year. The post-test was administered to the same students toward the end of COMM151. It was expected that the time gap between the pre- and post-tests would allow exposure to instructional activities and learning content that are EI compatible as per the nature of COMM courses. However, the instructors teaching COMM101 and COMM151 course neither received any EI training, nor were asked to alter any aspect of their planned instructional design for the sake of the research. Rather, we assumed that the nature of these courses would allow for (semi)incidental learning opportunities for EI improvement. Through its project-based learning approach to teaching soft skills to engineering students, the Communication Department creates opportunities for incidental learning defined as "a byproduct of some other activity, such as task accomplishment, interpersonal interaction, … trial-and-error experimentation, or even formal learning" (Marsick &Watkins, 1990, p. 12). As this definition suggests, there is some structure to incidental learning, and instructors can probe an insight and intentionally explore it (Marsick & Watkins, 2001). Students who experience this approach to learning can increase their awareness through lived experience, to which COMM courses attach primary importance as well.

SPSS (Version 18.0) (SPSS Inc., Chicago, USA) was used to analyze the data. Descriptive statistics such as frequencies, mean, standard deviation, minimum and maximum were used to describe the data collected. The Student's t-test was used to compare different data sets. A p-value of 0.05 was considered statistically significant.

b) In order to identify the factors that contributed to the development of students' EI, we held semi-structured, in-depth interviews with fifteen students who agreed to be interviewed by the researcher. The interviews took place shortly after the post-test. Prior to the interviews, the students were given a briefing about their scores from the pre-test and post-test, and what the difference might mean. We also summarized the EI theory and how the increase in their test scores may be interpreted. In doing so, we avoided jargon and detailed information on EI to prevent confusion. We also refrained from making reference to COMM101 and COMM151 with the purpose of avoiding any influence on student responses to the interview questions. The prompts for the interviews were generated by the researchers themselves considering the various aspects of the PBL approach and course content in the communication courses in the department. The main prompts used in the interviews can be seen in Appendix B. Open and direct questions were used to elicit detailed narratives from the participants, as suggested by DiCicco-Bloom and Crabtree (2006). We analyzed the qualitative data from the interviews by using a coding scheme according to the emerging themes. An independent coder also assessed the data from the interviews in order to establish reliability.

Results

The first research question was aimed at determining if the students' emotional intelligence improved as a result of their participation in project-based courses over the course of the academic year. The results of the data analysis regarding this question can be seen in Table 1 below.

Table 1

Comparison of EI scores

	Pre-test N=100			Post-test N=100		
Min-Max	Mean	SD	Min-Max	Mean	SD	p
93-155	124.97	11.5832	88-159	125.7	11.2550	0.3258

P<0.05

According to Table 1, there was a marginal increase in the overall EI scores for the whole population (0.54%). However, the t-test did not reveal a statistically significant difference (p=0.3258>0.05). Despite the results indicating a lack of a statistically significant increase in the participating 100 students' EI scores at large, further analyses revealed that 46 students (46%) in fact experienced a statistically significant increase in their EI scores. Table 2 below shows the results of statistical analysis conducted to determine the significance of this increase.

Table 2

Comparison of pre and post-test results for those who experienced increased EI scores

	Pre-test N=46			Post-test N=46		
Min-Max	Mean	SD	Min-Max	Mean	SD	p
96-152	122.41	11.2774	109-159	130.7	11.1492	0.0003

P<0.05

As can be seen in Table 2, 46 of the 100 students increased their average score from 122.41 to 130.7, with an overall 6.77% rise. The statistical analysis also confirmed that this increase was at a statistically significant level (p=0.0003<0.05), suggesting that almost half of the students felt the effect of their communication studies, becoming emotionally more intelligent.

Further analyses were conducted to identify which particular subscales of SEIS contributed to the increases in the 46 students' scores. The results can be seen in Table 3 below.

Table 3

Comparison of SEIS subscales

	Pre-test N=46			Post-test N=46			
	Min-Max	Mean	SD	Min-Max	Mean	SD	p
Managing others' emotions	20-38	29.34	4.2854	25-38	31.45	3.7404	0.0133
Managing own emotions	26-42	35	3.6697	28-45	36.5	4.1833	0.0708
Perception of emotion	25-47	35.08	4.4162	29-49	38.15	4.4169	0.012
Utilization of emotion	17-29	22.97	2.6456	18-30	24.58	2.8093	0.0057

$P<0.05$

Table 3 shows that the scores for managing others' emotions, perceptions of emotions and utilization of emotions were different at a statistically significant level ($p=0.0133<0.05$, $p=0.0127<0.05$ and $p=0.0057<0.05$ respectively). However, no statistically significant difference was detected regarding managing one's own emotions ($p=0.0708>0.05$). The second research question asked if there was a difference between the male and female students' EI scores over the given period. Table 4 shows the results of data analysis regarding this question.

Table 4

Comparison of EI scores according to gender

	Male N=38			Female N=62			
	Min-Max	Mean	SD	Min-Max	Mean	SD	p
Pre-test	96-155	125.89	12.1272	93-152	124.40	11.2998	0.2710
Post-test	106-155	125.08	9.7131	88-159	126.08	12.1645	0.3254

$P<0.05$

As seen in Table 4, no statistically significant difference between the pretests taken by the male and female students was found (p=0.2710>0.05). Similarly, the post-test results did not yield a difference at a statistically significant level either (p=0.3254>0.05). The test results for both genders were further compared separately to detect any differences, the results of which can be seen in Table 5.

Table 5

Pre and post-test comparison for male and female students

	Pre-test			Post-test			
	Min-Max	Mean	SD	Min-Max	Mean	SD	p
Male (N=38)	96-155	125.89	12.1272	109-131	125.07	9.71313	0.3735
Female (N=62)	93-152	124.40	11.2998	88-159	126.08	12.1645	0.2139

P<0.05

Table 5 shows that the male students' pre- and post-test results did not yield a statistically significant difference (p=0.3735>0.05). Similarly, the difference between the female students' pre-and post-test results was not at a statistically significant level (p=0.2139>0.05). Taken together, it appears that gender was not a determining factor in students' EI growth. It is also important to note that out of 46 students who had an increased EI score, a large majority (65.22%) was female. Table 6 below shows the results of statistical analysis conducted to detect any differences between male and female students' increased EI scores among the 46 students who actually experienced improvements in their EI.

Table 6

Comparison of male and female students' increased EI scores

	Male N=16 (34.78%)			Female N=30 (65.22%)			
	Min-Max	Mean	SD	Min-Max	Mean	SD	p
Pre-test	96-146	120.75	11.2279	103-152	123.3	11.39313	0.2354
Post-test	109-155	128.68	11.4816	121-159	130.6956	11.14923	0.1933

P<0.05

Table 6 indicates that there were no statistically significant differences between the test scores of male and female students who enjoyed an increased EI score (p=0.2354>0.05 and p=0.1933>0.05 respectively). The students' emotional intelligence with respect to different subscales was also compared considering the gender variable. Table 7 shows the results of the t-test conducted with this purpose.

Table 7 *Gender comparisons*

Subscales		Pre-test				Post-test			
		Min-Max	Mean	SD	p	Min-Max	Mean	SD	p
Managing others' emotions	Female N=30	20-37	29.36	4.2139	0.4844	26-38	31.6	3.6822	0.3639
	Male N=16	20-38	29.31	4.5565		25-38	31.18	3.85087	
Managing own emotions	Female N=30	26-42	34.96	3.9782	0.4644	28-44	36.36	4.19756	0.3864
	Male N=16	30-41	35.06	3.1298		28-45	36.75	4.28174	
Perception of emotion	Female N=30	30-47	36.3	3.9229	0.0072	32-49	38.86	4.03206	0.0817
	Male N=16	25-42	32.81	4.5050		29-46	36.81	4.91554	
Utilization of emotion	Female N=30	17-27	22.66	2.4116	0.1582	18-30	24.93	2.80312	0.1293
	Male N=16	17-29	23.56	3.0324		20-30	23.93	2.7921	

P<0.05

It can be seen from Table 7 that the only difference between the female and male students' scores on the subscales was regarding perception of emotions. The female students' pre-test score for this subscale was found to be different from that of the male students at a statistically significant level (p=0.0072<0.05). The scores for managing others' emotions, one's own emotion and perception of emotions were not found to differ at a statistically significant level (p=0.4844>0.05, p= 0.4644>0.05, and p=0.1582>0.05 respectively). The scores for the post-test results reveal no statistically significant differences between male and female students either.

The third research question asked which aspects of project-based courses contributed to the increases in the students' EI scores. To determine this, semi-structured interviews were conducted with fifteen of the students who had significant increases in their scores. Table 8 shows the frequency of each theme that emerged from the interview data and the percentage of commenting students.

Table 8

Factors contributing to increases in EI scores

Themes	f	P
Research project	15	100
Team-meetings	12	80
Seminar topics	10	67
Individual writing examinations	8	53
Presentations	6	40
Meetings with instructors	5	33

According to Table 8, the most frequently expressed reason for the increase in students' EI scores (100%) was the research project in which the students were engaged. These projects encouraged students to research into issues that might cause other people to suffer. This increased their awareness of others' emotions regarding the issues they were confronting. Often, the students stated that they became informed about local and global issues causing distress in others. Their increased awareness had some students questioning their current attitudes towards issues that they might not necessarily have faced yet, thus encouraging them to confront possible emotions they might have in the future. One student said, "Our project topic helped me see the problems pollution can create for poor people."

Another common theme (80%) was the team meetings the students held. These meetings appeared to provide a venue for students to get to know each other at an individual level. They often stated that the project work required them to get to know each other in order to work as an effective team. This meant that they had to identify each individual's academic strengths as well as personality, a part of which included their emotions. Some students remarked that they faced various conflicts arousing strong emotions. Their initial reactions were more defensive although they learned to accept how others felt too. They also started searching for ways to express their own feelings more intelligently without hurting others. One student said, “We almost had a fight because of some people’s strong opinions. But we learned that we mustn’t say things to hurt people”, which suggests that the students became more aware of what to say and how to say it. This required them to monitor both their friends’ and their own emotions.

Seminar topics were also among the factors that contributed to the increase in EI scores (67%). Students’ engagement in seminars taught them various communication theories explaining what makes communication effective. The students noted that they learned how their communication styles might affect others’ emotions. They became more aware of the unintended messages they send to others. They particularly enjoyed the intercultural communication seminar where they learned about non-verbal communication styles across cultures. Some stated they learned that certain body language they use might be offensive in the countries they visit, and therefore they should do some research about the countries they might go to in the future. The effective listening seminar, on the other hand, taught them they could (dis)engage others emotionally depending on their listening behaviors. One student stated that the effective listening text had showed him his strengths and weaknesses and that he had tried to become a better listener by trying out the strategies he learned, among which were paying attention to facial expressions and tone of voice. One result of this was his increased knowledge of others’ and his own emotions in a given listening situation.

Another theme, which was related to the seminar topics, was the individual writing examinations the students took after the seminars (53%). These were commonly mentioned as tools engaging students in critical evaluation of their experiences in relation to the communication theories covered in the seminars. The examinations requiring them to reflect on their previous successes and failures in communicating to others seemed to enhance their perception of emotions (See Nunn and Brandt, 2016, for a full discussion of reflective writing in this same context). In the words of one student, "In writing the exam, I identified some reasons why I felt annoyed with a team member's attitude toward team tasks." Students' future action plans in the writing tasks, on the other hand, encouraged them to consider ways of managing emotions. The same student as above said his response in the examination included his intention to control his anger and avoid shouting at his friends even if they avoid taking responsibility for team tasks. Taken together, these quotes show students' developing ability to evaluate their friends' and their own emotions and exert control over them, which provides an indication of increased EI.

Yet another theme identified was the oral presentations the students were required to give (40%). The students often expressed that their first experience presenting was not successful due to a lack of previous training. This caused some to have anxiety. However, their perception of their anxiety changed after some class discussion on how it could actually keep them alert. After various rehearsals, these students seemed to gain more control over their feelings of anxiety and develop an aptitude for presentations. One student said, "I am still nervous when I have to do a presentation, but now [that] I trust myself, I can do better and relax. I actually like it!" This quote suggests that the student has gained more consciousness of feelings caused by a stressful event, but the student has also become more tolerant of seemingly negative emotions.

Meetings with instructors were also mentioned as a contributing factor (33%). Initially, the students visited their instructors in their offices to talk about issues they faced within their teams. For some, working with certain members was challenging due to clashing personalities or previous experiences. The instructors, however, appeared to help students confront their discomfort and look at issues from others' perspectives. In this way, the students were encouraged to recognize their role in creating the unpleasant team atmosphere and to explore ways to tackle the problem by empathizing with others. This helped them create a better rapport within the team. Meetings with instructors were also helpful for some students by increasing their awareness of instructors' perceptions of what constitutes an effective learning process. Through one-on-one meetings, students were able to familiarize themselves with the emotional aspects of learning. That is, their instructors informed them that emotional engagement in content matter would make learning more meaningful. As a result of such discussion with an instructor, one team of students shifted their project focus towards a topic of interest to all the team members. This encouraged them to value each other's feelings and opinions on different topics, promoting cohesion in the team, as can be seen in one of the students' words: "I was very interested in that research topic, but I did not realize my team member [Ali] was not happy about it because of some experience in past [sic]. So we changed the topic to something everyone was OK with." We conclude that interaction with their instructors outside of the classroom appears to enhance students' EI.

Discussion

This study aimed at determining whether or not freshman students' EI improved as a result of their participation in project-based courses, and examining possible aspects of the courses that contributed to any improvement. The results revealed that 54% of the students did not experience an increase in their EI scores over the course of the academic year. However, the pre- and post-test results of 46% of the students did differ at a statistically significant level, suggesting enhancements in their EI levels. Analyses further showed that this difference stemmed from the development of the subskills for managing others' emotions, perceptions of emotion and utilization of emotion. This finding is important since it offers more evidence for the discussion on the malleability of EI (Abe et al., 2013; Nelis et al., 2009; Bond & Manser, 2009). However, the lack of increase in some of the students' EI scores may be explained by the nature of the study. That is, as researchers, we refrained from intervening in the design and nature of the courses using intentionally designed educational interventions. We did not require the instructors to adjust their teaching methods, or content either. We did this with the aim of investigating the effects of incidental learning on EI development. However, as explained above, the nature of the courses did allow for exposure to EI and EI-related communication themes. Another reason for the lack of EI development in these students may be related to instructors' choices of emphases in course content in different classes. Although there were core curriculum content and common assessments, much of what was done and how it was done was left to the instructors' discretion. It is, therefore, highly possible that these students may not have had the opportunity to enjoy as much EI-compatible classroom practice as the other students.

The results of the study as related to the gender variable showed no statistically significant differences between the male and the female students, even though nearly twice as many female students as male students increased their scores (30 vs. 16). The amount of increase also benefitted the female students more, which differs from the findings of earlier research suggesting that men may be as likely to increase their EI as women, if not more (Ahmed, Bangash & Khan, 2009; Nasir & Masrur, 2010). This implies that female students may have a greater potential for enhancements in their EI, providing some support for the existing literature (Abe et al., 2013; Portillo, 2011). One possible reason for the comparatively lower number of male students increasing their EI score may be the gender-segregated nature of the PI. It is argued by some that students in such schools enjoy limited opportunities for EI and interpersonal skills development, and these students cannot learn teamwork and empathy as easily (Elliott, 2012). On the other hand, students in co-educational settings can relate to and understand each other better (Brian, 2006). Together, these studies could suggest that male students may be expected to sharpen their EI through their interaction and collaboration with female students, who have higher tendencies for EI.

The third research question investigated how project-based courses may have contributed to improvements in students' EI. All the students interviewed stated that the research projects they conducted helped them become aware of others' thoughts and feelings about the issues they were investigating. In this way, they became more aware of their own feelings about these issues and felt more caring about those suffering from them. Riemer (2007) also notes that emotionally intelligent students are better at identifying others' needs, and the kinds of projects they need to engage in to help meet these needs. This finding supports the existing literature on various aspects of project-based learning (PBL) leading students to become more emotionally intelligent. For instance, Evans (2009) found that peer appraisals in PBL encourage students to provide each other with structured and constructive feedback thereby increasing their EI. Similarly, Rasoal and Ragnemalm (2011) found that engineering students in PBL increased their levels of empathy as a result of reflection on their own behaviors within the group and supervised tutorial groups. Therefore, PBL as an experiential approach to learning provides opportunities for debriefing and (re)application, increasing learners' self-awareness (Riemer, 2002).

The students also often cited their team meetings as a source of emotional development. In these meetings, they found out about each other's personalities and skills, which helped them conduct their projects. The conflicts they experienced made them face their own emotions, as well as others'. Their effective use of conflict-resolution strategies contributed to their EI. It is, however, important to note that negative emotions can emerge if conflicts make a team dysfunctional, which might easily distract teams from the task at hand and cause them to focus on their emotions instead (Jordan & Troth 2002). Fortunately, this was not the case with the participants of our study. Previous research indicates possible reasons for this. It has been shown that students who are engaged in teamwork through PBL enjoy the opportunity to build their communication and leadership skills, cope with stress more effectively, and acquire adaptability skills (Sirotiak, 2008). The findings in this research related to students' experiences in their team meetings provide some evidence of this occurring.

We also found that the seminar readings and discussions followed by reflective writing examinations helped increase students' EI. The communication topics, intercultural communication in particular, helped raise students' awareness of emotions they might cause in others through their (in)effective communication styles. In this way, they became more aware of their own communication styles and how they feel about them, as well as others' communication styles and how their intelligent use of emotions can help them succeed in interpersonal communication. Reflective writing examinations, on the other hand, engaged them in intrapersonal communication, leading them to evaluate their own and others' emotions in the face of communication challenges. Writing tasks required them to devise action plans, helping them manage undesirable emotions that may be caused by lack of effective planning. Taken together, these findings support the arguments that reflection enhances learning. Dzubak (2013), for example, states that reflection allows for "purposeful thinking, integration of information, and the development of concepts," and "facilitates the formation of memories, thereby strengthening the integration of learning and experience" (p. 1). Learning is further strengthened by having students emotionally engaged in the content matter allowing for more positive emotions. This has the potential to encourage students to explore more options, integrate various materials and use problem-solving strategies (Fredrickson, 2001). By raising students' awareness of their emotions, needs and priorities, reflective writing helps self-construction (Burton & King, 2004). Based on their reflection on project-based courses in the PI, Nunn and Brandt (2016) also note that requiring students to describe their experience, including their feelings about the experience, and then evaluate it and analyze it by referring to literature, provides an external academic perspective on their experience, increasing greater awareness. In effect this requires students to use their emotional intelligence and their rational ability in combination. They also state that individual reflective writing tasks encourage students to be less dependent on their team, which contributed to self-construction of their experience.

The presentations the students gave were also found to be a factor contributing to students' EI development. They often acquired skills for controlling their feelings of anxiety in the face of a situation perceived as uncomfortable. They gained a greater understanding of the effects of their presentation styles on how their audience might feel. Previous research on engineering students' emotions during oral presentations found that the students usually suffered from anxiety due to their low English proficiency, a lack of technical knowledge and presence of evaluators (Radzuan & Kaur, 2011), which could naturally impact students' skills of dealing with anxiety and therefore reduce their EI. In our study, the students did not feel these effects. One reason for this may be the PBL nature of the COMM101 and COMM151 courses where students constantly engage in a variety of learning activities allowing them to practice oral presentation skills often. Also, the project topics they choose furnish them with the essential technical knowledge. This gives them self-confidence when interacting with their peers and instructor. They are also provided with multiple sets of feedback on their written and oral output before they present their work at the end of the course. The seminars they participate in may be another reason for the increased control over their emotions during oral presentations. Most seminars are run by student teams requiring all the students' active involvement. This gives them the chance to further practice speaking skills supported by other academic skills such as reading and note-taking. Taken together, these provide evidence for improved management of students' own and their peers' emotions. In this way, presentations help improve students' interpersonal relationships (Riemer, 2002). This direct effect of EI on their communication is rather important since students are equipped with the skills to target "particular elements that improve and enhance the process of communication" (Riemer, 2007, p. 95).

