A Needs Analysis of the Assessed Writing Genres of a 1st Year Undergraduate Engineering Programme

Matthew Ketteringham

Abstract

Increasing numbers of non-native English speakers (NNES) are studying at English-medium universities. This increase of students has stimulated the need for EAP instruction, so students can become competent in the discourse conventions of their chosen academic community. The purpose of this research was to carry out a needs analysis (NA) of a 1st year Engineering programme at an English-medium university. A case study approach was used to gain a deeper understanding of the writing requirements of 1st year Engineers and to influence teaching and learning within the School of Engineering (SOE). The methodology used to carry out the NA included genre analysis of institutional artefacts, and interviews and focus groups with faculty and students. The results of the genre analysis highlighted nine writing genres for assessed coursework and three genre families used for examinations. The results of faculty interviews and student focus groups found the importance of English varied across the discipline, but communication was seen as very important for Engineers. Also, students had experience and understanding of the majority of genres; however, difficulties in writing arose through a lack of instruction and feedback. Therefore, a need for in-sessional writing support is suggested to improve student writing at the SOE. This case study has highlighted a further need for research of student writing across all four years within the SOE.

Keywords: EAP, Needs Analysis, Genre Analysis

Table of Contents

List of Tables and Figures

List of Appendices

List of Abbreviations

NNES	Non Native English Speaker
HEI	Higher Education Institution
EAP	English for Academic Purposes
EGAP	English for General Academic Purposes
NA	Needs Analysis
ESP	English for Specific Academic Purposes
ESAP	English for Specific Academic Purposes
ELT	English Language Teaching
CNP	Communicative Needs Processor
TSA	Target Situation Analysis
LSA	Learning Situation Analysis
PSA	Present Situation Analysis
BAWE	British Academic Written English
CoP	Community of Practice
SOE	School of Engineering
IELTS	International English Language Testing System

Chapter 1

Introduction

1.1 Rationale and Significance of the Study

English-medium universities, where the language of instruction is English rather than the national language, are increasing globally. For example, in European universities alone, there has been a 340% increase in the number of Undergraduate and Master's programmes taught entirely in English, from 2002 to 2007 (Wachter and Maiworm, 2008). The reasons for this vary, but include globalisation, increased graduate employability and the internationalisation of higher education (Coleman, 2006). This increase in non-native English speakers (NNES) studying at English-medium Higher Education Institutions (HEIs) may pose significant challenges to both students and universities. Students must gain competence in the 'conventions of English language academic discourses' to become successful students in their chosen discipline (Hyland & Hamp-Lyons, 2002, p.1). The response of HEIs to meet these demands has seen the development of English for Academic Purposes (EAP) which is a broad term encompassing different forms and supporting methodology that are all learner centred and context specific.

EAP programmes aim to prepare students with the communicative skills required for study in higher education. Writing instruction within these programmes is grounded in the belief that what is taught and learnt in EAP classes will help NNES, and in some instances L1 students, become successful across the whole spectrum of academic subjects

available at HEIs (Leki & Carson, 1994). These common core 'English for General Academic Purposes' (EGAP) (Blue, 1988 cited in Hyland, 2002, p.387) programmes are based on the assumption that there is one 'academic English' common to all disciplines. However, with developments in discourse-based approaches with the socialisation of students into their chosen discipline and the emergence of academic literacies, which is based on the understanding that 'writing and reading are understood as social and context-dependent practices that are influenced by factors such as power relations, the epistemologies of specific disciplines and students' identities' (Wingate and Tribble, 2012, p.482), it is now understood that different disciplines have alternative views of knowledge creation and students 'need a specialised literacy' to meet the needs of their specific discourse community (Berkenkotter, Hucklin, and Ackerman, 1991, p.19; Zhu, 2004a).

To address these developments, EAP courses should be designed around students' needs, and a key factor in understanding these needs is through a detailed needs analysis (NA) to inform curriculum design. A NA is an approach to gathering information from various stakeholders involved within a course to help prepare students to participate within the institution. This study undertakes a NA of the assessed writing genres of a 1st year undergraduate Engineering programme at an English-medium university in Kazakhstan. The study includes analysis of institutional artefacts and interviews with the key stakeholders, the students and professors, within an Engineering department.

The students involved in this particular study have just undertaken a one year EGAP course which curriculum is based more on the broad liberal educational ideologies of its

instructors, rather than any analysis of the students' current and future needs. Therefore, this research aims to improve the teaching and learning of English within the School of Engineering and beyond, by undertaking a needs analysis based on a genre and academic literacies approach.