Although comparatively few in number, five interviewees (33%) referred to the meetings with their instructors as a contributing factor. These meetings helped them confront their emotions and look at issues from others' perspectives. They also developed an awareness of how emotional engagement in learning can contribute to their success. Taken as a whole, these students' experiences support the idea that interaction between faculty and students allows for reflective thinking and learning, allowing students to achieve their learning goals (Berge, 2002) and become more mature. It has also been suggested that students cannot be expected to function effectively unless instructors offer them a helping hand in dealing with stressful situations that prevent social, emotional and academic attainment (Salovey, Brackett & Mayer, 2007); the results of this current study provide at least some corroborative evidence for that idea as well. Furthermore, the data from the interviews support the argument that instructors who consider students' emotions, personal situations and expectations are more likely to cultivate success for students (Hargreaves, 2000). Finally, when the results of this study are taken together, they provide some support for student development theory, suggesting that students develop psychosocially by defining themselves and their relationships with others (Chickering & Reisser, 1993); and becoming emotionally more intelligent seems to be at the heart of it.

Conclusion

With the growing evidence showing that emotions play a key role in learning (Ledoux, 2002; Cherniss et al., 2006), creating opportunities for emotional engagement in educational contexts has become non-negotiable. This requires educators to consider students' EI, which may be second only to the Intelligence Quotient (IQ) as a factor contributing to learning. The phenomenological view that the two are inextricably related is also supported by our results. One of the limitations of this study stems from the absence of a control group to better assess the PBL effects on students' emotional growth. This was not possible mainly because of the university policies regarding the design of the communication courses not allowing us to run a parallel course that was different in nature. We believe future research can help fill this gap. It should also be noted that no learning during a particular course can be limited to its boundaries, since at any given time and place there may also be other factors at play. In this research, too, the participants may have been influenced by other life events taking place outside the boundaries of COMM101 and COMM151, which were non-controllable variables. We believe such variables could be investigated by future researchers. Despite these limitations, the results of this study suggest that learners do benefit from educational approaches that support the development of EI, although not all may enjoy the same amount of increase in their EI. Some doubt exists about the extent to which any educational intervention may affect individual students, as this depends on various external factors such as previous learning experiences, learners' expectations and emotional state. Therefore, it would be inappropriate to expect each individual student to feel the effects of instructional design at the same level. It is therefore essential that each and every student be provided with opportunities to develop their intelligences, including EI, through a variety of learning activities. As was also suggested by this study, it appears that students' engagement in teamwork in a PBL environment has the potential to support development by providing both students and teachers with a holistic framework within which EI can be both implicitly and explicitly addressed. Since instructors' engagement with their students at an individual level also appears to influence their EI development, both instructors and their learners need an appropriate framework and environment so that they can develop EI alongside their academic and cognitive abilities. Our research lends credence to the view that a project-based learning framework has the potential to provide an environment which both mirrors and improves real-life experience. This holistic framework can be exploited by skilled faculty experienced in this mode of learning to develop a range of abilities in combination. Affectivity will always be an important aspect of learning so it is important to make sure our mode of teaching takes it into account.

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Appendix A

The Schutte Emotional Intelligence Scale

Indicate the extent to which each item applies to you using the following scale:

	strongly disagree	disagree	neutral	agree	strongly agree
1. I know when to speak about my personal problems to others.					
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.					
3. I expect that I will do well on most things I try.					
4. Other people find it easy to confide in me.					
5. I find it hard to understand the nonverbal messages of other people.					
6. Some of the major events of my life have led me to re-evaluate what is important and not important.					
7. When my mood changes, I see new possibilities.					
8. Emotions are some of the things that make my life worth living.					

9. I am aware of my emotions as I experience them.					
10. I expect good things to happen.					
11. I like to share my emotions with others.					
12. When I experience a positive emotion, I know how to make it last.					
13. I arrange events others enjoy.					
14. I seek out activities that make me happy.					
15. I am aware of the nonverbal messages I send to others.					
16. I present myself in a way that makes a good impression on others.					
17. When I am in a positive mood, solving problems is easy for me.					
18. By looking at their facial expressions, I recognize the emotions people are experiencing.					
19. I know why my emotions change.					
20. When I am in a positive mood, I am able to come up with new ideas.					
21. I have control over my emotions.					
22. I easily recognize my emotions as I experience them.					
23. I motivate myself by imagining a good outcome to tasks I take on.					
24. I compliment others when they have done something well.					
25. I am aware of the nonverbal messages other people send.					
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.					
27. When I feel a change in emotions, I tend to come up with new ideas.					

28. When I am faced with a challenge, I give up because I believe I will fail.					
29. I know what other people are feeling just by looking at them.					
30. I help other people feel better when they are down.					
31. I use good moods to help myself keep trying in the face of obstacles.					
32. I can tell how people are feeling by listening to the tone of their voice.					
33. It is difficult for me to understand why people feel the way they do.					

Appendix B

Interview Questions

1. What aspects of COMM101 and COMM151 do you think have increased your awareness of your own and others' emotions? Why?
2. How and why did you choose your project topic? How do you feel your research topic increased your awareness of your own and others' emotions? Why?
3. What issues did you face working in a team and how did you resolve these issues? How do you think your experience of working in a team contributed to your emotional growth?
4. How do you feel the seminar you engaged in COMM151 helped you grow emotionally?
5. Do you think individual reflective writing examinations helped you increase your emotional awareness and how you react to events in your life? Why (not)?
6. How did your meetings with your instructor outside of class help you achieve emotional growth?
7. Having increased your emotional intelligence, how do you think you will behave differently in the future?

THE ASIAN ESP JOURNAL

English Teaching Reform and Practice in an Arts University in China: Meeting the Needs of Diverse English Learners

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Abstract

This paper presents an approach to college English teaching reform carried out by an Arts university in China. It starts with a brief discussion of the nationwide college English reform, especially the challenges of English teaching under the new conditions, followed by the theoretical framework underpinning the reformed English language teaching design. This paper also includes a review of the current academic research on graded English teaching reform in China, which indicates that it is urgent to focus on arts students' English teaching reform. The paper then describes the reformed language teaching practice, which includes grouping students to meet their diverse needs, a teaching system combining EGP and ESP, a learner-centered teaching approach, updating teaching materials, second classroom activities, assessment, CPD of English teachers, and research-informed teaching innovation. It shows that the student-centered and communication-oriented design of curriculum innovation has aroused interest among learners, fostered their self-learning capability, enhanced their English proficiency, and promoted their communicative competence. Moreover, the language teaching reform initiative has empowered and enlightened the English teachers in the process of expanding their knowledge base, improving their teaching skills, and promoting their personal and professional development by means of training and support.

Keywords: *ESP, Fashion and Arts English, teaching reform, diverse needs*

1. Introduction

The nationwide College English reform in China was started at the beginning of the 21st century by the Ministry of Education. It focused on developing students' all-round abilities in English, in particular the ability of listening and speaking (Ministry of Education, 2007). In terms of teaching methods, it intended to advocate, for example, a social constructivist approach of learning through student-centeredness, moving away from a traditional grammar-translation, teacher-centered teaching style (Dello-Iacovo, 2009) and audio-lingual methods grounded in behaviourism. This English teaching reform promoting autonomous learning and self-directed study was, in effect, a response to the pressing demand for high English proficiency (especially a high level of communicative competence) fueled by the phenomenon of globalization and the economic and social development in China. Beijing Institute of Fashion Technology (BIFT) as an arts institution located in the capital of China, has put forward a graded English teaching reform in some majors for three years and greatly improved students' English study. Nowadays, due to the development of international collaboration in higher education, more and more students choose to study abroad after spending two years at BIFT. This poses a new challenge for us in terms of how to prepare our students for such collaborative programs, especially their diverse needs of using English to study different disciplinary subjects. There are a series of questions needing further consideration: what should be taught, who will be taught (Shu, 2013, pp.90-96), and how to teach and evaluate the learning outcomes. Proper reform is needed based on the current condition of BIFT so as to help students to develop all-round English language skills, improve their academic awareness, enhance their employability, and promote their career development.

2. Previous studies on college English teaching reform in China

It has been established that most previous studies of college English teaching reform in China have focused on the graded English teaching reform (Huang, 2004; Wang, 1986; Wang, 1991); after class activities (Xue & Xiao, 2010); the exploration of teaching model (Liu & Chang, 2009; Ren, 2015) and teaching evaluation (Wu *et al*, 2008; Zhang, 2013). There are also studies which discuss the students' class performance considering their psychological reaction (Gao, 2010); students' motivation (Ma, 2013) and self-study catering for the students' personality (Tian, 2014) and study strategies (Gu, 2011). However, our literature review indicates that there is limited publication about student-centered English reform in arts institutions. This study, therefore, addresses this gap in the existing literature.

3. Theoretical framework

This reformed English language teaching design was mainly underpinned by social constructivism and the concept of student-centered learning and teaching or learner-centered education. Social constructivists hold that knowledge is socially constructed or acquired through the interaction between individuals, sources of knowledge and a sociocultural environment. In educational contexts, it is through a social process called scaffolding (Bruner, 1978), provided by teachers or peers, that students gain knowledge or methodology, and reach their next potential level of cognitive development or ZPD (Zone of Proximal Development) (Vygotsky, 1978). According to social constructivist theory, the role of a teacher is as a skill facilitator, which should motivate or nurture students' autonomy in learning. Social constructivist theory emphasizes the active role played by students in engaging in learning and the construction of knowledge.

The concept of student-centeredness or learner-centeredness (Dunn & Rakes, 2010; O'Neill & McMahon, 2005) is based on constructivist learning theory highly influenced by thinkers such as Piaget, Vygotsky and Bruner. It emphasizes how students learn. As Weimer (2002) stated,

> If students are engaged, involved and connected with a course, they are motivated to work harder in that course. They learn not just about how communication works from a theoretical and conceptual basis; they come to understand themselves as communicators and suddenly see communication happening all around them. (p.31)

4. The reform design of Graded ELT at BIFT

The fundamental principle in running the graded ELT in BIFT is to accommodate the diversified students' needs. By organizing graded ELT, the students can improve in classes suited to their own levels, and teachers prepare their lectures reflecting the levels of the subjects and adopt appropriate teaching methods. Graded ELT meets the varied learning demands of students of different levels. The starting point of this teaching reform is to arrange classes according to the students' English level, set up learning goals and objectives, adopt appropriate teaching methods, reform the marking mechanism, organize English quality education activities accordingly, fulfill the objectives of efficiency implementing

ELT and conscientiously strengthen the students' language application ability. Based on that, the English learning goals and objectives set up by BIFT include fostering students' skill of using English effectively for the purpose of study, daily life, social interaction and future employment, ultimately meeting the needs of government, society, educational institutions and personal development, as well as developing students' autonomy of learning and enhancing students' cross-cultural awareness, culture attainment and communication competence.

These goals and objectives mentioned above provide a basic framework, within which a reformed English teaching design was developed. The guidelines (framework) for the new design include arrangement of teaching to be made depending on the diverse needs of students at different levels and categories, combination of first and second classrooms, classroom teaching and self-learning, knowledge and task orientations, basic compulsory modules and advanced elective modules, and mutual complementation between EGP and ESP.

5. Procedure of the Implementation of Graded ELT at BIFT

Taking into consideration the significant difference in level of strength, capability of learning and specialty in English among the arts, engineering and business students, we proposed a novel teaching model of grouping and categorizing students in order to help them to achieve their individually tailored learning goals. All arts, engineering and business students needed to take a 'sounding out' examination at the beginning of the first term and then were grouped into three different classes, "A" (advanced), "B" (improved) and "C" (basic), according to their English proficiency level. Students in 'specialty subjects' such as arts or sports were categorized as one group.

5.1 Teaching arrangement for graded ELT to meet the students' diverse needs

The three groups of learners have different learning goals and objectives: students in B and C classes need to meet the standard requirement demanded by the College English Curriculum (the basic level); students in the A class are expected to reach the more advanced requirement (the improved level); students in the Fashion Innovation Experiment class need to not only meet the above-mentioned requirements, but also complete some ESP modules (the advanced level). The sample of teaching arrangement for different classes can be seen in Table 1.

Table 1: Sample of teaching arrangement for ESP

	Basic English		**Advanced English**		
	A Class	B, C Class	Culture	Inter-discipline	Skills
General Modules	Culture and Comprehensive Language skills	Comprehensive Language Skills	Culture of English-Speaking countries, Sino-Western cultural comparison, culture and Fashion	Art critics, English for Fashion, Modeling and Designing.	Practical English Writing, communicative English, strategy of Learning English.
Practice and Web-based modules	Practice and Web-based modules defined at “improved level”.	Practice and Web-based modules defined at “basic level”.	Practice and Web-based modules defined at “improved level”.	Practice and Web-based modules defined at “improved level”.	Practice and Web-based modules defined at “improved level”.
Teaching arrange-ment	Term 1-3, Term 4 reserved for IELTS, TOEFL and English Entrance Exams for Postgraduate Schools; Subject English.4 credits per term, 64 hours.	Term 1-4, 4 credits per term, 64 hours.	Term 1-4, 1-2 credits per term depending on the course progress, 16-32 hours	Term 1-4, 1-2 credits per term depending on the course progress, 16-32 hours	Term 1-4, 1-2 credits per term depending on the course progress, 16-32 hours
Module type	Compulsory	Compulsory	Elective	Elective	
Notes	Graded teaching	Graded teaching	Optional to students based on subject and career orientation		

5.2 A teaching system adopted by combining EGP with ESP

Currently, both English for General Purpose (EGP) modules and English for Specific Purpose (ESP) modules are taught at BIFT. EGP aims to provide students' with all-round skills such as listening, speaking, reading, writing and translating (Jing, 2014), which are common to all academic subjects (Dudley-Evans & St John, 1998). ESP, on the other hand, integrates English and specific academic content knowledge, which is an approach to language teaching based on the needs of learner (Hutchinson & Waters, 1987) and the language requirements of a particular academic discipline, occupation or activity (Dudley-Evans & St. John, 1998). Although ESP courses fulfill the specific language needs of different subject areas, EGP courses should still be taught because all the disciplines share the same basic linguistic themes or a common core of grammar and vocabulary (Bloor & Bloor, 1986), which equips English learners with a basic set of language skills before they start their ESP courses.

In our institute, EGP courses in Terms 1-4 are the core part of the college English curriculum. During this period of time students are expected to reach College English Test 4 (CET-4) level through the language training including listening, speaking, reading, writing and translating. Moreover, EGP courses pave the solid way for students before they take on any ESP course in Term 4, e.g. Academic English Writing, Academic English Communication and Specialty English in Fashion and Culture. There are four different levels for EGP through the two years of four terms (Autumn Terms and Spring Terms). There are 4 contact hours each week and 16 weeks in each term, making up 64 hours in total.

ESP courses are also an important part of English education in BIFT. As the major subjects in our institute are related to costume and art designing, the content of ESP courses has been determined firmly by students' subjects and their future career. Therefore, the main aim of our ESP courses is to nurture students' communication skills within international academia, improve their application of English in practical work, enhance their analytical and self-learning ability and mold their professional attainment and morality. Different from EGP, the ESP courses in BIFT integrate English and specific academic content knowledge. For example, modules such as fashion English, fashion show and design, costume and language, translation of fashion English, cultural and fashion change in the US during 20th century, and selective reading of arts critics in English are tailored for arts and fashion major students whilst the module “inter-cultural business communication” is provided to meet the needs of business English major students. ESP courses are scheduled across Terms 1-4 with each module running once a term. The length of each module depends on its contents and student demand, ranging from 6-12 weeks in each term. The lectures are arranged on Monday to Thursday afternoons (Lecture hour 7-10) which are reserved for all the elective modules.

5.3 A learner-centered teaching approach exemplified as an elective course

Within the framework of the revised English language teaching design, teachers are encouraged to create an interactive classroom environment. The interaction between the teacher and students during the class not only stimulates learners' cognitive development, but improves students' communicative competence by encouraging them to use the second language. In this way, the role of the teacher is transformed from knowledge transmitter to study guide and skill facilitator (Weimer, 2002). As Jones (2007) stated, “[t]he teacher (and the textbook) helps guide the students, manage their activities, and direct their learning” (p.2). The students are active participants in the learning process.

For instance, “Costume-related Idiom and cultural differences” is an elective ESP course module at BIFT. Strategies for teaching this specific module exemplify the learner-centered methodology. The students are actively involved in their learning process through pre-class assignments, classroom group discussion, and post-class reflection and summary. Rather than explaining the meanings of English costume idioms during the class, students were asked to find these out and hand them in before the class to the teacher, who produced a list of phrases and idioms arranged in the order from "head" to "toe" for classroom discussion, such as "pull something out of a hat", "at the drop of a hat", "a feather in one's cap" etc. In this case, the teacher actually facilitated brainstorming in the classroom for the correct answers, which was well received by the students. The teacher also used pictures with the idioms to scaffold students' learning. In addition, the teacher always encouraged students to find out the answers themselves by checking a dictionary in fashion culture if they were not sure about how to explain something. A typical example is about the "hat" which means a lot in the Chinese culture, such as "a beast in human clothing and hat"(衣冠禽兽), "top hat" (戴高帽), "red-hat merchant" (红顶商人), "little red hat" (小红帽), "little yellow hat" (小黄帽) and "wearing a green hat" (戴绿帽子). The students are encouraged to use references to find out the proper English version of these ancient Chinese costume idioms rather than translating them as the above just based on their literary meanings. All these will help them further study and explore the cultural difference between East and West.

This learner-centered teaching approach created a positive classroom atmosphere, which not only helped students stay motivated throughout the class, but consolidated their knowledge and promoted their English language appreciation. Finally, post-class reflection is extremely important in the self-learning process for students to critically review what they have learned and enhance their knowledge and skills. It was discovered following the interviews with 62 students who took this module that all of them found it interesting and learned lots of idioms through story-telling. In practice, the attendance rate for this module remained over 93% throughout the term. As the final assessment, the students were asked to find idioms related to both the human body and costumes. To the authors' surprise, they identified a large number of them by searching online resources, including the Bible. Since the students start to read and make use of classic literature in the western world, there is no doubt that they will get on the fast track to learning English language in no time.

5.4 Updating teaching materials based on distinguished features of BIFT

Riazi (2003) asserted that "textbooks play a very crucial role in the realm of language teaching and learning and are considered the next important factor in the second/foreign language classroom after the teacher" (p.52). Updating/revising language teaching materials to meet students' needs and requirements from the learning process is, therefore, an indispensable part of college teaching reform. Within the material design framework of learner-centeredness, English course materials are carefully tailored for students to develop communicative competence, to pursue personal and career development, and to take ownership of their language learning (Cunningsworth, 1984; Tudor, 1996). The program team also tries to reform the teaching materials to match the distinguishing features of BIFT, and to cater for students from different majors to raise their interest in English study. Some fresh and vivid English expressions and idioms may give them some help in their future fashion design and fashion brand creation. For example, some students volunteered to join the Chinese and Western Costume Culture research team at BIFT and we wrote our own textbooks such as "Study of English Idioms originated from fashion" (Zhang, 2016). Taking into consideration the content/knowledge required by an arts university, which may successfully combine our daily teaching with academic research, both the students and teachers benefit from each other in the long run.

5.5 Second classroom activities provided in teaching reform of BIFT

As part of the teaching reform, BIFT set up "second classrooms" to supplement normal classroom teaching. The initiative aims to maximize students' opportunities to practice English so as to fulfill their needs of developing high level proficiency and all-round language skills, as required by the college English reform. Second classroom activities include reading English newspapers, Cafeteria "English corner", and a series of challenges or competitions such as English writing, reading, vocabulary building games, and drama performance. Teachers, as motivators and skills facilitators, actively observe and provide guidance or help when necessary. High quality authentic materials (such as English magazines, TV programs, and movies) are also used for the second classroom activities.

There are other opportunities beyond the curriculum for students to practice in BIFT, such as Model United Nations competitions, Beijing International Fashion Week, Exhibition of Graceful Fashion in Dunhuang. Such competition and activities provide opportunities for our students to be involved in translation, interpretation, and organization, and help them broaden their perspectives, deepen their understanding of the subject and showcase their English skills.

In addition to the after class activities and competitions, BIFT also provides the computer/internet-assisted language learning laboratory to encourages students to go to the self-learning center to practice listening and speaking by themselves, supervised and supported by the staff members. To some extent, the classroom-based English language teaching has been expanded to a campus-wide event. Consequently, the whole campus becomes a big English language learning classroom, which plays an active role in students' knowledge expansion, as well as improving their cultural attainment.

5.6 Flexible final marking system

Within the framework of college English reform, assessment of students' learning is designed to evaluate the process of learning, which consists of both formative and summative assessments. Formative assessment (accounting for 50% of the final mark), which is oriented to the "process" rather than the "products" of the learning process, includes students' self-assessment, peer assessment, teachers' assessment, and even an oral English test. These kinds of procedural and developmental assessment conducted in the teaching process promote an all-round development of the students and effective monitoring of students' self-study. Examples of formative assessment include attendance record, web-based self-study, small routine essays and some practical work. Summative assessments include unseen examination, dissertation and art work. Furthermore, in order to meet the requirement of students' career development, TOEFL and IELTS training courses were provided and students were encouraged to pass international English language tests before graduation. In addition, the London Trinity College oral exam and China Education Associate oral exam were also introduced to enhance the assessment of students' ability to use English in their communication.

6. Reflection of teaching reform in BIFT

The knotty problem encountered in graded ELT is the CPD (Continuous Professional Development) for teachers, and when we deal with it well, both teaching and academic research will be greatly promoted.

6.1 CPD in BIFT

In the process of English teaching reform based on the student-centered approach, English teachers play crucial roles in the implementation of curriculum reform. Ibrahim (1991) stated that "it is the teacher who has the final say about what is to be done when innovation is implemented in the classroom" (p.97). The need of CPD (Continuous Professional Development) for teachers (teacher training) is not only driven by the teacher's personal aspirations but the demand of institutions to improve students' learning through effective teaching (Day, 1999). The nationwide college English reform puts pressing demands on competent English teachers because the new curriculum advocates a pedagogical shift from a traditional teacher-centered grammar-translation style of teaching to a student-centered approach, which promotes autonomous learning and self-directed study with the focus on communicative language. This reform requires teachers to change from a role of knowledge givers/transmitters to skills facilitators. The new curriculum also requires teachers to increase their knowledge, skills, and adjust their teaching philosophy to improve both content and pedagogy. For example, high quality ESP teaching requires both language skills and specialty knowledge of a particular academic field. However, most ESP teachers are trained language educators but not subject specialists, which could be a challenge (Dudley-Evans & St John, 1998). In order to deliver effective teaching, sometimes ESP teachers need to work closely with subject teachers in terms of course planning and teaching material design and tailoring (Hyland, 2002).

English teachers at BIFT responded positively towards the challenges posed by the college English reform. They participated in various CPD or teacher training programs to promote their personal and professional development. The university should enhance language teachers' training in both academic subjects and pedagogy to enable them to adapt quickly to the new teaching model. Among the English teaching program team there were regular peer observations, exchange of teaching experience, selection of best teaching plans and so forth to encourage the staff members to develop standardized, novel and personalized course materials. Also the institute constantly invites external educational experts to give lectures on both pedagogy and practice in English education. Finally, the institute sends a number of staff members to other Chinese or overseas universities for visits and training, who bring back invaluable ideas to improve the quality of our English teaching practice.

6.2 Research-informed teaching innovation

Teaching and research are two inter-related functions and tasks of higher education. At BIFT, English language teaching team members are also active in undertaking their own scientific research, through which an innovation platform has been set up. They have translated and published academic books, published journal research papers and attracted government social science research funding. Applied research activity will underpin the student experience through its support for learning and teaching, and many staff members have already made good use of their research in the teaching context. The students will also benefit from the outcomes of frontline research in modules such as costume psychology, costume sociology, global costume culture, costume linguistics, and fashion translation.

Conclusion

This paper presents an approach to college English teaching reform carried out by Beijing Institute of Fashion Technology, which is tailor-made to meet the diverse needs of students. As a student-centered and communication-oriented design of curriculum innovation, it has aroused English learners' interest, fostered their self-learning skills, enhanced students' English proficiency, and promoted students' communicative competence and employability. Moreover, the language teaching reform initiative has empowered and enlightened the English teachers in the process of expanding their knowledge base, improving their pedagogic skills, and promoting their personal and professional development by means of training and support. In order to improve the English proficiency among Chinese undergraduates, the college English curriculum has been regularly revised and some elective courses reflecting the distinguished features of BIFT have been provided. However, new challenges faced by both English teachers and learners emerge constantly. Higher education institutions and English teachers who understand and address these challenges head on are better positioned to help students improve their language proficiency, enhance their learning experience and meet their diverse needs.

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English Textbook Use in Discipline-Specific Courses: A Survey of University Freshmen in Taiwan

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Abstract

To enhance students' academic achievement and workplace competitiveness, English is becoming more prevalent in discipline-specific university courses in Taiwan with English textbooks being used beginning at the freshman level. Despite the long history of adopting English textbooks for content courses, studies show that they are often too challenging for Taiwanese college students (Cheng, 2009, 2010). This study of 1,098 first-year students in six colleges at a comprehensive university examines students' reports of experiences with English textbooks in content courses and their instructors' expectations of how they should use them. About 86% of the participants reported having one or more courses using English textbooks. However, only half of these students claimed to read at least 60% of their textbooks, and only about half reported that they could understand the reading. To understand their courses, students adopted work-around strategies such as relying on notes taken in class or reading a Chinese version of the textbook. Instructors also offered in-class help by explaining in Chinese and using PowerPoint slides. To promote the development of students' English reading skills, the findings suggest the importance of collaboration between English teachers and discipline teachers and also the development of ESP curricula that enhance students' English proficiency in courses in their specialized fields.

Key Words: *CLIL, English textbook use, discipline specific courses, freshmen English needs*

Introduction

As in many EFL contexts, the use of English textbooks and English language lecturing are promoted in Taiwan's colleges and universities with the goal of introducing up-to-date content knowledge while enhancing students' English abilities. Known as Content and Language Integrated Learning (hereafter CLIL), this approach has become an important stepping stone in the internationalization of the local education system (Chen & Tsai, 2012).

As English has become the dominant language of scholarship in international conferences and journals, to remain abreast in their fields, professionals in all disciplines must master academic English (Belcher, 2007; Tardy, 2004). Four decades ago, at least half of all academic publications were written in English (Swales, 1987), a trend which has sharply accelerated since. Indeed, as Fung (2008) has noted, when the MEDLINE database was established in 1966, 47% of its articles were in languages other than English; however, by 2000 publications in other languages have declined to 10%. Between 1990 and 1998, over 95% of publications in the Science Citation Index (SCI) were in English (Van Leeuwen, Moed, Tijssen, Visser, & Van Raan, 2001, p. 344). Also, as noted by Larsen and von Ins (2010), 96.5% of the public health research indexed by SCI and the Social Science Citation Index was in English. Content instructors no doubt recognize that the ability to read at least discipline-specific English is critical for timely access to research and consider using English textbooks as a way to prepare their students to cope with future career needs.

But while learning content and improving their English at the same time might benefit some Taiwanese college students, most have been exposed only to general English for about six years before entering the university and experience at least some degree of frustration because they cannot fully comprehend textbooks written for college-level native English speakers (Chang, 2010; Cheng, 2009, 2010; Cheng & Hung, 2002). Cheng (2009) also found that of 209 freshmen at a medical university, where many courses used English textbooks, half (49.77%) scored below Grade 7 on a test designed for native English speaking students in the United States, and the other half (49.35%) scored between Grades 7 and 9, meaning that virtually all scored still below high school level. To emphasize the deficit, Cheng cites Singer and Donlan's (1989) claim that college level textbooks are usually written at Grade 13 level or above.

Similarly, Kung (2013), surveying 104 Taiwanese college students' perceptions of English-medium instruction (EMI) in content courses, found that students were frustrated and reported that receiving lectures in English was not effective for either their language or their content learning. In contrast, the same group of students found EMI effective when implemented in their general English course with proper guidance from the English instructor. These studies suggest that EMI and use of English language textbooks in content courses should involve cooperation between content instructors and ESP professionals.

Because adopting English textbooks is often the initial stage in moving towards CLIL, all stakeholders should first understand in what ways and to what extent they are actually being used in discipline-specific courses. However, few previous studies have addressed these questions, particularly from the students' perspective. Examining university administrative office pronouncements or course syllabi might reflect only the instructors' expectations or school policy concerning implementing a whole English curriculum. Also, previous studies conducted in Taiwan have targeted specific institution types or majors, including medical schools (Chia, Johnson, Chia, & Olive, 1999; Hwang & Lin, 2010), business programs (Chang, 2010; Huang, 2006), and engineering and informatics majors at a private general university (Chang, 2010). Accordingly, for the present study a survey was administered to 1,098 first-year students in all six colleges of a three-campus comprehensive university in Southern Taiwan to capture at first hand their learning experiences with English textbooks and their perceptions of the English reading skills these materials required.

The study addressed the following four research questions:

1) How many content area courses use at least one English textbook?
2) How do instructors use the English textbooks in the content courses?
3) How do students use the English textbooks assigned in the courses?
4) What do instructors do to help students understand their English textbooks?

Literature Review

Barwell (2005) described Content and Language Integrated Learning (CLIL) as "the teaching and learning of both language and subject areas in the same classroom, at the same time" (p 143), an approach that Coyle, Hood, and Marsh (2010) referred to as "an innovative fusion" of language learning and content knowledge. While the emphasis is generally on a dual focus on content and language (Mehisto, Marsh, & Frigols, 2008), however, Coyle (2007) proposed the interrelationship of four elements of CLIL: content (subject matter), communication (language), cognition (learning and thinking), and culture (cultivating intercultural awareness). While Seikkula-Leino (2007) found no significant differences in learning between pupils who studied in a CLIL program and pupils who studied in their mother tongue, some studies have shown various positive effects of CLIL, for example, that it enhanced students' active engagement (Yamano, 2013), their thinking and content learning (Jäpppinen, 2005), their motivation (Lasagabaster, 2011), their overall language achievement (Lasagabaster, 2011), and their learning of language vital for understanding content materials (Uemura, 2013). Factors that facilitate positive outcomes include supplementing CLIL with L1 content courses and extra language courses (Jäpppinen, 2005), providing instructors' scaffolding using translanguaging (Uemura, 2013), and employing language-level-appropriate materials and vocabulary learning strategies (Brown, 2013). As these studies suggest, to successfully promote student learning, CLIL is likely to require proper facilitation and scaffolding, which in turn must be based on understanding students' experiences with this approach.

English Textbooks Used in Content Courses

Chia et al. (1999) conducted a survey on the use of English textbooks in content courses involving 20 faculty members (F) and 349 students (UC, upper-class students; LC, lower-class students) at a medical school in central Taiwan. They found that the faculty (95%) perceived English to be much more important in medical studies than the students (UC, 55.6%; LC, 57.9%) did. Nevertheless, the three groups were in close agreement concerning the importance of English for students' future careers (F, 90%; UC, 93.8%; LC, 88.3%). As for English textbooks, more than a third of the faculty (35%) reported that 90%-100% of the textbooks they used were in English, and another 45% reported that 70%-89% of their textbooks were in English, so 80% of the faculty reported that at least 70% of their textbooks were in English. As to their perceptions of English for success in the medical program, the majority of the students (UC, 91.6%; LC, 95.6%) and all of the 20 faculty considered the ability to read English textbooks and medical journal articles as the most important skill, followed by understanding lectures for students, and writing reports and papers for faculty.

In a study at another Taiwanese medical school, Hwang and Lin (2010) surveyed 24 faculty members and 378 students between October 2007 and March 2008 regarding the English needs of students. When asked about the percentage of reading materials in English that they required students to read, such as textbooks or journal articles, more than 80% of the faculty members reported that more than 50% of the reading materials they assigned were in English, but only about 30% of the students reported that percentage, a discrepancy the researchers explained as suggesting that students were using Chinese versions of the assigned English readings. This interpretation, that students avoid reading an English text when its Chinese version is available, is consistent with Huang's (2006) study discussed below.

Student Satisfaction with Courses Featuring High Use of English

Chang (2010) investigated the implementation of EMI in 12 content courses in six majors in the College of Management, the College of Engineering, and the College of Informatics of a private university in Taiwan. Although an EMI course designation implies significant English language use, Chang found that English was used more than 90% of the class time in only a small number of the putative EMI courses (10.3% in their favorite EMI course). The study involved interviews with six students and six instructors, and a questionnaire administered to 370 sophomores and seniors.

Nearly 80% of the students reported that they "felt satisfied with or at least neutral towards their EMI courses" (p. 64). Since 55.5% of those responses were "neutral," positive and neutral responses should be considered separately, especially as subjects were told that neutral meant only "no especially negative feelings," and it is possible students chose the neutral response to avoid appearing too negative on the survey. Only about 24% described themselves as satisfied or very satisfied. Electrical engineering and information communication students reported the least satisfaction, dissatisfied (28.1%) and very dissatisfied (30.3%) with their EMI courses. While over 60% of the students reported that EMI helped them improve their English language proficiency, particularly in listening (73%), only 28% of the students perceived that their reading ability had improved. Most of those who perceived improvement in reading were business majors, a greater number of whom read the English versions of their textbooks compared with students in the other departments.

Instructors' Practices Relating to English Textbooks

While instructors may require students to purchase English textbooks, students may choose not to read them, or they simply may not have the language skills to do so. Huang (2006) explored situational factors motivating 212 undergraduate business majors at a university of science and technology in Taiwan to read their English textbooks. The results showed that by the time of the survey, the students had taken a range of one to six (average 2.77) courses that used textbooks in English. When asked to estimate how much of their English textbook reading they actually completed, students' mean score was 26.48%, indicating that most of them did not even come close to doing all the assigned English reading in their content courses.

In Chang's (2010) study, fewer than 40% of the students read the English textbooks before or after the class, and 64%, especially engineering and informatics majors, ascribed their difficulties to their low English proficiency, including limited vocabulary knowledge and slow reading speed. Their inadequate previewing of the material in English textbooks could have hindered the students' comprehension of lectures as well, especially English lectures. Several students also complained about some instructors' poor command of spoken English. Based on these findings, Chang recommended greater support for instructors who use English in their teaching as well as courses in English for Academic Purposes (EAP) to support students in EMI courses, especially to bridge the gap between English for General Purposes (EGP) courses and content courses.

Sources of Support for Understanding English Textbooks

In Huang's (2006) survey, the students were also asked to rate their responses to 18 situations in which they might be more motivated to do EAP reading from 1 (very unwilling to read their English textbooks) to 7 (very willing to read their English textbooks). Students were most willing to read their English textbooks if they had 1) access to teacher support for problems; 2) texts with clear, easy-to-read formats, illustrations, and accessible vocabulary; and 3) clear expectations for reading the textbook. It is noteworthy that the situation, "There is no Chinese translation available" had the lowest mean (3.81) as well as the highest standard deviation (1.71). Huang interprets the high standard deviation as indicating that some students might use the Chinese version as a resource for reading their English textbooks while other students might turn to a Chinese translation instead, suggesting the need for further research. These studies suggest English textbooks or articles were used in content courses to a fairly large extent. As found in Chia et al.'s (1999) study discussed above, 80% of the content teachers in a medical school reported that at least 70% of their textbooks were in English. In Hwang and Lin's (2010) study in another medical school, 80% of the faculty reported more than 50% of their course readings were in English. However, only 26.48% completed their reading in English in Huang's (2006) study, and fewer than 40% in Chang's (2010) study, statistics that in themselves may be questioned in a self-report survey and without knowing what "read" meant to the respondents. These studies targeted specific majors with a relatively limited number of participants.

Method

Research Design

To examine students' views of English practices in their content courses, the current study employed a survey that included background information, number of courses using English textbooks, instructors' expectations concerning their textbooks, textbook use in class and other relevant practices of instructors, and students' uses of textbooks outside of class as well as other questions relevant to the present report (see Appendix A for the full questionnaire). The questionnaire was written in Chinese to facilitate students' comprehension and administered using Survey Monkey at the end of the semester.

Context of the Study

This study took place at a national comprehensive university in southern Taiwan, where all students are required to complete three semesters (six credits) of general English communication courses, focusing on speaking and listening, reading and writing, and presentation skills respectively, along with supplementary activities designed by the Language Center to enhance their language skills. In addition, two tracks of ESP courses, Business/Management English Communication and Professional English Communication, are provided as elective English courses. This curriculum is part of the English immersion milieu at this university. While most students take ESP courses after the completion of the six required credits, a few take the ESP courses along with their general English courses. Among ESP courses with broad appeal are international business exhibitions, workplace English, tourism English, and intercultural communication.

Focus on Entering Freshmen

The focus of the study was on freshman content courses in which English textbooks had been adopted because, at this level, students have just entered the university with similar K-12 English backgrounds and have not yet completed college EGP and ESP courses. In these courses, they will be expected to use English mainly for reading with less emphasis on writing, listening, and speaking. These are the students whom content instructors will encounter at the beginning of their college careers and teach for the next four years.

Participants

Data were collected at the end of the students' first semester. The total population of freshmen was about 1,870, of whom 1,369 took the online survey, a response rate of approximately 73%. After 271 incomplete questionnaires were excluded, participants comprised 1,098 freshmen, about 61% of the total freshman population, of whom 49% were male (n=540), and 51% were female (n=558), reflecting the general gender distribution of the university.

Table 1 shows the distribution of participants across the six colleges on the three campuses of the university. Table 2 shows the students' language proficiency, assessed as high (Level A), intermediate (Level B), or low (Level C) based on the placement test they took when they entered the university, a mock version of the intermediate level General English Proficiency Test (GEPT), developed in Taiwan for use by government, private companies, and educational institutions to assess English skills. The GEPT intermediate level is equivalent to a Common European Framework of Reference for Languages (CEFR) B1 according to the website for the Language Training and Testing Center (LTTC), which develops and administers the test. The extent to which students at different proficiency levels read and understood their textbooks is reported in Tables 7 and 8.

Table 1
Study Participants for Six Colleges Across Three Campuses of the University

	N	%
Teachers College	77	7%
Humanities and Arts	97	9%
Management	272	25%
Agriculture	271	25%
Science and Engineering	225	20%
Life Sciences	156	14%
Total	1098	100%

Table 2
Participants' Language Proficiency Levels for Participants

	N	%
High Level A	219	20%
Intermediate Level B	448	41%
Low Level C	431	39%
Total	1098	100%

Questionnaire

The questionnaire, which was designed by the researchers based on their teaching and research experiences in this context, included background information and 13 items that addressed the four research questions posed in the introduction above (see Appendix for complete questionnaire).

To answer the first research question, "How many content area courses use at least one English textbook?" the participants were asked about the number of content courses they were taking and in how many an English textbook had been assigned. To answer the second research question "How do instructors use the English textbooks in the content course?" the students identified the content class in which an English textbook was used the most and reported the percentage of the textbook their instructor assigned and lectured on and the instructor's expectations regarding the textbook.

For the third research question, "How do students use the English textbook assigned in the course?" students estimated the percentage of reading they finished outside of class, the level of their comprehension, strategies they used for independent reading, and possible use of a Chinese version of the textbook as a resource or substitute if they could not understand the English version.

For the fourth research question, "What do instructors do to help students understand their English textbooks?" students reported their instructors' reading support strategies. In the analyses of the data, total numbers and percentages were calculated as reported and discussed in the next section, following the order of the four research questions.

Findings

Research Question 1: How many content area courses use at least one English textbook?

As shown in Table 3, 86% of the students had at least one content course that used an English textbook (n=946), and 51% of the students had at least two content courses which used an English textbook (n=557). Only 14% of the students had no content courses with an English version textbook (n=152). These results indicate English version textbooks were widely used in this university, and an overwhelming majority of these freshmen were assigned English textbooks in their first semester. This immediate use of English textbooks suggests that content instructors might be unaware of possible gaps between students' general English proficiency and the language level of the textbooks they assigned. Given the high percentages of students at low or intermediate proficiency levels, further research is needed to investigate how instructors make their text selections and whether

English texts are available that meet the needs of lower proficiency EFL speakers. The present findings, however, clearly indicate that instructors have high expectations of entering freshmen's English reading skills.

The 152 students who reported they were assigned no English textbooks in their content courses ended the survey at this point, so subsequent items were answered by 946 respondents, who selected the course in which an English textbook was used the most on which to base their answers. This focus on one course was intended to evoke specific memories of their recent experience rather than more general recollections across courses or even high school courses. It should be noted, therefore, that because these responses reflect the course in which the teacher emphasized English reading, other courses that adopted English textbooks might have lower instructor expectations or student performance.