1.2 Research Purpose

The aim of the research is to investigate the assessed writing genres of a first year undergraduate Engineering programme at an English-medium university in Kazakhstan and compare student and faculty member views on academic writing. The results may be used to inform course design for the EGAP course in the Foundation year or highlight the need for an English for Specific Purposes (ESP) Pre or In-sessional course in the School of Engineering.

1.3 Research Questions

These research questions were designed to meet the aim described above and the results are presented in Chapter 4. The implications of these results are discussed in Chapter 5.

1. What are the assessed writing genres required of 1st year undergraduate Engineering students?
2. What are faculty views on the role of English and disciplinary expectations for the identified genres above and how are they expressed?
3. What is the students' current understanding and experience of these genres?

1.4 Scope of the Study

The university, where the case study took place, is a new English-medium institution based in northern Kazakhstan. The research took place in the School of Engineering and the study investigated the 1st year undergraduate degree modules which form a common part of all four Engineering degrees: Civil, Mechanical, Electrical, and Chemical. The scope of the study included course syllabi, exams, coursework documents and interviews with both students and teaching staff. The purpose of the research is to investigate the writing needs of 1st year students at this institution and the data collected is only a reflection of this population and context. However, the results of the study may raise generalisations for curriculum development of writing courses in similar contexts.

Chapter 2

Literature Review

2.1 Introduction

The following literature review discusses the key theory that underpins the study. First, EAP and English for Specific Academic Purposes (ESAP) will be described and how their development has influenced Needs Analysis (NA). Second, NA will be explained in detail outlining different types of NA methodology and how disciplinary socialisation and academic literacies approaches have informed NA. Finally, previous NA studies of academic writing will be summarised.

2.2 EAP and ESAP

EAP has developed due to the demands of the internationalisation of higher education and the increasing numbers of NNES students studying at English-medium HEIs. English for Specific Academic Purposes (ESAP), which is a type of English for Specific Purposes (ESP), emerged in the 1960s with the work of "Peter Strevens, Jack Ewer and John Swales" (Hutchinson & Waters, 1987:9). ESAP began in the hard sciences as a response to students' needs of how to write in different scientific registers. Hutchinson and Waters (1987) describe an early course in scientific writing by Ewer and Latorre in 1969. The course offered students a curriculum that did not include any grammatical or lexical differences from a general English course, but aimed to focus specifically on the language forms required for scientific academic writing. Since then, developments in genre analysis (Swales, 1990) and the concept of discourses as communities (Swales,

1990; Lave and Wenger, 1991; Wenger, 1998) has changed the way ESAP is taught, and also the terminology used to describe it.

EAP has developed as a branch of ESAP with a more ‘wide angle’ English for Academic Purposes focus which aims to prepare students for a range of disciplines in higher education (Widdowson, 1983). Blue (1988 cited in Jordan, 1997) calls this 'English for General Academic Purposes' (EGAP) and the focus is on 'core skills' rather than discipline specific needs. Identifying whether there is a common core across all disciplines has been a divisive issue within EAP most notably between research articles by Spack (1988) and Hyland (2002). Spack (1988) argued that EAP teachers should not be expected to teach writing in the disciplines because most teachers do not have sufficient content knowledge of the target writing genres. She argued this may lead to accuracy issues and teacher insecurity. Instead, English teachers should concentrate on 'general' academic writing and develop research skills and rhetorical conventions that can be transferred across future writing requirements (p.29). Since then, Hyland (2012, p.29) states that there has been a move towards ‘a research-informed view of targeted language instruction’ and in 2002 he refuted Spack’s claims that these 'core skills' may be identifiable by grammatical forms, but this neglects the fact they may change depending on meaning and use. Identifying 'general' academic writing assumes a pragmatic approach and sees writing as a skill that can be learnt, or problems that can be fixed, and transferred. It ignores the socialisation process of learning to become a member of a discourse community and the understanding that different disciplines use a variety of different linguistic practices to construct knowledge in different ways (Harwood & Hadly, 2004; Lea & Street, 2006). For example, Peacock (2002) analysed the

communicative moves in 252 published research article discussion sections across seven disciplines and found that different disciplines discuss their research findings and express their knowledge in different ways. One difference his results found was that reference to previous research was more common in the discussion sections of Language and Linguistics compared to Physics and Environmental Science.