Table 3 shows that the number of English textbooks assigned to students ranged from one to five or more. More than half of students had more than one English textbook in this semester in their freshman year.

Table 3
Number of English Textbooks Assigned an English Textbook as Main Textbook in Discipline-Specific Courses

English textbooks assigned	N	%
0	152	14%
1	389	35%
2	194	18%
3	260	24%
4	68	6%
5 and above	35	3%
Totals	1098	100%

Research Question 2: How do instructors use the English textbooks in their content courses?

When students were asked how much of the textbook material their instructors covered in class, 77% reported that more than 60% of the content of the English textbook assigned to be read in the course syllabus was covered in class, while 22% of students said that less than 60% of the assigned reading was covered (see Table 4). Again, this finding, which referred to the courses where English reading was assigned most, implies that other content courses which had adopted English textbooks do not use them much in class and that students might not have been expected to complete all assigned reading in English.

Table 4
Percentage of English Textbook Content Covered in Class

Percentage covered	N	%
81%-100%	419	44%
61%-80%	313	33%
41%-60%	142	15%
21%-40%	41	4%
less than 20%	31	3%
Totals	946	100%

As Huang (2006) found, students are motivated to read their textbooks by their instructors' clearly conveyed expectations. As shown in Table 5, 70% of the respondents judged their instructor's expectations for use of the textbook as clear. Table 6 presents their instructors' expectations.

Table 5
Clarity of Instructor Expectations for Student Use of Textbook

	N	%
Clear	665	70%
Not clear	281	30%
Totals	946	100%

Table 6
Nature of Instructor Expectations of Textbook Use

	N	%
Read everything assigned	163	25%
Try to read everything	239	36%
Look at the graphs, figures, and formulas	94	14%
Do at least some of the exercises in the homework section	133	20%

Note: This table represents those who received specific instructions of what they were supposed to do with the textbook. The participants could choose more than one answer.

Research Question 3: How do students use the English textbook assigned in the course?

Tables 7 and 8 indicate the extent to which the students read and understood the assigned English textbooks. The findings are reported for the whole group and by proficiency level. The results in Table 7 show that only about half of all students claimed to have read at least 60% of the content of their textbook for the one class they reported on. In addition, overall, about 55% of the students reported that they could understand 60% or more of what they read, as shown in Table 8. The percentage of reading completed and comprehended by students with a higher proficiency level was greater than that of students with a lower proficiency level. About 58% of Level A students, 50% of Level B students, and 42% of Level C students reported they finished at least 60% of the reading. As for reading comprehension, about 71% of Level A students, 56% of Level B students, and 46% of Level C students reported they understood what they read.

Despite or perhaps because of coverage of an English textbook in class (with lectures mostly in Chinese), the rate of students' own reading was not high. Some students may have decided not to spend much time reading the textbook since the instructor would lecture on the important, need-to-know points in class. In addition, it is possible that students may have interpreted what the word "read" means more or less strictly, resulting in some inflated estimates of reading.

Table 7
Percentage of English Textbook Read by Students

Proficiency Percentage	All		Level A High		Level B Mid		Level C Low	
	N	%	N	%	N	%	N	%
81%-100%	167	18%	46	21%	81	18%	69	16%
61%-80%	293	31%	81	37%	143	32%	112	26%
41%-60%	267	28%	50	23%	139	31%	121	28%
21%-40%	98	10%	11	5%	45	10%	60	14%
less than 20%	121	13%	31	14%	40	9%	69	16%
Totals	946	100%	219	100%	448	100%	431	100%

Table 8
Percentage of English Textbook Understood by Students

Proficiency Percentage	All		Level A High		Level B Mid		Level C Low	
	N	%	N	%		N	%	N
81%-100%	174	18%	68	31%	85	19%	47	11%
61%-80%	347	37%	88	40%	166	37%	151	35%
41%-60%	265	28%	48	22%	134	30%	129	30%
21%-40%	99	10%	11	5%	45	10%	60	14%
less than 20%	61	6%	4	2%	18	4%	43	10%
Totals	946	100%	219	100%	448	100%	431	100%

Only a little more than half (55%) of the students reported that they could understand at least 60% of the reading, requiring them to find other ways to understand the content. The most common solutions were to read notes that they took in class (66%), look up Chinese meanings of all the words that they did not understand (53%), and look up Chinese meanings of only words that they thought might be important (49%) (see Table 9).

Table 9
Student Strategies for Understanding Textbook Content

	N	%
Read notes that you took in class	620	66%
Looked up Chinese meanings of all the words that you didn't understand	501	53%
Looked up Chinese meanings of only words that you though might be important	466	49%
Read the Chinese version of the textbook	270	29%
Read notes that you borrowed from senior students	134	14%
Skipped the parts of the textbook that you didn't understand	128	14%

Note: The participants could choose more than one answer, so the total percentage exceeds 100%.

The responses to this item suggest that the students relied primarily on notes they took in class and including the PowerPoint slides used by their instructors to understand the course content. Similarly, the importance and effectiveness of the instructors' facilitation are highlighted in Table 10. Whereas the students' English levels were slightly correlated with portions of English textbooks read by them (r = .119**) and portions of English textbooks understood by them (r = .229**), English textbooks covered in class are moderately correlated with the extent they read (r =.356**) and understood (r =.361**). The correlations further show that the more they understood, the more they read (r = .578**).

Table 10
Correlations

			English Level	English Textbook Reading Covered in Class	English Textbook Reading Read by Students	English Textbook Reading Understood by Students
Spearman's rho	English Level	Correlation Coefficient	1.000	.59	.119**	.229**
		Sig. (2-tailed)		.070	.000	.000
		N	946	946	946	946
	English Textbook Covered in Class	Correlation Coefficient	.59	1.000	.356**	.361**
		Sig. (2-tailed)	.070		.000	.000
		N	946	946	946	946
	English Textbook Read by Students	Correlation Coefficient	.119**	.356**	1.000	.578**
		Sig. (2-tailed)	.000	.000		.000
		N	946	946	946	946
	English Textbook Understood by Students	Correlation Coefficient	.229**	.361**	.578**	1.000
		Sig. (2-tailed)	.000	.000	.000	
		N	946	946	946	946

***Correlation is significant at the 0.01 level (2-tailed).*

Though more than half of the students claimed to have looked up Chinese meanings, the effectiveness of this solution for readers with low reading proficiency is questionable. As found in Cheng's (2009, 2010) studies mentioned above, the reading levels of the English version textbooks are usually higher and often much higher than students' proficiency levels. If students do indeed try to look up every word that they do not understand, it is very likely that they rapidly become frustrated and eventually give up trying to read the textbook at all.

Resorting to a Chinese version of the textbook might be an attractive solution when students have difficulties reading the English version, and 29% of all respondents resorted to a Chinese version at least some of the time. As seen in Tables 11 and 12, of these, about 23% owned copies of Chinese versions, of whom more than 62% read at least 61% of their Chinese versions. This reliance on Chinese texts may suggest lack of ability to do independent reading in English, lack of confidence in their reading skills, or lack of time to read in English rather than Chinese. Regardless, the convenience of reading about their subject in their own language is undeniable.

As shown in Table 11, there was little difference in ownership of Chinese versions among proficiency levels: 24% for Level A, 24% for Level B, and 21% for Level C. On the other hand, differences among the proficiency groups were somewhat greater for those who read between 61% and 100% of their Chinese textbooks: 50% for Level A, 69% for Level B, 61% for Level C, as seen in Table 12. While it was not surprising that the highest level used the Chinese versions least, it was unexpected that the lowest group did not use the Chinese version more, though this group's lower percentage of access (21%) to a Chinese version may account at least partially for this result. The above findings indicate that as early as the freshman year, a great number of Taiwanese university students are required to use English textbooks in their content courses, though present findings indicate lack of proficiency, confidence, and/or time.

Table 11
Students Having a Chinese Version of the Target English Textbook

	All		Level A		Level B		Level C	
	N	%	N	%	N	%	N	%
Yes	217	23%	53	24%	108	24%	91	21%
No	729	77%	166	76%	340	76%	340	79%
Total	946	100%	219	100%	448	100%	431	100%

Table 12
Percentage of the Chinese Version Read by Students

	All		Level A		Level B		Level C	
	N	%	N	%	N	%	N	%
81%-100%	76	35%	13	25%	44	41%	30	33%
61%-80%	59	27%	13	25%	30	28%	25	28%
41%-60%	37	17%	16	30%	16	15%	9	10%
21%-40%	24	11%	3	5%	11	10%	15	17%
less than 20%	21	10%	8	15%	6	6%	11	12%
Total	217	100%	53	100%	108	100%	91	100%

Research Question 4: What do instructors do to help students understand their English textbooks?

For this research question, students were presented with a list of teaching techniques that their instructors might have used in class lectures to help the students understand the English textbook content. Students were also given the option to add additional techniques, though few did so. As shown in Table 13, the most frequent techniques were explaining the meanings of the content in Chinese (75%), using PowerPoint slides containing important notes in English (55%), explaining important terms (52%), and translating the content of the textbook orally into Chinese (51%). As the teaching approach most used was explaining important ideas and terms in Chinese, these courses were clearly neither EMI courses nor examples of a fully developed CLIL approach; students might be given English textbooks but instruction was carried out largely in Chinese. Learning the English language was not a significant part of the curriculum as might be expected in EMI or CLIL courses.

Tables 5 and 6 report the clarity and nature of instructors' expectations regarding students' use of the assigned English textbooks, showing that approximately 70% of the instructors informed students they expected them to read or try to read the whole book. Admonitions to "try to read everything" cited by 36% of the respondents, however, set a low level of expectation. Moreover, 30% of the students reported that their instructors did not inform them of any specific expectations. Inasmuch as these were freshmen, this was probably the first time they had encountered an English textbook in a subject other than English. If their instructors conveyed no expectations or set low expectations, it might have been unclear what the students should do with the English textbook, other than to try to read it.

Table 13
Instructor Techniques Used to Promote Student Understanding of the English Textbook in Class

	N	%
Explained the meanings of the content in Chinese	709	75%
Used PPT slides containing important notes in English	523	55%
Explained important terms	492	52%
Translated the content orally into Chinese	483	51%
Explained graphs, flow charts, or tables in the textbook	431	46%
Explained the meanings of the content in English	303	32%
Used PPT slides containing important notes in Chinese	210	22%
Explained grammar	147	16%

Note: The participants could choose more than one answer, so the total percentage does not equal 100%.

As shown in Table 13, instructors had developed techniques for presenting course content and material from the textbooks in a form accessible to students, even if they did not read the textbook, indicating that the instructors themselves had little faith in their students' ability to learn by this means on their own.

Discussion and Conclusions

Summary of the Findings

This study shows that English textbooks were used extensively in the six colleges at a comprehensive university: 86% of the students had at least one content course using an English version textbook, and 51% had at least two content courses with an English textbook. A large percentage (77%) reported that their instructors used the assigned English textbook in class, and that more than 60% of the English textbook was covered in the class that made greatest use of a textbook. This high level of English textbook use is consistent with the findings in the literature (Chia et al., 1999; Hwang & Lin, 2010). Although higher proficiency students read their English textbooks slightly more than the mean of the three levels combined, it was seen that only half of all students claimed to have read at least 60% of the content of their textbooks for the one class they reported as using the textbooks the most among their classes, and only about half of the students reported that they could understand what they read. Therefore this study confirms Cheng's (2009, 2010) conclusions that English textbooks are too challenging for Taiwanese college freshmen. Nevertheless, students have compensatory strategies for learning their subjects, such as taking notes in class, looking up unknown vocabulary, and reading a Chinese version of the textbook. Instructors, on their part, have also developed techniques such as using PowerPoint slides and explaining content in Chinese. Inasmuch as these strategies may displace rather than support reading, the question is how English textbooks should be used.

As the findings of this study show, implementation of CLIL is gaining its popularity in college freshman content courses in Taiwan. The adoption of English textbooks is a pragmatic choice made by instructors who know their students need to be able to at least read English, though they are likely to take steps to assist their students in understanding the texts or working around them. Thus, while English textbooks are prevalent in freshman content courses, students are not making full use of them and perhaps cannot because of limited language ability. Students not only rely on instructors' practices in the classroom, but also take advantage of the workaround solutions to learn the course content. While some of their strategies may address language issues, such as looking words up, often they serve the purpose of allowing students to function despite incomplete access to the knowledge in their textbooks and do not enhance students' English language proficiency. Thus, there is need to attend to the language-learning side of the CLIL equation.

Suggestions for Future Practice

As suggested in previous CLIL studies, for positive language-learning outcomes, proper scaffolding needs to be provided for CLIL courses, such as extra supplementary language courses (Jäpppinen, 2005) and level-appropriate materials and vocabulary learning strategies (Brown, 2013). In addition, we suggest that content instructors should first achieve a more realistic understanding of the language proficiency levels of their students, beginning with a review of their students' placement exam results in their freshman year. Based on this information, instructors can implement the following facilitations.

Select language-proficiency-appropriate English textbooks

Instructors should review their textbook selection criteria and identify the readability level of any English textbook they consider adopting for a content course, with reference to the level of the course in the four-year undergraduate curriculum. Publishers may be able to provide readability levels as this information is also relevant to different reading levels of native English speakers. If publishers do not provide such information, there are formulas available for instructors to calculate a rough estimate of the readability of a text.

While currently little is known about factors content instructors consider in their text choices, informal enquiries suggest they are most interested in up-to-date information, and readability is not considered. Investigating their reasons for selecting textbooks could benefit instructors, their students, and the ESP instructors who may be called upon to help students cope with the difficult language they will encounter in their field-specific English textbooks. If there is an easier version available, it may be more suitable to the proficiency level of English learners in Taiwan at a given year in school. Although readability may not factor strongly in an instructor's choice of textbook, especially if none of the possible selections is close to students' proficiency levels, a clear understanding of students' proficiencies could prompt instructors to make greater efforts to adapt their teaching and use of their textbooks to the level of their students along lines that students in this study found helpful. If the level of an English textbook is far beyond students' current English proficiency level, ESP professionals should be enlisted to work with the instructor to develop students' proficiency levels. Simply requiring students to buy a textbook they cannot or will not use is counterproductive.

If neither selecting more language-proficiency-appropriate English textbooks nor helping students make greater use of them is a viable option, content instructors should consider seeking suitable Chinese textbooks to supplement or replace English textbooks, and if possible, select English textbooks for which good Chinese translations are available and provide guidelines for using them along with or in place of English versions. As Huang (2006) suggests, a Chinese translation might be a good tool to help students read English books outside of class.

Facilitate English textbook reading

To facilitate English textbook reading as either an implicit or an explicit course objective, especially if English reading skills are indispensable to students' future success in many fields, remedial or supplementary instruction in the two critical areas of vocabulary and reading skills (Chang, 2010), should be provided. This approach may necessitate increased emphasis on ESP reading practice in the target field. While some of this work can be done in ESP classes, content instructors should also take responsibility in this area.

As suggested by Huang (2006), instructors should always explicitly inform students of their expectations. Specifically, quantifiable expectations are better than vague suggestions. About 30% of the participants in this study reported that they were not told what their instructors expected (see Tables 5 and 6). As freshmen, these participants needed unambiguous guidance about how to read or use the textbook. For example, should students strive to read all of the content or just part of it? Table 6 indicates that 61% of the students were advised to read or try to read all of the textbook, the first being unrealistic and the second being imprecise advice at best. Only 11% mentioned they were given specific directives to pay attention to tables and graphs and only 20% indicated they were required to complete at least some of the exercises in the book. Besides the lack of unambiguous explanations of instructors' expectations, there is also the question of what students should do when they understand expectations but cannot meet them. This may be a particularly worrisome question for freshmen, who have no experience with what university instructors expect. Clear guidelines on what students should do and how to do it should reassure them that they are indeed fulfilling their instructors' expectations.

Most students reported that in their focal course lectures on course content included PowerPoint slides with notes in English to help the students understand important points. This kind of visual aid is especially important in courses in which instructors lecture in English and/or use English textbooks extensively. Even when lectures are given in Chinese, PowerPoint slides in English can enable students to easily take notes for reference when they read the English textbooks after class. Although this strategy may have the effect of encouraging students to read, instructors should provide effective PowerPoint slides in which English is used extensively to scaffold the reading and learning of students with low English proficiency. Although note taking is not within the scope of this study, it can be said that effective note-taking skills can help students record important facts and English terminology for later review.

Involve ESP instructors and provide ESP courses

In this study of students' uses of English textbooks in courses in which they were most used, one focus was on ways content teachers' practices helped them learn the course content with or in spite of a difficult text. To restore the balance between language and content learning in a CLIL classroom, ESP instructors can be enlisted to help students comprehend the content textbooks by enhancing their vocabulary (general, academic, and field-specific or technical) and practicing reading skills such as getting the gist, drawing inferences, taking notes, outlining, summarizing, and integrating new information. Proper guidance from English specialists can motivate students and help them overcome language barriers (Kung, 2013). Increasing expectations of English language development requires a concomitant increase in resources, including adequate time devoted to acquiring language skills. An effective partnership between content and ESP instructors depends on the extent to which the former recognize the contribution the latter can make and whether they work together to help students learn their subject through reading their English textbooks.

Finally, universities should provide ESP curricula that meet students' academic, field-specific, and profession-related needs. EGP courses alone do not provide the ESP support that students need to read the English textbooks in their majors. Also some universities in Taiwan offer ESP courses only after the sophomore year, though as seen in this study, first year students are already being assigned English textbooks despite the sizeable gap between their previous general English training and their current language needs. Content instructors, ESP instructors, and English curriculum designers should collaborate to design ESP programs to help students meet both instructors' and their own needs in their major fields.

Implications for Future Research

In connection with previous studies, this study of English content textbooks use by university freshmen in Taiwan helps clarify what students are being expected to do in their content courses and their ESP needs. Given the extent to which students work around rather than with their textbooks to learn course content, it is questionable whether ESP courses as they are presently constituted are adequate to meet content instructors' expectations of their students' English, suggesting the need for additional research at all undergraduate levels. Two specific recommendations are offered here: 1) Students should be individually interviewed to supplement and clarify survey answers. For example, although 49% of the students said they completed at least 60% of their assigned reading, we need to clarify their understanding of “reading” something in order to interpret their answers more accurately; 2) Content instructors’ attitudes, goals, criteria and practices in selecting English textbooks need to be better understood in order to help them more effectively bridge the gap between the language of the textbooks and their students’ current levels of English proficiency.

These and similar recommendations for research and practice call for increased cooperation between professionals in ESP and in the university disciplines. Such meaningful cooperation can best benefit our EFL students in their content courses.

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Appendix

In order to understand better what your English needs might be for your classes in your major, please complete the following survey.

1. Name:
2. Student ID Number:
3. Year in school: Freshman Sophomore Junior Senior

4. College:
    a) Teachers College
    b) College of Humanities and Arts
    c) College of Management
    d) College of Agriculture
    e) College of Science and Engineering
    f) College of Life Sciences
5. Department:
6. Age:
7. Gender:
    a) Male
    b) Female
8. English Proficiency Level: (Based on the placement test you took when you entered NCYU)
    a) Level A
    b) Level B
    c) Level C
9. How many discipline specific courses do you take in your department this semester?
10. Among the discipline specific courses you are taking, how many of them do your professors choose an English book as the main textbook?

    ____

If your answer is 0, skip all the questions below. If your answer is more than 1 course, choose the course that the English textbook is used the most and answer the following questions based on it.

11. To what degree does your professor use the English version textbook in class?
    a) 81%-100% of the chapters included in the syllabus.
    b) 61%-80% of the chapters included in the syllabus.
    c) 41%-60% of the chapters included in the syllabus.
    d) 21%-40% of the chapters included in the syllabus.
    e) less than 20% of the chapters included in the syllabus.
12. How does your professor help you understand the English version textbook in class? (Choose all that apply to you)
    a) Explain the meanings of the content in English.
    b) Explain the meanings of the content in Chinese.
    c) Translate the content orally into Chinese.
    d) Use ppt slides containing important notes in English.
    e) Use ppt slides containing important notes in Chinese.
    f) Explain graphs, flow charts, or tables in the textbook.
    g) Explain important terms.
    h) Explain grammar.
    i) Others: ____________________
13. The teacher made it clear what he/she expected students to do with the textbook.
    a) Clear
    b) Not Clear
14. The teacher expected us to (Mark all that apply)
    a) Read everything assigned.
    b) Try to read everything.
    c) Look at the graphs, figures, and formulae.
    d) Do at least some of the exercises in the homework section.
    e) Other:

15. Based on your own evaluation, what percentage (%) have you read in the English textbook taught by the teacher?
    a) 81%-100% of the chapters included in the syllabus.
    b) 61%-80% of the chapters included in the syllabus.
    c) 41%-60% of the chapters included in the syllabus.
    d) 21%-40% of the chapters included in the syllabus.
    e) less than 20% of the chapters included in the syllabus.
16. Based on your own evaluation, what percentage can you understand when you read the English version textbook after class?
    a) 81%-100% of the chapters included in the syllabus.
    b) 61%-80% of the chapters included in the syllabus.
    c) 41%-60% of the chapters included in the syllabus.
    d) 21%-40% of the chapters included in the syllabus.
    e) less than 20% of the chapters included in the syllabus.
17. What do you do when you don't understand the reading? (Choose all that apply to you)
    a) look up Chinese meanings of all the words that you don't understand
    b) look up Chinese meanings of only the important words that you don't understand
    c) read notes that you took in class
    d) read notes that you borrowed from senior students
    e) read the Chinese version of the textbook
    f) skip the parts that you don't understand
    g) others: _______________
18. Was the midterm exam in this discipline specific course given in English?
    a) Yes
    b) No
    c) Part of it

19. In your midterm exam, were you required to answer in English in this discipline specific course?
    a) Yes
    b) No
    c) Part of it
20. Do you have a Chinese-version textbook for the English version?
    a) Yes (Answer Question 21)
    b) No
21. In the Chinese version, what percentage (%) have you read?
    a) 81%-100% of the chapters included in the syllabus.
    b) 61%-80% of the chapters included in the syllabus.
    c) 41%-60% of the chapters included in the syllabus.
    d) 21%-40% of the chapters included in the syllabus.
    e) less than 20% of the chapters included in the syllabus.

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Genre Analysis of Job Application Letters in Malaysia

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Abstract

A job application letter is the first business document that an applicant encounters in workplace correspondence. Despite its importance, however, the genre is understudied. The present study was conducted to examine the schematic structure: move patterns and communicative purposes of moves in job application letters written in English by a group of applicants, so as to gain an understanding of their lacks and needs when writing the letter. Discourse and genre analysis make up the research design. Genre theory and the theory of cooperation in communication were used to guide the study; Bhatia's (1993) framework for moves in job letters and Grice's (1975) model for cooperation in communication were used as the frameworks for analysis. Data constituted authentic letters of application to a Malaysian small to medium enterprise. The findings show that Malaysian fresh graduates use a 5-move structure and have, to a certain extent, grasped the basic format of the job application letter. Nonetheless, they still have problems in writing an effective letter. The problematic moves are Essential Detailing of Candidature, Indicating Value of Candidature and Offering Incentives. The moves lack clarity and textualisation in terms of quantity and quality of semantic content and linguistic input. As a result, self-appraisal is weak because applicants are unable to promote and present their individuality as useful and valuable persons to the company with unique achievements, abilities and skills. The study gives insights into the use of multiple theories and analytic methods for doing a genre analysis and the findings are useful for teaching and learning letter writing in the contexts of ESL, EAP and ESP.

Keywords: moves, maxims, genre analysis, discourse analysis, job application letter, culture, ESP, Malaysia

1. Introduction

The job application letter is essentially a business document with specialised language (Bhatia, 1993; Pierini, 2014) and is presumed to be the first business text that is written by a potential employee that an employer reads (Bhatia, 1993). The success or failure of the applicant depends to a large extent on the nature of response that the letter triggers in the potential employer. Letter writing is in fact described as "a self-reflexive activity" (Watts, 2015, p. 10), where the writer has an opportunity to present himself/herself in a particular way. In performing "a positive 'self'", writers who are able to present themselves effectively can have increased chances of receiving rewards and avoiding a dismal fate (*ibid.*). In light of the importance of letter writing, it is undeniable that the cover letter is an important document in the workplace that can open opportunities for job applicants to be short-listed for an interview. The main function of the job application letter is to highlight the candidates' strengths so that they are granted the opportunity of an interview, thus leading to a better prospect of clinching the offered position.

However, despite the importance of the job application letter, the genre is understudied and there is little guidance on how to write the text in order to meet its communicative purposes. Swales (1996) classifies it as an 'occluded genre' that is hidden, hard to obtain and not open to public scrutiny. In the local Malaysian context, little attention has also been devoted to the study of this genre although much attention and effort is spent on its teaching and learning in post-secondary and tertiary education. Our literature review revealed only one published study, that of Tg Nor Rizan Tg Mohd Maaasum et al., (2007) who looked into job application letters written in English by Malaysian graduates. They found that the letters are not well-written, organized and presented. The Malaysian job application letter is viewed as unattractive and inappropriate. They suggest there is a lack of knowledge and skills in writing an effective job application letter in

English amongst Malaysians and this may be a leading reason for dissatisfaction on the part of potential employers in employing new graduates.

In order to address the needs of learners of the 21st century, there is a pressing necessity to conduct more studies on the genre of the job application letter with greater attention on “needs assessment and target situation analysis” (Johns & Salmani Nodoushan, 2015, p. 118). Genre-based ESP research will help not only to improve the teaching of the genre in classrooms especially with regard to pedagogy, syllabus and material design but will also help to gain insights into the specialised discourse and communication practices of Malaysians when writing the genre. The present study contributes to fill the gap in the research on professional and workplace communication in Malaysia particularly in letter writing; it investigates the schematic structure of job application letters of a group of Malaysian applicants written in English in order to examine move structures and communicative purposes of the moves. Further, the study adds to an understanding of the weaknesses Malaysian writers may have when writing the letter.

2. Review of related literature

2.1. Genre

An important area within English for Specific Purposes is research into the discourse structure of a communicative event, better known as genre analysis. Swales (1990) and Bhatia (1993) identified genre as types of goal-directed communicative events with shared communicative purposes that have schematic structures with beginnings, middles and endings such as lectures, seminars, recipes, manuals, service encounters, news broadcasts and so on, while genre analysis involves studying the global structure of such communicative events that make the events recognizable as belonging to particular discourse types. Swales (1990, p. 140) suggests “rhetorical movement” analysis or “move and step” analysis as the basis for defining a genre. He introduced the Creating a Research Space (CARS) model to capture the moves and steps used by academic writers to write and organize research articles. A move is defined "as a functional unit in a text used for some identifiable purpose" (Ding, 2007, p. 369) that can be used "to describe the functions (or communicative intentions) which particular portions of the text realises in the relationship to the overall task" (Connor, Davis & De Rycker, 1995, p. 463). A step (or sub-move) is a smaller unit than move and it is placed on a subordinate level to move. Each step has a communicative purpose and it leads to the realization of a move. The length and size of a move and step may vary from several paragraphs long to one sentence; but irrespective of length, they contain at least one proposition (Connor & Mauranen, 1999). Moves and steps may be obligatory or discretionary, may vary in sequence, may be repeated, and may be embedded one within another (Swales, 1990). Move analysis is a tool in genre studies since "moves are semantic and functional units of texts which can be identified because of their communicative purposes and linguistics boundaries" (Ding, 2007, p. 370).

2.2. Job application letter

A job application letter is a type of business letter that is written by a job applicant for prospective employers. It is enclosed with a resumé or curriculum vitae (CV) of the applicant, which is a comprehensive listing of the details of the applicant. The purpose of the application letter is to express interest towards a particular position and to show the relevant abilities and qualifications possessed by the applicant in order to persuade the prospective employer to elicit a call for interview so as to be able to clinch the position. Bhatia (1993) notes that the primary function of a job application letter is to promote the candidature of the writer by allowing the candidate to demonstrate possession of relevant qualities for a particular job. He says the letter legitimately allows the candidate "to relax the maxim of quality and observe the maxim of relevance", that is, the letter gives the candidate the freedom to manipulate Grice's maxims (Bhatia, 1993, p. 74). This freedom makes self-promotion or self-appraisal the most important feature of the job application letter. Self-appraisal is "to highlight the qualifications and experience of the job applicant and demonstrate their relevance to the specifications of the vacancy" (Connor, Davis, & De Rycker, 1995, p. 458). In sum, a job application letter highlights the relevant qualifications, experience, skills and abilities of a candidate to promote himself or herself as a competent applicant. The letter is clarificatory to the enclosed resumé as it clarifies information in the resumé by highlighting the most essential aspects of the candidate (Bhatia, 1993). The job application letter is thus informative, persuasive and clarificatory.

Other features of the letter are that it is defined by space and time. The letter is short, normally one-page or less in length (Doyle n.d., Hsiao, 2013) and requiring only a short amount of time from the reader (Donlin, 2000). Doyle (n.d.) notes that 70% of employers want a job application letter of less than a page and Hsiao (2013) reports that the average length of this letter is 196 words. In terms of time, Donlin (2000) explains that employers spend 10-20 seconds reviewing a letter. The job application letter therefore is a text type that requires features that allow for expediency in reading. It has to be correct (accurate surface features such as spelling, sentence grammar, lexical accuracy) and clear (informativeness in terms of meaning components) (Connor, Davis, & De Rycker, 1995) as well as well-structured and captivating (Bhatia, 1993).

The job application letter can be divided into two categories, namely solicited and unsolicited (Bhatia, 1993). A solicited letter is intended for applying for a known available position while an unsolicited letter, which is also known as a prospecting letter, is used to apply for a random position with an employer.

2.3. Bhatia's (1993) move structure

Bhatia (1993) pioneered the study of genre analysis on job application letters and presented seven moves for the genre (see Table 1).

Table 1 Bhatia's identification of moves and steps in the job application letter

Move	**Descriptors**
Move 1: Establishing credentials	The writer establishes his credentials as someone who can fulfil the needs of the addressee.
Move 2: Introducing candidature	The writer introduces himself.
Step 1: Offering candidature	The writer mentions the offer that he is referring to.
Step 2: Essential detailing of candidature	The writer presents his essential details for the job applied.
Step 3: Indicating value of candidature	The writer evaluates himself for the job applied.
Move 3: Offering incentives	The writer offers incentives to the addressee.
Move 4: Enclosing documents	The writer encloses documents to complement the letter.
Move 5: Using pressure tactics	The writer puts pressure on the addressee to solicit desired responses.
Move 6: Soliciting response	The writer solicits further contact with the addressee.
Move 7: Ending politely	The writer ends the letter politely.

(Bhatia, 1993)

2.4. Related studies

Bhatia's (1993) framework has been used by scholars such as Wang (2005), Al-Ali (2006), Tg Nor Rizan, Tg Mohd Maasum *et al.,* (2007), Furka (2008), Khan and Tan (2012) and Miciano (2014).

Wang (2005) examined the schematic structure of job application letters by Chinese applicants and found four obligatory moves: establishing self, offering self, referring to enclosed materials, and inviting further action. Al-Ali's (2006) study on

Jordanian graduates revealed six obligatory moves: opening, offering candidature, applying for the job, promoting candidature, enclosing documents, and ending politely. Tg Nor Rizan Tg Mohd Maasum *et al.,* (2007) found that Malaysian graduates use two to four moves ranging from establishing credentials, offering incentives, enclosing documents, and ending politely. The study reported a lack of use of soliciting response and pressure tactics among the Malaysians.

Furka (2008) examined the rhetorical structure of job application letters (referred to as motivational letters in the study) and CVs written by Hungarian EFL learners and found that self-appraisal was not valued positively in the Hungarian culture, making writing a job application letter difficult. He also found Hungarian cultural characteristics manifested in the letters analysed which explained the variation of the letters from Bhatia's (1993) template.

Khan and Tan (2012) examined job application letters of Pakistan applicants and found that the letters displayed six moves, of which establishing credentials was a central and elaborate move. Glorifying the employer was practised and although the applicants displayed good use of formulaic expressions they failed to use language creatively to present themselves as individuals with unique abilities and achievements. Miciano (2014), on the other hand, found that job letters by Filipino applicants had a variety of strategies that were persuasive in nature that helped realise Bhatia's (1993) moves such as listing qualifications, relevant skills and abilities, sharing experiences, describing feelings for the position, predicting success, and overcoming possible objections.

All the studies above, although reporting similarities, also found variations from Bhatia's (1993) framework. Bhatia (1993) acknowledges that there may be differences in his 7-move structure in different contexts and cultures as the genre of job application letter is encapsulated by the sociocultural context in which the letter writing is done.

2.5 Grice's (1975) Theory on Cooperation in Communication

Grice (1975) formulated a general principle that speakers observe when speaking, called the Cooperative Principle. He based the cooperative principle on the assumption that talk is a cooperative effort and has a common purpose between speakers and listeners. The principle prescribes that what speakers say in conversation coincides with the direction established in the talk. He defines the cooperative principle as "Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk-exchange in which you are engaged" (Grice, 1975, p.45). In observing the cooperative principle, he notes that there are four sub-principles or maxims that operate: quantity, quality, relation and manner. According to Grice, speaking is coherent and purposeful, not a "succession of disconnected remarks" (Grice, 1975, p.45). Speakers cooperate by agreeing on the purpose of the interaction and by their mutual understanding of the rules that govern what is appropriate or inappropriate to the exchange. It is however possible for speakers to fail to fulfil a maxim or maxims, without intention to do so. For instance, speakers may be so involved in an interaction that they may say things they do not believe (thereby violating the maxim of quality) or they may misjudge hearers' knowledge and give too much or too little information (violating the maxim of quantity).

Although intended for speaking, Grice's (1975) cooperative principle is also described as "a powerful heuristic for evaluating a piece of writing" (Flowerdew, 2013, p.106). The theory is described as useful because the cooperative maxims can help the analyst locate weaknesses in writing and make evaluations about the clarity, coherence and purpose of a piece of text. The theory was used by Lovejoy (1985) as a rubric to help students evaluate and revise their compositions while White (2001) adapted the theory to help teachers and writers understand successful and unsuccessful written correspondence in multicultural settings. Lovejoy (1985) explains that writing, like speaking, is a cooperative effort. He explains that although writers and readers are detached and unable to communicate in a talk-exchange, they are nevertheless engaged in a cooperative interaction. Writers desire their intended readers to understand the message sent while readers decode the written text for its meaning or intention. Lovejoy clarifies the reader-writer interaction by citing Larson (1982) who examined the rhetoric of style in nonfiction prose and maintained that “written discourse participates in a transaction with its readers” (cited in Lovejoy, 1985, p. 5). Larson maintains that “the reader participates in the process of discovering the writer, for the reader may form judgements of the worth of what is said, of its credibility or importance, and of his or her willingness to continue participating in a transaction with that writer” (in Lovejoy, 1985, p.5). Lovejoy (1985) therefore argues that the cooperative transaction between reader and writer places demands on the writer to ensure that his or her writing is clear and coherent so that the reader understands. He explains that the fulfilment of the cooperative principle and its maxims can result in successful writing, and conversely the nonfulfillment can result in unsuccessful writing. White (2001) makes a similar claim that readers expect clarity, brevity and sincerity in writing and that writing that fails to fulfil these criteria can be viewed as unfavourable. Flowerdew (2013) also concurs with the power of the cooperative principle for evaluating written text when he shows the usefulness of the principle as a tool for evaluating the writing of an email letter. Based on insights from Lovejoy (1985), White (2001) and Flowerdew (2013), the cooperative principle is adopted as a tool for evaluating the writing of the letters in the present study in order to gain insights of the suitability of the moves employed and the content matter of the letters (what is said and how it is said). The cooperative maxims and descriptors for the data analysis of this study are presented in Table 2.

Table 2 Grice's maxims for cooperation in communication

Quantity 1. Make your contribution as informative as is required for the current purposes of the exchange. 2. Do not make your contribution more informative than is required. Evaluative Comments: The writer is saying more than he/she needs to here. The writer needs to explain this. More information/explanation is needed.
Quality Try to make your contribution one that is true. 2. Do not say what you believe to be false. 3. Do not say that for which you lack adequate evidence. Evaluative Comments: The writer is overgeneralising. The information is not believable. The information is not supported by rational evidence.
Relation 1. Be relevant. Evaluative Comments: The importance of the information is not seen. The information is not relevant. The information is too obvious.
Manner 1. Avoid obscurity of expression. 2. Avoid ambiguity. 3. Be brief (avoid unnecessary verbosity). 4. Be orderly. Evaluative Comments: It is not clear what is meant here. This could be expressed more clearly. The relationship between these ideas has to be shown. This information has to be organised better.

(Grice, 1975; Lovejoy, 1985)

3. Methodology

The study involves descriptive and explanatory procedures. The descriptive procedure concerns text analysis of authentic job application letters to examine how the letters are structured. This procedure was guided by principles of discourse and genre analysis. Discourse analysis enabled the analysis of the letters at the suprasentential level, that is at the level of paragraph and the letter as a whole, in order to see “how the units of language combine together and structure the overall discourse” (Flowerdew, 2013, p. 1) while genre analysis was employed to find the recurrent patterns of moves in the letters. The explanatory procedure involved interpreting and explaining the move patterns found in the data using theories on writing the job application letter and understandings of the Malaysian culture culled from the literature. Cultural understandings also involved “authors’ native cultural insight into the setting studied…where ‘cultural’ refers to the condition of native sociolinguistic familiarity of the author/analyst with the situation and data in hand” (Kadar & Bargiela-Chiappini, 2011, p. 4). Kadar and Bargiela-Chiappini (2011) specify that native insight is a uniquely important tool in the analysis of discourse as it functions as a repository of shared perceptions of linguistic behaviour and beliefs in institutional communication.

A Malaysian small-medium enterprise in Kuala Lumpur (referred to in this study as XYZ Sdn. Bhd.) was used to obtain solicited job application letters. The data was obtained through the authors’ personal contact with the manager of the enterprise who granted permission to use the letters for research purposes. For ethical reasons, the manager was given a copy of the research proposal outlining the purpose of the study and the assurance of confidentiality of the letters and the company. The company was involved in providing day care and kindergarten services for young children and was seeking fresh graduates to fill several positions. Fifteen letters comprised the data for the study. Although the sample is small, the study was worth the effort as many “small single-site studies” of genre had emerged in ESP literature and were found to be of value in gaining insights about genre knowledge and ability of ESP users (Paltridge, 2013, p. 356). The sample, although small, was also sufficient to establish the linguistic patterns of interest since the study is discourse in nature for which “smaller selections of material, written or oral, which are handled ‘manually’ by the researcher” is a normal feature of the inquiry (Angermuller, 2015, p. 512). The data were gathered in 2012.

The applicants were Malaysians, namely Malays. There were six males and nine females, all of whom were in their early twenties. They were fresh graduates who had graduated from Malaysian universities. In the data, their names and the universities they graduated from have been removed for confidential purposes. It is assumed that they learnt how to write the job application letter from universities. In the Malaysian education system, English is taught and learnt as a second language and Malaysian students learn and practice writing the job application letter and CV in English in university through ESP courses such as *Professional Communication* and *English for the Workplace*. They also learn the genres from *Writing the Job Application Letter and CV* module which is part of the Finishing School program that is compulsory for graduating students in Malaysian universities to participate in before they are able to graduate. Malaysian students, therefore, have pedagogical knowledge and practice in writing the job application letter, although they may lack real world experience in writing the letter.

Data analysis involved several stages. Firstly, the moves and steps in the letters and their communicative functions were identified. This was done using Bhatia's (1993) framework of moves and steps in job application letters (see Table 1).The criteria noted by Connor and Mauranen (1999, p. 52) for move identification was adhered to. They note that "identification of moves in a text depends on both the rhetorical purposes of the texts and the division of the text into meaningful units on the basis of linguistics clues, which include discourse markers (connectors and other metatextual signals), marked themes, tense and modality changes, and introduction of new lexical references". In this study, paragraph divisions as an identification marker for moves did not prove to be always reliable as parts of a move were sometimes found in different paragraphs; one part of a move was found in one paragraph while another part of the same move was found in the subsequent paragraph. Therefore, in addition to paragraph divisions, the introduction of new themes, the use of lexical references, and discourse markers played a key role in identifying the start of a new move and step. Keywords such as *graduate, degree, training, experience, I believe I am suitable, resume/curriculum vitae/CV, hope to hear, interview* are lexical references that suggested the introduction of different topics and themes in the text while discourse markers that performed the same function were markers for addition of ideas such as *other than that, also, besides,* and *furthermore.* Structural and functional components that occur in all types of business letters and that do not add to the special nature of job application letters such as the writer's address, the receiver's address, the dateline, salutation (e.g. 'Dear Sir'), and closing (e.g. 'Yours sincerely') were left out of the analysis as recommended by Connor, Davis and De Rycker (1995). The move/step coding adopted by Khan and Tan (2012) is employed in this study. A sample coded letter is provided in Figure 1 (Appendix) to illustrate the move/step identification: the text preceding the number indicates the move while the alphabetical numbers specify the steps within their respective moves. After the move analysis, in the next stage of the data analysis, the moves and steps identified were examined in terms of Grice's (1975) maxims for cooperation in communication (see Table 2) in order to evaluate the effectiveness of the moves. This was done in order to be able to establish the strengths and weaknesses of the moves so that the lacks of the learners in letter writing could be determined.