Research by Johns (1997) also supports Hyland's view that there may be a 'core' set of skills in a very general sense, but often these skills are executed differently within each discipline. Despite these challenges to the appropriateness of EGAP courses and the support that EAP should have a specific, disciplinary focus, EGAP programmes are ubiquitous within HEIs (Flowerdew and Peacock, 2001; Hyland 2002, Hyland and Hamp-Lyons, 2002; Hyland 2009, Bruce 2011).

Perhaps what may be more appropriate for students, particularly students with higher linguistic abilities or graduate students, is the development of ESAP programmes within institutions rather than 'one-size fits all' EGAP courses (Belcher, 2006). It is difficult to clearly define ESAP, but one description is Richards and Schmidt's (2002, p.181) definition who state English for Specific Purposes (ESP) as 'the role of English in a language course or programme of instruction in which the content and aims of the course are fixed by the specific needs of a particular group of learners'. These learners may be in a professional or vocational sphere, but framed in an academic context it relates to the needs of studying in a specific discipline. Dudley-Evans and St. John (1998, pp.4-5) provide a detailed definition of ESP using three absolute and four variable characteristics.

Absolute characteristics:

- ESP is designed to meet the specific needs of the learner;
- ESP makes use of the underlying methodology and activities of the discipline it serves;
- ESP is centred on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

Variable characteristics:

- ESP may be related to or designed for specific disciplines;
- ESP may use, in specific teaching situations, a different methodology from that of general English;
- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be used for learners at secondary school level;
- ESP is generally designed for intermediate or advanced students. Most ESP courses assume basic knowledge of the language system, but it can be used with beginners.

Compared with EGAP courses, ESAP is 'narrower' and central to all definitions is targeting the specific needs of the learners for a particular purpose rather than focusing on improving English communication for a variety of contexts (Dudley-Evans and St. John, 1998; Batsurkman, 2010). Due to this greater awareness of learner needs and the target situation for where the language skills are needed, needs analysis (NA) is crucial in the design of ESP courses. Despite this, there has been little research on NA methodology and the reliability of instruments used in NA since Dudley-Evans and St. John's 1998

work which was developed from Hutchinson and Waters (1987) earlier methodology. Long (2005), for example, highlights that further research reports more on the results of NA cases, rather than the methodology.

2.3 Needs Analysis

Needs Analysis is defined by Graves (2000, p.98) as 'a systematic and ongoing process of gathering information about students' needs and preferences, interpreting the information, and then making course decisions based on the interpretation in order to meet the needs'. Furthermore, NA is a broad term which is primarily based on the analysis of all stakeholder needs, not just the learners, in a particular localised context and often includes other analyses such as discourse, corpus, and genre analysis (Chambers, 1980; West, 1994). Wilkins (1976) states that defining objectives is the first step in course design. These objectives should be based on the analysis of the communicative needs of the learner (cited in West, 1994, p.2). Bruce (2011, p.49) and goes on to propose that after gathering information about the 'present knowledge and skills of learners' and analysis of 'target situations', the course aims, objectives, and material design should be based on relevant theories of discourse, and language teaching and learning. Dudley-Evans and St John (1998) add evaluation to the ESP process described above and Brown (1989 cited in Ibid, p.121) suggests that 'the difference between needs analysis and program evaluation may be more one of focus than of the activities involved'. This suggests NA should be an on-going process and is not necessarily linear (*see* Figure 2.1), but rather a dynamic continuous analysis, and where necessary, revision of teaching and learning (Hyland, 2006).

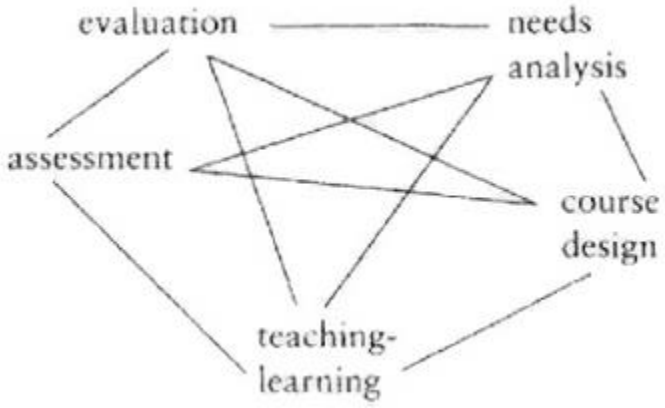

Figure 2.1: Stages in the ESP Process. (Dudley-Evans & St. John, 1998, p.121)