4. Findings

The analysis revealed that Malaysian applicants have to a certain extent grasped the basic format and linguistic requirements of writing the job application letter. They displayed six moves out of Bhatia's 7-move structure. Nevertheless, the letters displayed a lack of self-appraisal. The linguistic problems that emerged were:

a. Indicating Value of Candidature lacked quantity and quality, and
b. Essential Detailing of Candidature and Offering Incentives lacked clarity.

4.1. Indicating Value of Candidature lacked quantity and quality

This move was too brief in the Malaysian letters as it constituted only one general sentence expressing the candidates' optimism about the outcome of his/her letter and predicting his/her potential success. The move was positioned either before or after the candidates' specific details. Although the candidates informed the employer of their essential details and advantages that they could offer, they did not elaborate to transform their education, experience and skills into capabilities that would be useful to the company that the employer would have been looking for in a potential employee for the job applied for. The move lacked textualisation in terms of quantity and quality of semantic content and linguistic input. The examples below illustrate this move (highlighted in bold).

1. Based to my experiences with the organisation that I worked before, **I am confident that I can perform according to the job** (*Move 2 Step 3 Indicating Value of Candidature*).I have been working as a Pendidikan Khas teacher at Sekolah Kebangsaan Batu 9 Cheras about 6 months. Other than that, I also have an experience as a temporary teacher at Sekolah Kebangsaan Tasek Damai, Bercham Perak about 2 months (*Move 2 Step 2 Essential detailing of candidature*).

2. I also able to do management works such as filing, writing report and data entry. I am a willing learner and I love to work with children (*Move 3 Offering incentives*). **I believe that my knowledge and skill help me contribute a great deal to your organisation** (*Move 2 Step 3 Indicating value of candidature*).

3. I have diploma from Universiti AAA in business management. My last CGPA is 3.4. (*Move 1 Establishing credentials*). **Therefore I believe that I have the qualification for a post at your company** (*Move 2 Step 3 Indicating value of candidature*).

4. I am (name) (*Move 2 Introducing candidature*), degree holder from Universiti SSS, majoring in Business Management (*Move 1 Establishing credentials*).

   According to my experiences with organisations that I have worked, **I am confident that I can accomplish the job scope given** (*Move 2 Step 3 Indicating value of candidature*). I have been working as a relief teacher at Sekolah Kebangsaan Gopeng Baru for 4 months and as temporary teacher at

Sekolah Kebangsaan Sri Lesong, Kampar, Perak about 3 months (*Move 2 Step 2 Essential detailing of candidature*).

5. I have done my practical at Seri Budiman Sdn Bhd. I also had experience working with a private company (*Move 2 Step 2 Essential detailing of candidature*). **Based on my training and experience I believe that I am suitable to fill in the position at your company** (*Move 2 Step 3 Indicating value of candidature*).

6. I have done my practicum at Tadika Kemas, Batu Gajah. During the practicum I learned how to teach, take care of children and how to conduct activities (*Move 2 Step 2 Essential detailing of candidature*). Furthermore I have basic training on Microsoft Word and Excel. I am a fast learner and I am able to work in a group (*Move 3 Offering incentives*). **Based on the experience I believe I have the ability and skills to fulfil the position at your kindergarten** (*Move 2 Step 3 Indicating value of candidature*).

7. I have had some management training in a company in Terengganu for 3 months (*Move 2 Step 2 Essential detailing of candidature*). **Based on the experience I believed that I have the experience and knowledge to work with your company** (*Move 2 Step 3 Indicating value of candidature*).

4.2. Essential Detailing of Candidature and Offering Incentives lacked clarity

Essential detailing of candidature (Move 2 Step 2) and Offering incentives (Move 3) were combined, that is, they were not differentiated and clarified. Offering incentives was positioned adjacent to essential detailing of candidature within the same paragraph with no clear link or relationship between the two. The data showed that although the candidates informed the prospective employer of their essential details and extra benefits that they could offer, there was a lack of clarification of both domains. Both domains were not distinguished and explained. It was, therefore, not clear what their specialities were and how they could contribute to the company with regard to the position applied for. The examples below illustrate where the two moves were combined and the fortes of the applicant were not clarified. These sections of the letters lacked clarity.

8. I have experience working in the private for 2 years. There I learned on how to manage a company. Besides I also learned some computer skills such as Microsoft Word, Excel and Photoshop (*Move 2 Step 2 Essential detailing of*

candidature). I know how to teach and handle children well since I have my own child (*Move 3 Offering incentives*).

9. I have been working as a relief teacher at Sekolah Kebangsaan Gopeng Baru for 4 months and as temporary teacher at Sekolah Kebangsaan Sri Lesong, Kampar, Perak about 3 months (*Move 2 Step 2 Essential detailing of candidature*). I also can do a management job based on my practical experience at Kastam Diraja Malaysia, Ipoh. Other than that I am hardworking person and willing to learn a new thing (*Move 3 Offering incentives*).

10. I have experience working with kindergarten for 2 years. I know how to teach and handle children well. (*Move 2 Step 2 Essential detailing of candidature*). Besides I also have the skills to cook and organise activities such as field trip and concert (*Move 3 Offering incentives*).

11. I have done my practicum at Tadika Kemas, Batu Gajah. During the practicum I learned how to teach, take care of children and how to conduct activities (*Move 2 Step 2 Essential detailing of candidature*). Furthermore I have basic training on Microsoft Word and Excel. I am a fast learner and I am able to work in a group (*Move 3 Offering incentives*).

4.3. Adversary-glorification practised

The applicant tends to glorify the credentials of the company of the prospective employer by using adjectives such as ‘great institution’, ‘an honour to work with your great company’ and ‘wonderful company’ to secure goodwill and indicate eagerness to work for them. This practice is performed as part of establishing their credentials (Move 1). The move was brief and, as mentioned, functioned more to secure goodwill with the potential employer rather than to persuade him/her to accept the applicant’s candidature.

12. Based on the above matter, I (name) (*Move 2 Introducing candidature*), would like to apply for the position of manager at XYZ Sdn Bhd (*Move 2 Step 1 Offering candidature*).

    I am a diploma graduate from Universiti MMM majoring in business management (*Move 1 Establishing credentials*). **I am very interested with the opportunity to work with your wonderful company.**

13. Based on the above matter, I (name) (*Move 2 Introducing candidature*), would like to apply for the position of manager at XYZ Sdn Bhd (*Move 2 Step 1 Offering candidature*).

    I am a diploma graduate from Universiti PPP majoring office management (*Move 1 Establishing credentials*). **I am looking forward to be part of your great institution.**

14. I am (name) (*Move 2 Introducing candidature*), would like to apply for the position of teacher at XYZ Sdn Bhd (*Move 2 Step 1 Offering candidature*).

    I have a diploma from PPP college in Early Child Education. My last CGPA is 3.54 (*Move 1 Essential credentials*). **It would be an honour to work with your great company.**

4.4. Summary of moves in job application letter by Malaysian applicants

The moves and steps that emerged from the analysis of the letters in the present study are presented in Table 3. The Malaysian letters displayed a 5-move schematic structure.

The letters to some extent fulfilled the basic format and linguistic requirements of the job application letter. Six moves out of Bhatia's 7-move structure were used. However, when compared side-by-side with Bhatia's model (see Table 1), there are differences in the moves and steps. Firstly, the applicants practised adversary glorification to secure goodwill as a step when they established their credentials (labelled as Move 1 Step 1 in Table 3).

Secondly, after establishing credentials, they went on to establish their candidature as someone suitable for the job. This was the most central and elaborate move of the letters constituting four steps: offering candidature for the job referred to, presenting essential details, offering incentives, and indicating value of candidature for the job applied. In Bhatia's model (see Table 1), essential detailing of candidature is labelled as Move 2 Step 2, indicating value of candidature as Move 2 Step 3 and offering incentives as Move 3. However, in the letters of this study, Offering incentives appeared as part of the communicative purpose of introducing candidature as the move was merged with and positioned adjacent to essential detailing of candidature within the same paragraph. Offering incentives, thus, appeared as a step within the move of Introducing Candidature. It is labelled as Move 2 Step 3 in Table 3.

Table 3 Moves and steps in the job application letter by Malaysian applicants

Move	Descriptors
Move 1: Establishing credentials Step 1 : Adversary glorification	The writer establishes his credentials as someone who can fulfil the needs of the addressee. The writer glorifies the company of the prospective employer as a way to secure goodwill.
Move 2: Introducing candidature Step 1: Offering Candidature Step 2: Essential detailing of candidature Step 3: Offering incentives Step 4: Indicating value of candidature	The writer introduces himself. The writer mentions the offer that he is referring to. The writer presents his essential details for the job applied. The writer offers incentives to the addressee. The writer evaluates himself for the job applied.
Move 3: Enclosing documents	The writer encloses documents to complement the letter.
Move 4: Soliciting response	The writer solicits further contact with the addressee.
Move 5: Ending politely	The writer ends the letter politely.

After introducing candidature, reference was made to the resumé or CV enclosed (Move 3 in Table 3). Subsequently, telephone number and/or email address were provided to establish contact for an interview (Move 4 Table 3) before ending the letter politely (Move 5 Table 3). Malaysians did not practice using pressure tactics (Move 5 in Bhatia's model, see Table 1). This move was not found in the data.

5. Discussion

The study shows that the letters lacked self-appraisal. The applicants were not able to establish their relevance to the job. In other words, the move for indicating value of candidature (Move 2 Step 3 in Bhatia's framework, Table 1) was insubstantial. This is mainly because the move was brief and comprised only of the applicant being optimistic of himself/herself and predicting his/her potential success with the job; textualization was inadequate in terms of quantity and quality of semantic content and linguistic input. The applicants did not transform their education and experience into abilities employers would have been looking for in potential employees.

Another factor that contributed to weak self-appraisal is that incentives in the form of benefits or advantages were combined and presented together with essential details. This may have been an attempt to either make the applicant more attractive or it could have been an attempt to indicate value or relevance of their candidature. It is difficult to say which was really intended by the applicants. In both cases, the offering of incentives lacked clarification of the applicants' relevance for the position applied for. In sum, although essential details and incentives were presented, the applicants did not indicate how these were linked and could be useful and valuable to the company.

Bhatia (1993, p. 65) notes that the move that "establishes the candidate's relevance to the job is the most complex form of self-representation in written discourse". In a job application letter, this function is performed in Move 2 Step 3 of his framework. He says "self-representation in job application letters needs to be persuasive and in order to be persuasive, in that it must arouse an appropriate emotional response in its readers, it must achieve credibility" (Bhatia, 1993, p. 65). Bhatia (1993, p. 65) explains that "the applicant has a real self, on the basis of which he has to create a relevant self" in order to match the specifications of the job. The relevant self "represents a relevant, positive and convincing selection of the applicant's real self" and "it skilfully disguises or conceals the irrelevant, negative and less convincing aspects of the real self" (Bhatia, 1993, p. 65). Self-appraisal is used as the main strategy to persuade the prospective employer to accept the candidature of the applicant and permit him or her an interview. Bhatia

(1993, p. 73) explains that “a lack of communicative skills in a (second/) foreign language makes it difficult for an average applicant to identify and communicate his or her relevant self in job negotiation”. Applicants of average proficiency thus need to be coached and trained in doing self-appraisal so that they are able to “portray a relevant self in making claims about the general usefulness of (their) abilities, which will be perceived by the reader as useful and relevant to the job requirement” (Bhatia, 1993, p. 66).

Other than a deficiency of communication skills in English, culture may also have been a contributing factor for the lack of self-promotion in the letters. Bhatia’s (1993) research on South Asian letters show that they tend to exhibit cross-cultural differences from Western letters. Connor, Davis and De Rycker (1995, p. 459) explain that the degree of power distance of a culture (i.e. the extent to which people accept that power is distributed unequally (Hofstede, p. 1991) may be a factor that influences self-promotion of people. They explain that the higher the degree of trust in authority, the less the degree of self-promotion because “you trust your prospective employer to make the right decisions, there is no need for you to ‘come on strong’ or ‘to glorify your successes’ yourself”. In other words, applicants rely on prospective employers to read between the lines and make inferences about their value and relevance to the job. Malaysia is described as a culture with a high regard for power hierarchy (Asma Abdullah, 1996; Goddard, 1997, 2000) with a high power distance score of 104 (Hofstede, 1991). This cultural factor may have contributed to the lack of self-promotion in the letters.

The high regard for power and authority in making decisions may also be the contributing factor for the absence of pressure tactics and the use of adversary-glorification in the letters. Bhatia (1993) notes that adversary glorification is a South Asian practice where instead of self-appraisal, adversary-glorification is used as a strategy to persuade the reader to accept the writer’s candidature. The function of this move as a persuasive strategy was also found in Khan and Tan’s (2012) study in the context of Pakistan and Al-Ali’s (2006) study on Jordanian applicants. In the context of the present study, however, although the move was found in the letters, it was brief and functioned to secure goodwill with the potential employer rather than to persuade him/her to accept the applicant's candidature.

6. Concluding remarks

This study contributes to genre knowledge and professional understanding of an occluded genre, i.e. the job application letter, in the context of a group of Malaysian applicants. The rhetorical structure and patterns of moves found in this study give insights into the genre competence of a group of Malaysians particularly the schematic structure employed and the linguistic difficulties they have when they write the job application letter in English. Although they displayed a 5-move structure in writing the letter and had more or less grasped the basic format and linguistic requirements of the letter, they still have problems in writing an effective letter. Mainly, the applicants are not able to self-appraise. They did not translate or transform their knowledge, experience and skills into capabilities that would be useful to the company and which an employer would look for in a potential employee. The ability to self-appraise or self-promote is key to the persuasive appeal of the job application letter. The move chiefly responsible for the persuasive element of the letter is Indicating value of candidature. In the letters of this study, this move was weak as it comprised merely of a prediction of the applicant's potential success for the job applied. Textually, the move was brief and lacked in quantity and quality of semantic content and linguistic input. In addition, other moves in the letter that contribute to promoting candidature, mainly Essential detailing of candidature and Offering incentives, lacked clarity of how the knowledge, experience and skills listed by the applicants functioned as their specialisation and added benefits, and how these two domains were linked and were of value to the company.

Through the use of multiple theories and analytic methods, the present study shows the value of triangulation in genre research as a way “to gain a fuller picture of what is always a complex reality” in second language writing (Hyland, 2016, p.121). Conventional genre analysis can only reveal formal generic patterns of text and cannot reveal deeper insights into the practices of the writers, their cultural conventions and the language used. For instance, the use of underlying principles for communication in this study such as culture and cooperation, as additions to move analysis, served as equally important tools to gain insights into the production of texts in their socio-cultural context. The combination of multiple theories and methods that work together can help make explicit the tacit knowledge and strategies that writers bring to the act of writing as well as increase the credibility and reliability of the findings (Hyland, 2016).

Genre analysis offers insights that can be applied in the teaching of ESL, EAP and ESP courses as it serves as a useful tool for methodology, syllabus and material design (Bhatia, 1993; Crossley, n.d.; Swales, 1990; Tardy, 2009). The findings of the study have strong practical pedagogical applications for writing as the structure and patterns of moves discovered can be presented in writing classrooms to illustrate to students their lacks or language problems and the importance of using accepted conventions and linguistic structures “to assert communal sense-making and to ensure cultural cohesion” with employer expectations (Danesi, 2016, p. 139). For instance, the findings show Malaysian applicants may need training to be able to self-appraise in English when writing job application letters and that the training that is given to them may need to account for their cultural makeup of being members of a high-power distance culture.

The drawback of the study is in its limited size of the sample of 15 letters and in the use of the product-based approach that views texts as end-products to conduct the analysis which lead to tentative conclusions about the findings. It would be worthwhile replicating the study on a much larger corpus and to include applicants from different backgrounds and in different job sectors, for instance on applicants who apply to high-tech industries and multinational companies. Sequels to this research could also include qualitative interviews with applicants and employers to see what their perceptions are of the moves identified by the analysts and what evaluation criteria are used by employers when reading letters so that the findings of this study can be substantiated and more conclusive results can be drawn of Malaysian applicants' writing skill and genre competence of the job application letter. Further research could also take on a process-based approach and the view of genre as social action (Paltridge, 2013) and letter writing as social practice (Barton & Hall, 2000) where job letters would be seen as socio-cultural products so that "the relationship between text and context and how this impacts on language choices that language users make in their performance of particular genres" (Paltridge, 2013, p. 358) may be captured more fully. This approach can help to better explain differences in rhetorical structure and linguistic features from established analytical models such as Bhatia's and indicate the reasons for or roots of the differences through a more thorough and comprehensive cultural analysis.

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Appendix

Sample coded letter

	MOVE SCHEME
. . Sir **APPLICATION AS KINDERGARTEN TEACHER** In accordance to the above mentioned post, I would like to apply a job at your company as kindergarten teacher **(2a)**. 2) I am (name) **(2)**, degree holder from Universiti SSS, majoring in Business Management **(1)**. 3) According to my experiences with organisation that I worked before I am confident that I can perform according to the job scope given **(2c)**. I have been working as a relief teacher at Sekolah Kebangsaan Gopeng Baru for 4 months and as temporary teacher at Sekolah Kebangsaan Sri Lesong, Kampar, Perak about 3 months **(2b)**. I also can do a management job based on my practical experience at Kastam Diraja Malaysia, Ipoh. Other than that I am hardworking person and willing to learn a new thing **(3)**. 4) I believe that my knowledge and skill help me contribute to your organisation **(2c)**. I am looking forward to meeting you to discuss this position further. I can be contacted at (hp number) and the following email (email address) **(6)**. Attached to this letter is my resume and hope that my application will be your main consideration **(4)**. Thank you **(7)**. . .	1. Establishing credentials 2. Introducing candidature a. Offering candidature b. Essential detailing of candidature c. Indicating value of candidature 3. Offering incentives 4. Enclosing documents 5. Using pressure tactics 6. Soliciting response 7. Ending politely

Sekolah Kebangsaan (English translation: National School)

Kastam Diraja (English translation: Royal Customs)

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A Genre Analysis of Web-based Crowdfunding Discourse

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Abstract

The rhetorical construction of discourse is constantly changing with the development of the social environment, which results in discoursal and generic varieties. Consequently, generic integrity of a discourse tends to be invaded by social factors, especially by promotional elements. Crowdfunding, a newly invented online fundraising channel, has created a new form of fundraising genre—the web-based crowdfunding genre. Within the framework of genre analysis, this study investigates 30 web-based crowdfunding texts by analyzing their moves and linguistic features. Move structures and linguistic features are observed in the crowdfunding texts, which are used to express particular communicative purposes. Generic variations within crowdfunding texts in our corpus are identified. This study provides implications for further research on the rhetoric of the crowdfunding genre in the field of applied linguistics.

Key words: *crowdfunding genre, move analysis, generic variations*

1. Introduction

Crowdfunding or crowd funding – a new way of seeking investment online – allows individual entrepreneurs to request funds from individual crowd funders in order to support their projects. It is a new kind of fundraising activity which is very different from traditional fundraising since it seeks funds online from the individual crowd funders, rather than from the bank or other foundations (Gerber & Hui, 2013). This makes the fundraising practice more convenient for the entrepreneurs to handle and much easier for them to get money. As a result, it has gradually become an important and popular way for entrepreneurs to raise funds. Kshetri (2015) describes crowdfunding activity as "a truly global movement with significant financial and economic benefits [with] potential to bring important changes in social practices and political processes" (p. 100).

Since the crowdfunding activity is mainly carried out online, specialized crowdfunding platforms have been established such as Kickstarter, IndieGoGo, and Rocket Hub (Gerber, Hui, & Kuo, 2012). Against such a background, a detailed textual description of the project is therefore needed. As is known, crowdfunding genre helps conventionalize the rules of crowdfunding activity which give constraints on lexico-grammatical resources one can employ. Its chief communicative purpose is to successfully raise funds and in the meantime to promote the projects. Therefore, the language use in crowdfunding texts must have the function of helping founders promote the projects and attract the maximum funding from the maximum number of investors (Tirdatov, 2014).

As the crowdfunding genre is a new type of fundraising genre, prior research related to the genre is very scarce. Two relevant studies can be found in the literature. Larrimore et al., (2011) examined the linguistic features of trust building and persuasion in online peer to peer environments. They found that extended narratives (e.g., increasing word count), using more concrete descriptions (e.g., articles, quantifiers, and prepositions) and quantitative words (e.g., number words and money words) related to one's financial situation have a positive association with funding success. Tirdatov (2014) investigated 13 most-funded crowdfunding texts and found that all the texts include the factors of Aristotle's rhetorical appeal (e.g., ethos, pathos, and logos).

The studies shed light on the rhetorical aspect of the persuasion language used in the crowdfunding texts. They also show that the promotional factors have greatly influenced the construction of the crowdfunding texts. In view of the important role of the promotional factors involved in the crowdfunding texts, Tirdatov (2014) refers to Silverman's (1995) "four Ps" of marketing suggesting that both "proper product and proper promotion are essential elements of a successful marketing strategy" employed in the crowdfunding texts (p. 22). Similarly, Bhatia (1998, 2004) asserts that promotional factors have great influence on different kinds of genre, resulting in genre mixing and genre embedding, which presents great variability and complexity for analyzing a genre.

Considering that genres usually depict dynamic and recurrent situations where members have shared communicative purposes (Bhatia, 1993; Swales, 1990), this study aims to investigate rhetorical variations in the 30 crowdfunding texts from the perspective of applied linguistics, particularly focusing on genre, moves, steps and linguistics features of crowdfunding genre.

2. Theoretical background

In the English for Specific Purposes (ESP) tradition (Bhatia, 1993; Swales, 1990), genres are recurrent social events that are shaped both by their "communicative purposes" and various kinds of "structure, style, content and intended audience" (Swales, 1990, p.58). Although genres are highly structured and conventionalized constructs, with constraints on allowable contributions, they are dynamic and flexible constructions in the real world of discourse (Bhatia, 2004).

To examine generic flexibility can require "the analyst to undertake a fair amount of independent and open-minded investigation" (Swales, 1990, p. 46). However, the professionals within a particular discourse community tend to respect and maintain the generic integrity which keeps relatively stable features over a long period of time (Bhatia, 2004). Therefore, to deal with the highly complicated nature of professional genres, both generic integrity and generic variations should be studied accordingly. Bhatia's (2004) multi-dimensional perspective of genre analysis has put genres in a dynamic as well as situational context for researchers to investigate. Within the multidimensional perspective framework, Bhatia (2004) developed a set of coherent genre analytical tools (see Table 1), which "have been proved to be efficient and productive when applied to heterogeneous genres" (Zhou, 2012, p.325).

Table 1 Tools for discourse analysis.

Procedures	Descriptions
(1)	Placing the given genre-text in a situational context
(2)	Surveying existing literature
(3)	Refining situational/contextual analysis
(4)	Selecting corpus
(5)	Textual, intertextual and interdiscursive perspective
(6)	Ethnographic analysis
(7)	Studying institutional context

How should we make use of the tools in the study of crowdfunding genre? First and foremost, we should identify the crowdfunding genre by placing it in a certain social environment. As is pointed out by Vergaro (2004), genres are defined by their communicative purpose. In the process of social activity, human beings in their minds will have a "prototypical image" of a specific genre and then they will assign a particular text to a "prototype genre on a pragmatic and perceptual basis" (Vergaro, 2004, p. 188). The fundraising activity online therefore is assigned by the community of professionals the form of crowdfunding texts, which aims at "capital accumulation" (Bhatia, 1998, p.101) and project promotion. The same communicative purpose makes crowdfunding genre the sub-genre of fundraising discourse.

To investigate the issue of crowdfunding genre, this article integrates textual space with socio-cognitive space to better understand the crowdfunding genre. The fundamental way for textual analysis is to examine the move structure and linguistic features of a genre. Through understanding the basic textual elements, the research can extend further into discussing the generic variations or flexibility of the crowdfunding genre.

2.1 Move analysis

Move schema is a notion that is widely discussed in discourse analysis. Based on genre analysis, a text is composed of different moves, and each move has different communicative purposes. Different purposes of moves can help a genre to achieve the overall communicative purposes (Biber, Connor, & Upton, 2007).

Move analysis has been applied to the analysis of different genres such as academic genres (Brett, 1994; Dudley-Evans, 1994; Salager-Myer, 1990; Swales, 1990), grant proposals (Connor & Mauranen, 1999; Feng, 2011), job application letters (Bhatia 1993; Henry & Roseberry, 2001), business emails (Warren, 2016), advertisements (Labrador et al, 2014), and fundraising letters (Goering, Connor, Nagelhout, & Steinberg, 2009).

The move of "Create a Research Space" (CARS) identified by Swales (1990) in the introduction has been widely applied in the investigation of research articles and other academic genres. The CARS model can scaffold novice scholars in writing their academic papers. Bhatia (1998, 2004) explained the differences of the generic pattern between fundraising discourse and advertising discourse, and also identified move structures of fundraising and advertising discourse. Drawing on Bhatia's (1998) generic move structure of advertisement and philanthropic fundraising genres, we aim to identify the overall move structures of the crowdfunding genre.

To know a genre effectively, comprehensive knowledge of a genre needs "to be supplemented by a knowledge of the specific language associated with each move" (Henry & Roseberry, 2001, p.155). Studying the specific language features of crowdfunding genre can help professional writers become more efficient in constructing a text. Like online advertisement (Labrador et al., 2014), the purpose of writing crowdfunding texts is to persuade the funder to invest funds. The persuasive language includes "catchphrases, emotive words, informal expressions and striking metaphors and comparisons to appeal to the readers" (p.40). In the meantime, exchanging information efficiently with the target audience can reduce the uncertainness brought up by the online environment (Berger & Calabrese, 1975). According to the uncertainty reduction theory, a concrete persuasive argument can effectively reduce uncertainty (Larrimore et al., 2011). The three dimensions that signal the concreteness of persuasion messages are: the use of articles (e.g., a, an, and the), prepositions (e.g., in, at, of, on, etc.) and quantifiers (e.g. more, lots of, etc.). The linguistic features of the crowdfunding genre will therefore be analyzed in terms of persuasiveness and concreteness in the present study.

2.2 Text-external factors

Apart from the fundamental elements like moves and languages that help build the text, "other contributors to the construction of the professional artefacts are conventions of the genre in question, the understanding of the professional practice … the culture of the profession… which constrains the use of textual resources for a particular discursive practice" (Bhatia, 2010, p.33). These contributors are the textual-external factors that help establish the text.

The text-external features include discursive procedures, disciplinary culture and discursive practices. Discursive practice involves the choice of "appropriate genres, the modes of communication and organizational constraints". The mode of the crowdfunding genre is a web-based activity. The major discursive procedures are carried out online, and the major participants are entrepreneurs and crowd funders who are representative of the multiple authorship to the final "artefact" of the crowdfunding genre. The disciplinary culture constrains the objectives, goals and norms of the social activity (Bhatia, 2004). Although the same genre has common communicative purposes, professional writers may exploit generic resources to realize private intentions, which results in generic variations. Therefore, we also need to take the generic variation within the crowdfunding genre into consideration

2.3 The research objectives

Given the inadequacy of the research in the literature, the present study attempts to contribute to the field through analyzing this online genre as crowdfunding text. To be more specific, the main research questions are addressed as follows:

1. What is the move structure of the crowdfunding genre? Are there any differences or similarities among crowdfunding genre, advertising discourse and philanthropic discourse?
2. What particular linguistic features does the crowdfunding genre have to realize the function of persuasion?
3. Are there any generic variations in the crowdfunding genre?

3. Method

3.1 Corpus Data

In order to address the research questions, we collected 30 crowdfunding texts from the U.S. website www.kickstarter.com as the samples for studying. The specific layout of the website is shown in Figure 1:

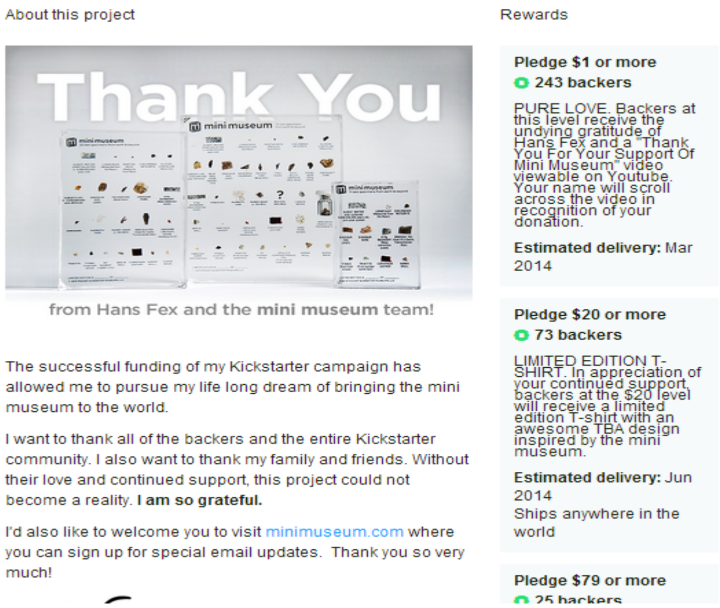

Figure 1 The layout of *Kickstarter* website

We selected two texts from two of the most funded projects in each of the 15 sections covering art, comics, crafts, dance, design, fashion, film & video, food, games, journalism, music, photograph, publishing technology, and theater. The move structures identified from the texts therefore would be representative of the crowdfunding genre. The moves were manually tagged to the 30 crowdfunding texts in order to identify the prototypical rhetorical structure of the crowdfunding genre. The release period of the crowdfunding projects is from the year 2009 to the year 2014. The detailed list of the projects is shown in the Appendix. Each text was assigned a number for the convenience of further discussion.

3.2 Procedure

All of the 30 texts were tagged manually for the move structures to identify the typicality of the crowdfunding genre. Before the coding procedure began, we did a preliminary analysis of the ten texts based on Bhatia's (1998) genre analysis framework of the rhetorical patterns of fundraising and advertisement genres. A tentative list of moves and steps is provided in Table 2. Next, each of us carried out the tagging separately to the 30 texts. At first, we checked all the texts and marked the moves of each text according to the moves and steps specified in Table 2:

Table 2 Moves and steps of the crowdfunding genre

Moves	Steps	Descriptions
Move 1. Headlines		To name the project.
Move 2. Establishing the credentials	1. By incorporating celebrity endorsement/ using the image of trustees	To incorporate or describe the celebrity's public support or customers' comments for the project.
	2. By referring to community needs	To promote the project or cause through meeting the needs of a particular community.
	3. By referring to mission statement	The project is carried out in order to complete a social, corporate, philanthropic or personal mission.
	4. By invoking community involvement	To call for the participation of a community or the society.
	5. By referring to the updated information	To provide the latest information about the project.
	6. By establishing the track record	To supply the funders with the historical records of the project or the information as the money will be used.
Move 3. Introducing the product or cause	1. By identifying the product or cause	To provide the general statement of the product
	2. By describing the product or cause	To provide more detailed information about the product's characteristics, and functions.
	3. By indicating the value of the product or cause	To introduce the importance and usefulness of the product/ cause.
	4. By indicating the gap	
Move 4. Soliciting support	1. By indicating the potential value of solicited support	To introduce the upcoming benefits the project or cause will bring to the funders.
	2. By offering rewards /Offering incentive	To give a list of rewards
	3. By direct/indirect appeals	To call for support directly or indirectly
	4. By invoking the contact with founders	To call for funders' response
Move 5. Expressing gratitude		To express gratitude to the founders and funders

Move 6. Risks, challenges and solutions	1.	By indicating risks and challenges	To imply the potential disadvantages/problems that would happen in the process of fundraising; Or risks that would happen to the production of the products; Limitation of the products.
	2.	By providing possible solutions	The founder may provide possible ways to face and deal with the problem

As regards the coding of the move, the criteria are as follows. If a sentence expresses the meaning of one move, we count it as one occurrence. If a whole paragraph expresses the meaning of a particular move, we also count it as one occurrence. For example, if a sentence or a paragraph manifests "Mission Statements", we mark this sentence or paragraph as "M2S3". A situation may occur when there are two moves in a sentence. We therefore assume that these are two different moves in one sentence and we count each move as one occurrence.

Subsequently, we checked each other's manuscripts by looking at the moves and the steps to examine if there might be any coding differences. When differences did occur, we discussed and checked the classification of moves/steps again until we finally reached a consensus. This can make the results more reliable.

The research procedure is both qualitative and quantitative. Qualitatively, we tagged the language as a particular move. Quantitatively, the occurrence of various moves in 30 texts was counted. All the texts were also put into Antconc 3.4.3 (Anthony, 2014) for analyzing the linguistic features of the crowdfunding genre. Altogether 62,279 tokens of words were checked.

The extra-linguistic elements in the online crowdfunding texts, which include the colorful pictures, hyperlinks, videos and so on, were not discussed here. The crowdfunding website, like online advertisement, involves many hyperlinks which makes it difficult to analyze. However, our study focused only on the main body of crowdfunding texts. The reward details are excluded, which are on the right-most side of the website. The FAQs (Frequently Answered Questions) are also not included in the research as most of the FAQs are presented in hyperlinks.

4. Findings and discussion

4.1 Move structure analysis

Move 1 Headline

"Headline" is a necessary/obligatory move, which has 100% occurrence in the 30 crowdfunding texts. It aims at attracting the reader's attention. The headline normally includes the title or the name of the project/cause/product and the name of the founder/the institute/the company. The average number of words for the headline is 5.933 per text. The longest headline has 10 words and the shortest headline has only one word. This indicates that the writing description of the headline of the crowdfunding discourse appears to be precise and concrete.

Besides, the headline should be closely related to the cause or the project that the founder promotes in order to draw the attention of the funder. Most texts use the name of the project directly as the title of the text. For example, in the art section, "Mini Museum", "Marina Abramovic Institute: The founders" are named to attract the attention of the funder immediately. However, some of the projects use the name of the founder, such as "Matter" initiated by Matter (Text No.19) in the Journalism section. The topic is presented clearly in the "headline" move, which has the advantages of making an impression on readers' minds, even if they do not go on reading the whole text.

Move 2 Establishing credentials

Through analyzing the 30 crowdfunding texts, we find that this move of "establishing credentials" consists of incorporating celebrity endorsement/image of trustees, community needs, mission statement, community involvement, updated information of the project, and the records of past history of the project/plan and how the money is raised. The percentage of each step is presented in Table 3.

Table 3 The occurrence of each step of Move 2

Step 1 By incorporating celebrity endorsement	**Step 2** By referring to community needs	**Step 3** By referring to mission statement	**Step 4** By invoking community involvement	**Step 5** By referring to the updated information	**Step 6** By establishing the track record
73.33%(22)	36.67%(11)	86.67%(26)	20%(6)	30%(9)	83.33%(25)

Almost all the crowdfunding texts include the move of "establishing credentials" which aims at building trust between the funder and the potential founder of the project because trust is crucial for high-stake interactions (Larrimore et al., 2011). It is also concluded by Goering et al. (2009) that credibility appeals can be used to achieve the highest donations in the fundraising letter. The result of our study further highlights the importance of establishing credentials in the crowdfunding genre.

The most popular strategies, as can be seen in Table 3, are the step of "mission statement" (86.67%) followed by the step of "establishing the track record" (83.33%) and "incorporating celebrity endorsement" (73.33%). The step of "mission statement" serves the function of attracting the attention of the targeted audience to arouse their interest in the project. Past records of the cause and celebrity endorsement are the strategies employed to improve the trust between the funders and the founders. These strategies or steps also contribute to promoting the product or the cause. In particular, the celebrity endorsement is one of the most classical advertising strategies for promotional purposes (Bhatia, 2004). The communicative purpose of establishing the track record is to make the funder believe that the project is well prepared which is also an act of promoting trust between the funder and the founder.

The example below seeks to establish that the founder has the ability to establish a mini museum based on his long experience with specimen collection:

> *"The idea is simple. For the past 35 years I have collected amazing specimens specifically for this project. I then carefully break those specimens down into smaller pieces, embed them in acrylic" (M2S6) (Text No.1)*

It can be seen from the example that the project has been pursued for a long time. The description further reflects the process of project initiation, the perseverance and the spirit of the founder. The background information and the records of how the founder created the project are good ways to establish the credentials and make the funders believe in the founder.

Credentials can also be established by giving detailed information about how the raised money would be used. Some of the crowdfunding texts have an independent part, such as "How the money will be used or where will my money go?" This move is aimed at making the funder believe that it is worth investing in and that the founder is trustworthy. It can be inferred that the concrete and particular information about the way in which the project is established and the plan for capital use can make backers become more confident in their understanding of the founder's situation and therefore more likely to fund the project (Larrimore et al, 2011).

Move 3 Introducing the product or cause

"Introducing the product or the cause" is an indispensable move for crowdfunding texts. It is important to make the audience become familiar with the cause and the product. This move is realized by identifying the product/cause, describing it, and by indicating the value of the cause and the gap or need. The occurrence of each step of Move 3 is shown in Table 4.

Table 4 The occurrence of each step of Move 3

Step 1 By identifying the product	**Step 2** By describing the product	**Step 3** By indicating the value	**Step 4** By indicating the gap
80 % (24)	90 % (27)	63.3% (19)	13.3 % (4)

Step 2 – "by describing the product" (90%) – is the most frequently occurring step, followed by "identifying the product" (80%), "indicating its value" (63.3%) and "indicating the gap" (13.3%). This shows that the product itself is the core of the whole project. It can also be inferred that the more details of the product that are introduced, the more funds the project can raise. If it is a product that the founder promotes, the function, the feature, and the size of the product will be introduced. If it is a cause, a brief introduction to the cause will be presented. This can be seen in the following example:

> *"It'll grow into you the way your favorite sweatshirt should — getting softer with wear, keeping you warm and snuggly, and stacking up stories along the way." (M3S2) (Text No.11)*

Through identifying the product or the cause, the copywriter makes a clear identification of the cause or the product involved. The value of the cause or the product is also presented in the text to convince and persuade the funder. For instance:

> *"The PonoPlayer…… let you hear high quality Ponomusic as close to its original recorded resolution as possible, and therefore, the original musical experience" (M3S2) (Text No.27)*

Sometimes, the copywriter also applies the step "indicating the gap" to show the uniqueness of the product. This suggests that the product can make up for the disadvantage or the inconvenience of the same kind of the product that is currently available on the market. This move further justifies the value of the product, which can be seen in the following example:

"There have been many books on video games, alongside an ocean of interview material. Steven Kent's Ultimate History of Video Games is an excellent example. <u>There are, however, few which are in English and focus on Japan</u>. Chris Kohler's Power-Up is one of the best, while David Sheff's Game Over is another. The only other option is a lifetime subscription to multiple video game magazines" (M3S4) (Text No. 20)

Move 4 Soliciting support

"Soliciting support" is a typical characteristic of the fundraising discourse. Copywriters use strategies to solicit support or response from the funders. Bhatia (2004) has explained that support may be solicited through direct appeals, extended appeals, and appeals with incentives. However, in crowdfunding texts, the way of soliciting support is "by indicating the value of solicited support", "offering incentives/rewards", "making direct and indirect appeals", and "invoking the contact with founders". Table 5 below shows the occurrence of each step in Move 4.

Table 5 The occurrence of each step of Move 4

Step1 By indicating the value of solicited support	**Step 2** By offering incentives /rewards	**Step 3** By direct/ indirect appeal	**Step 4** By invoking the contact with the founders
70 % (21)	73.33 % (22)	70 % (21)	40 % (12)

It can be seen from Table 5 that "offering incentives" (73.33%) is the most frequently adopted step, followed by "indicating the value of solicited support" (70%), and "making direct/indirect appeal" (70%). It is suggested that offering incentives can best motivate and attract audiences to support the project. For example:

"Contributions to this project are 80% tax deductible due to MAI's non-profit status." (M4S2) (Text No. 2)

“Soliciting support” is also achieved by making direct appeals. Let’s look at another example:

> *“Support the Joffrey Ballet Concert Group’s first international tour to China and first ever documentary.” (Text No.8)*

The above are direct appeals to solicit support from the target audience. Indirect ways of soliciting support or response can be exemplified below:

> “*Currently, we've only made samples in medium, as soon as enough people order we'll begin producing them in all sizes, so you can see before selecting size.” (Text No.11)*

Sometimes the steps are mixed in one move. For example:

> *“But we need even more support to make sure (M4S3) that we can continue to provide a product that is an amazing value.” (M4S1) (Text No.15)*

Different from the fundraising letters in which incentives are not very common, crowdfunding texts are full of the incentives or rewards to motivate funders to invest money. The incentives can be products or stakes/equity in the company or opportunities to attend activities or meet with celebrities held by the founder.

Move 5 Expressing gratitude

The move of “expressing gratitude” takes up 70% of the 30 texts. After introducing the whole project, the idea and the plan to the backers, the founders end politely by expressing thanks for the solicited support either in a direct or indirect way. The direct way of giving thanks is as follows:

> *“I thank you in advance if you can help make this ride possible.” (M5) (Text No.14)*

"Thanks to everyone who hasn't lost faith." (M5) (Text No.13)

The indirect way of expressing gratitude is by reaffirming mission statements, which can be seen below:

"…We are deeply appreciative of your faith, trust, and support (M5). <u>Now it's up to us to create and deliver the RPG experience we have described, the game you have asked for</u>." (M5) (Text No.18)

Move 6 Risks and Challenge

Eighty percent of the crowdfunding texts have the move "risks and challenges" However, this move is not all about risks and challenges. It also includes the possible solutions that the founders would take to address the risks to make the funders believe that they will try their best to solve the problems. Therefore, the communicative purpose of this move is achieved by referring to risks and challenges and by coming up with possible solutions. Take the following for instance:

"There is typically a 60-day lead time to create the molds for a product of this size and this is where delays could occur…(M6S1) <u>but any obstacle will be addressed by combining our internal knowledge with external expertise, and an overall goal of making the best possible product for you</u>, our COOLEST customer." (M6S2) (Text No.9)

In the above, copywriters not only present the supposed difficulties which cause the delay in making the product that would be encountered in the future when they produce it, but also claim that they would address all the obstacles. The move therefore transmits the positive image of the founder to the audience and further contributes to building trust and attracting investment from the funders.

To sum up, the web-based crowdfunding texts in our study consist of four compulsory moves: "headline", "establishing credentials", "introducing the cause or project", "soliciting response" and two optional moves: "expressing gratitude" and "risks and challenges".

Compared with the move structures of advertising and philanthropic fundraising discourses proposed by Bhatia (1998), crowdfunding genre exhibits similarity to as well as differences from these two genres. In terms of similarity, moves like "establishing credentials" and "introducing the project / cause" are basically the same in all the three genres. However, they differ in the move of "offering incentives". In crowdfunding genre, the incentives are often the rewards and equity given by the founders, while in the advertising discourse, the incentive is often the discounts and in philanthropic discourse, the income tax rebates may be a kind of incentive. Using pressure tactics and enclosing brochures in advertising are also absent in the crowdfunding genre. The move of "risks and challenges", which has eighty percent of presence in the 30 crowdfunding texts, is absent in the philanthropic discourse. These differences can be explained by the discourse conventions that are established by the professionals and community members. The complicated interrelations between the three genres can be explained by the colonization of promotional discourse.

Although the crowdfunding genre has its own generic integrity and conventions followed by the discourse community, "generic integrity is after all not fixed or prescribed" (Bhatia, 2004, p.112). The integrity is constantly colonized by other elements. Advertising, which is the most "dominant form" of promotional discourse "stands out to be the most predominant instrument of colonization" (Bhatia, 2004, p. 88). Move 3 ("introducing the cause or project") of the crowdfunding genre intends to "describe and evaluate a product or service in a positive manner" which is the most popular promotional strategy in advertising (p. 89). The copywriter of the crowdfunding genre therefore has fully exploited the advertising resources to realize the communicative purpose of persuading funders to invest funds. Such interdiscursivity serves as a bridge to connect crowdfunding genre with advertising discourse, which makes the crowdfunding genre “share not only the embedded format with advertising, but also a striking range of lexico-grammatical resources” (p. 89).

We can therefore clarify the first research question in that six moves have been found in the 30 crowdfunding texts and that providing a “headline”, “establishing credentials” and “introducing the project/cause” are the essential components, “expressing gratitude” and “risks and challenges” the optional moves. Differences have been found in the move of “offering incentives”. The move of “risks and challenges” of the crowdfunding genre is absent in advertising and philanthropic discourses. Generic integrity can help explain the differences. Colonization or interdiscursivity would help understand the similarities in the three genres.

4.2 Lexical Features

We put all the texts into Antconc 3.4.3 (Anthony, 2014) for the analysis of linguistics features and found the most frequent words (see Table 6) in all 30 crowdfunding texts. Among the most frequent words, we examined in particular the informal language expressions and the other three dimensions that signal the concreteness of persuasion messages, which would be representative of the persuasive language use in crowdfunding texts.

Table 6 Frequency of words in crowdfunding text

Rank	Frequency	Word
1	3108	The
2	1712	To
3	1662	And
4	1449	Of
5	1334	A
6	811	You
7	798	We
8	788	In
9	677	For
10	627	Is
11	564	It
12	521	That
13	508	I
14	485	Be
15	484	Will
16	475	With
17	434	Your
18	426	On
19	400	Our
20	399	This
21	334	Can
22	327	Are
23	314	Have
24	293	As
25	271	Or
26	263	By
27	252	From
28	216	More
29	210	All

From Table 6, we found that "you" and "we" are among the most frequently used pronouns, with the frequency of 811 times and 798 times respectively. The results have also been confirmed by Labrador et al. (2014) and discussed by Bhatia (2004, p.116). The use of the 2nd person pronoun contributes to making funders feel the message is directed at them individually and building familiarity (Myers, 1994, p. 52). The use of personal pronouns falls within the interpersonal dimension (Labrador et al, 2014, p.45). Since some individuals enter the online world highly suspicious of strangers, they interact primarily with those they know in the face-to-face world (Hancock, 2007). To a large extent, one of the most important aspects for the copywriter is to establish trust between the founder and the funder. Therefore, the frequent use of “we” and “you” can put the funder into the context where he/she and the founder can have a dialogue with each other. In this way, the copywriter can help founders and funders reach a common consensus on the value of the project. Moreover, the frequent use of “we” and “you” in the crowdfunding texts decreases the sense of strangeness and increases intimacy between the founder and the funder.

Specifically, the use of pronouns transmits a sense of connectedness to the particular community where members share similar interests and ideals with the founder. The pronoun “you” frequently appears in M4 (soliciting support) and M5 (expressing gratitude), for example:

> *“…Thank you so much for spending time with my dream project….” (M5) (Text No.1)*

> *“…We want you to be part of it…” (M4) (Text No.1)*

The use of pronoun “we” mostly occurs in Move 2 (establishing credentials), Move 3 (introducing the products) and Move 6 (risks and challenges). Next, we focused on the three dimensions (articles, prepositions and quantifiers) that signal the concreteness of persuasion message discussed in Larrimore et al. (2011). They argued that more specific information about the founders could make funders become more confident in the project.

It is interesting to note that the article “the” is the most frequently used word, which appears 3108 times in the 30 texts and “a” appears 1334 times. We also observed the frequent use of “to”, “of”, “in” and “with” which have a high frequency rate in our corpus. However, we found that the quantifiers have a low frequency rate with “more” appearing 216 times and “all” 210 times.

Examples of the use of articles, prepositions and quantifiers are listed below which can help explain how the copywriters exploit the linguistic features to achieve the communicative purpose of persuasion.

> *"Each mini museum is <u>a</u> handcrafted, individually numbered limited edition." (Text No.1)*

> *"Currently, we've developed a prototype for <u>the</u> Chester plush replica." (Text No.5)*

> *"The festivities will span two weeks in October, during which time the 13 company dancers traveling <u>to</u> China will interact with dance companies, artistic directors, choreographers, and dance students from around the globe." (Text No. 8)*

> *"Many elements <u>of</u> the rewards will be fulfilled well before September <u>of</u> 2014, which is when we hope to release the film and have all of our premieres and screenings." (Text No. 14)*

> *"Our next step is to do one <u>more</u> revision of our electronics board, implementing some specific additional audio technology from Ayre Acoustics." (Text No.27)*

The articles (a, the), preposition (to, of) and quantifiers (more) contextualize the object and give a detailed representation of the objects. From the example above, the article "a" helps define the object. The preposition "to" provides the audience with more detailed information about the project. The use of quantifier "more" indicates that a large amount of hard work will be completed by the team. The detailed and accurate description of the project or product helps the funders better understand the founders, which could lead to more trust between them.

This corroborates well with Larrimore et al.'s (2011) study in that the frequent use of articles, prepositions and quantifiers could decrease the uncertainty of online transaction. Their study shows that prepositions do not have a significant effect on the success of the fundraising activity, but they play an important role in the construction of crowdfunding texts, which help contextualize the project. Meanwhile, the quantifiers are not used very often when the copywriters construct the crowdfunding texts, which helps make the information more concrete.

As for the second research question of the study, we observed that the persuasive language in the crowdfunding genre is the representation of promotional functions of the language. Through analyzing the most frequent words in the 30 crowdfunding texts, the frequent use of the 2nd person pronoun “you” is regarded as the representation of the rather direct and informal style of online crowdfunding genre. The high frequency of articles and prepositions helps the copywriter to contextualize abstract concepts and increase the concreteness or familiarity of the funders with the crowdfunding project.

4.3 Generic Variation

Although genres are highly conventionalized and structured constructs, they continually develop and change with different contexts (Bhatia, 2004). As Berkenkotter and Huckin (1995, p.6) pointed out, “genres are inherently dynamic rhetorical structures that can be manipulated according to the conditions of use”. Our findings have corresponded well with their claims. Not all the moves found in our corpus of crowdfunding texts were presented in a linear and fixed order and also not all the moves appeared in all 30 crowdfunding texts. Some moves were optional and others were obligatory. This is because the real world of discourse is complex, dynamic, constantly changing and often less predictable (Bhatia, 2004). The unstable nature of genres has made the generic structures vary greatly within the generic boundaries. The dynamic context can partially account for the flexibility of move-structure of the crowdfunding text.

As far as move frequency is concerned, Move 5 only appears in 70% of the crowdfunding texts and Move 6 occurs in 80% of the sample texts. In addition, not all the steps make their appearance in the texts. In Move 2 ("establishing the credentials"), only six texts have the "invoking community involvement" step and nine texts include the "referring to the updated information" step. The step of providing updated information on the fundraising process (e.g., in Text 19, Matter) usually sends a positive message to the target audience. This could help the founders solicit more support and attract more audiences. Writers' private intention of attracting more funds and invoking more support makes them adopt the step of providing updated information on the project.

In Move 3, 63.3% of the texts have the "indicating the value" step, while only 13.3% of the texts have the "indicating the gap" step. Take Text 20, for example:

> *"There have been many books on video games, alongside an ocean of interview material…There are, however, fewer which are in English and focus on Japan." (Text 20)*

This step is obviously targeted at the audiences who are interested in Japan's video game history. This step is also employed to serve the function of product differentiation, distinguishing the book from that of its competitors. The flexibility of the move structure not only occurs in the choice of which move is obligatory and which is optional, but also exists in the move sequence. We found that not all the moves were presented in a strict linear order like the move order listed in Table 2. On the contrary, the move order displays a high degree of flexibility. This coincides with Bhatia's (1993) finding in the study of job application letters. He found "a certain degree of flexibility in the number of moves" as well as "a certain degree of freedom in the sequencing of these moves".
For example, Move 2 ("establishing the credentials") does not always appear at the beginning of the main body of the text. In Text 15, the first paragraph begins by "introducing the product" (Move 3) followed by Move 2:

“The Anova Precision Cooker is used to cook “sous vide”, which allows anyone to produce restaurant quality results.” (Text 15)

Text 15 starts with the introduction of (Move 3) “the Anova Precision Cooker” by defining it as “cook ‘sous vide’” (Step 1) and by indicating that it can “produce restaurant quality results” (Step 3). This description aims at attracting those who are interested in cooking and who are in urgent need of such a cooker. The move and step serve as an eye-catching element to attract the targeted audience.

In Text 3, the main body of the text begins with Move 4 (“direct appeals”) as in:

“Help us reprint the out-of-print The Order of the Stick books…”

Such a direct appeal invokes the common will of the audience who like the books. As noted above, not all of the texts have the same rhetorical structure nor do they have the same rhetorical order. The common purpose of all the copywriters of the crowdfunding genre is to employ different generic resources to make the best promotion and to attract the maximum funds. However, they also have to exploit generic conventions to communicate their private intentions since they have different promoting products/projects, different target audiences and different ways of persuading the audiences. It also should be noted that all the crowdfunding texts have four obligatory moves (“headline”, “establishing credentials”, “introducing the cause or project”, “soliciting response”), although they do not appear in a strict linear order.

On the one hand, the crowdfunding genre tends to observe the obligatory moves which can stand for the generic conventions. On the other hand, it should be subject to innovations and creativity of professional writers (Bhatia, 2004). As mentioned above, apart from socially recognized communicative purposes, the copywriters have their own private intentions in shaping the crowdfunding text so as to better promote the project.

To address the third research question, we claimed that there are indeed generic variations within the crowdfunding genre. Due to different targeted audiences and products, copywriters of the crowdfunding texts employ different rhetorical structures and arrange them in different orders to reach the best effect of promoting the product or the cause, which gives rise to generic flexibility and variations particularly in terms of the rhetorical move structure.

5. Conclusion

By examining the textual and socio-cognitive space of crowdfunding genre in light of Bhatia's (2004) multi-dimensional framework of discourse analysis, this study of online crowdfunding genre has yielded two sets of outcomes. One concerns the move structure and lexical features which are representative of the crowdfunding genre. The other is about the generic flexibility in the construction of the sub-genre of the fundraising discourse.

On the basis of the theories of genre analysis (Bhatia, 1993; Bhatia, 2004) and through the analysis of the 30 crowdfunding texts, we identified six typical moves ("headline", "establishing credentials", "introducing the product or cause", "soliciting support", "expressing gratitude", "risks and challenges") occurring in the crowdfunding genre.

Exploitation of the generic resources of advertising and philanthropic discourses makes the language of the crowdfunding genre persuasive, which is reflected in each move and step of the crowdfunding texts. By attracting the funder's attention (Move 1), the copywriter tries to persuade the funder to trust the founder (Move 2). Past records of the success achieved or effort made by the founder are introduced (Move 2, Step 6) to increase the credibility of the project. The products/causes are introduced (Move 3) to make the funder become more familiar with the project. Particular functions (Move 3, Step 2) and values (Move 3, Step 3) of the products are also presented to the funder. Incentives or rewards (Move 4) are given to motivate and persuade the funder to contribute. The founder will then express gratitude (Move 5) to the funder. Immediately after expressing the gratitude, further risks and challenges are shown (Move 6, Step 1) to the funder. However, the "indicating risks and challenges" move is closely followed by the step of "providing possible solutions" to the problem (Move 6, Step 2). All six moves may enhance the trust between the founder and the funder and also contribute to the successfulness of the crowdfunding project.

Since the generic integrity of crowdfunding genre has been colonized by advertising discourse, both the move structures and the lexical strategies have been invaded. The persuasive and promotion languages are identified as the typical features of the crowdfunding genre. The informal style and three dimensions of realizing the persuasive function of the crowdfunding genre have been explored through examining the most frequent words in our corpus. Through the investigation, it has been interesting to find that the most frequent word "the" can help to contextualize language and "reduce the uncertainness" (Larrimore et al., 2011, p. 32). It is also noted that the use of the second person pronoun "you" functions as an interpersonal technique, which can increase the familiarity and the possibility of funding success.

The awareness of the obligatory move structures and linguistic features of the crowdfunding genre can help copywriters more effectively construct crowdfunding texts. However, due to the generic variations within the crowdfunding genre, we need to point out that there is no fixed order of move structure for this particular type of genre writing. Copywriters can therefore construct the crowdfunding genre by exploiting different generic moves and linguistics techniques of crowdfunding texts in order to achieve the communicative purposes of each move. The private intentions of the copywriters in different sections could help explain their differences in terms of the language use and construction of move structures. However, the overall communicative purpose of crowdfunding text writing should not contradict "the object and goal of the community, the conventions and norms, and disciplinary practices" which are importance aspects of a disciplinary culture (Bhatia, 2004, p.130). It therefore should be suggested that creatively using and sequencing the moves of the crowdfunding text can scaffold copywriters to construct a text more flexibly.

Apart from the above findings of our research, future research on crowdfunding genre might be conducted in the following aspects. Contrastive studies can be carried out on rhetorical success across different professional fields (arts, dance, design, etc.). Rhetorical comparison may also be made between successful crowdfunding and unsuccessful ones, which can further guide the professionals to successfully depict their projects. Research might also focus on examining the construction of copywriters' identity in terms of the stance and voice of the crowdfunding genre. Comprehensive studies might be undertaken in terms of a qualitative analysis of the copywriter's awareness of writing the crowdfunding genre in an attempt to detect the extra-textual strategies that influence the success of the crowdfunding project.

Finally, the study can be seen as a pilot/preliminary investigation into the crowdfunding rhetoric in the field of applied linguistics. The crowdfunding genre discussed in this study will therefore contribute to the different varieties of fundraising discourse and provide further evidence supporting the dynamic nature of genres.

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Appendix

The corpus of 30 web-based crowdfunding texts

No.	Title	Founder	Section
1	Mini Museum	Hans Fex	Art
2	Marina Abramovic Institute: The founders	Marina Abramovic Institute	Art
3	The Order of the Stick Reprint Drive	Rich Burlew	Comic
4	The Tomorrow Girl: Dresden Codak Volume 1	Aaron Diaz	Comic
5	Don’t Starve Chester Plush	Erick Scarecrow	Craft
6	KitRex: the 3D Paper Velociraptor that You Build Yourself!	Lisa Glover	Craft
7	Europe’s First Gender-Neutral Community Dance Studio	Amanda Leon-Joyce	Dance
8	The Joffrey Ballet Concert Group Tours to China	Joffrey Ballet Concert Group	Dance
9	Coolest Cooler: 21st Century Cooler that’s Actually Cooler	Ryan Grepper	Design
10	Pebble: E-paper Watch for iphone and Android	Pebble Technology	Design
11	The 10-year Hoodie: Built for Life, Backed for a Decade!	Jack Bronstein	Fashion
12	Barbell Denim: Functional denim has arrived	Barbell Apparel	Fashion
13	The Veronica Mars Movie Project	Rob Thomas	Film Video
14	Wish I Was Here	Zach Braff	Film Video
15	Anova Precision Cooker- Cook sous vide with your phone	Anova Culinary	Food
16	The ukeg Pressurized Growler for Fresh Beer	GrowlerWerks	Food
17	OYUA: A New Kind of Video Game Console	OUYA	Game
18	Torment: Tides of Numenera	inXile entertainment	Game
19	Matter	Matter	Journalism
20	The Untold History of Japanese Game Developer	John Szczepaniak	Journalism
21	Amanda Palmer: the New Record, Art Book, and Tour	Amanda Palmer	Music
22	New Carman Album and Music Video	Carman Licciardello	Music
23	New55 Film	Bob Crowley	Photograph
24	100 More Years of Analog Film	FILM Ferrania	Photograph
25	Radiotopia: A Storytelling Revolution	PRX, Inc	Publishing
26	Planet Money T-shirt	Planet Money	Publishing
27	Pono Music- Where Your Soul Rediscovers Music	the PonoMusic Team	Technology
28	Bring Reading Rainbow Back for Every Child, Everywhere!	LeVar Burton & Reading Rainbow	Technology
29	Rescue the Historic Catlow Theater From Extinction	Tim O'Connor	Theater
30	Build the House of Dad’s!	Dad's Garage Theatre Company	Theater