Needs analysis may involve a variety of data collection methods and sources, and the *what*, *why*, *when*, *how*, *who* and *whom* are all important factors to consider when gathering data. West (1994) identified five aspects of a NA. These include: target situation analysis, deficiency analysis, strategy analysis, means analysis and language audits. Dudley-Evans and St. John (1998, p.125) provide a comprehensive overview of NA incorporating previous approaches (*see* Table 2.1 below):

Table 2.1: Overview of Needs Analysis Methodology. (Dudley-Evans and St. John 1998, p.125)

	Description of Approach
A	professional information about the learners: the tasks and activities learners are/will be using English for - *target situation analysis and objective needs*
B	personal information about the learners: factors which may affect the way they learn such as previous learning experiences, cultural information, reasons for attending the course and expectations of it, attitude to English - *wants, means, subjective needs*
C	English language information about the learners: what their current skills and language use are - *present situation analysis* - which allows us to assess (D)
D	the learners lacks: the gap between (C) and (A) - *lacks*
E	language learning information: effective ways of learning the skills and language in (D) - *learning needs*
F	professional communication information about (A): knowledge of how language and skills are used in the target situation - *linguistic analysis, discourse analysis, genre analysis*
G	what is wanted from the course
H	information about the environment in which the course will be run - *means analysis*

Before discussion of the methodology behind the data collection for each particular aspect, the concept of needs should be discussed.

2.3.1 The Concept of Needs

The concept of needs is difficult to define due to multiple viewpoints of what needs are. These differing viewpoints are based on 'different philosophical or educational value' and help to form different types of needs analysis methodology (Dudley-Evans and St John, 1998, p.123). Hutchinson and Waters (1987, pp.54-64) encompassed varying viewpoints, particularly Munby's (1978 cited in Songhori, 2008) Communicative Needs

Processor (CNP) which investigated the target linguistic needs required of the learner at the end of the course by analysing the situation the learner will be involved in, and classified needs into 'necessities, wants, lacks and constraints'. These went onto inform various NA methodology and below is a summary of each classification:

'Necessities' are 'determined by the demands of the target situation, that is, what the learner has to know in order to function effectively in the target situation' (Hutchinson & Waters, 1987, p.55). They have also been called 'objective needs' (Richterich 1973/1980 cited in West 1994) which are 'product-oriented' because they are 'derived by outsiders from facts' and this is now commonly known as 'Target Situation Analysis' (TSA) (Dudley-Evans & St. John, 1998, p.123).

'Wants' relate to 'what the learners want or feel they need' (Hutchinson & Waters, 1987, p.57). These needs are 'process-oriented' and personal, and are sometimes referred to as 'subjective needs'. These may be different from 'necessities' as seen by teachers or other stakeholders, yet they are nonetheless just as important (Chambers, 1980, p.27; West, 1994, p.4 Jordan, 1997, p.26). 'Wants' are identified through a 'Learning Situation Analysis' (LSA) or also known as a 'Strategy Analysis' (West, 1994, p.4).

'Lacks' are identified by cross-referencing what learners already know against the target needs (TSA). Richterich and Chanercel (1980 cited in Songhori, 2008) termed this 'Present Situation Analysis' (PSA). PSA is seen as an addition to TSA because the target needs and wants of learners are seen as the end product, and the lacks and learning needs are seen as the present.

Finally, ‘Constraints’ are defined by Munby (1978 cited in West, 1994, p.9) as ‘socio-political, logistical, administrative, psycho-pedagogic and methodological’ external factors which are relevant to the learning situation. White (1988) called this ‘means analysis’ and argued that these constraints affect the development and implementation of a NA and may in fact, be the most important consideration. This incorporates a ‘critical’ approach to EAP and Benesch (1999) argues the ‘rights’ of students should also be analysed to consider how other stakeholder ideologies affect NA. This allows the practitioner and learners to critically assess the socio-cultural, socio-political and economic power relations that shape their educational environment and the wider creation of knowledge within their future discourse communities. This helps to highlight to students that they may be democratically involved in the decisions that will affect their learning and the possibility exists to challenge the status quo (Benesch 2001 cited in Hyland, 2006; Morgan, 2009).

As can be seen above the concept of needs is broad and encompasses a variety of analyses including TSA, LSA, PSA and Means Analysis. However, perhaps the broad and complex nature of data collection and analysis is not conducive to continual NA as suggested, and consequently the results may expire with new cohorts of students and impact the validity of course design. Also finally, as described above the ‘rights’ of students should be explored and considered because this is an important element that is often neglected. These approaches to NA can now be used to gather appropriate data.

2.3.2 Data Collection Methodology and Sources

Needs Analysis data can come from a wide range of sources and methods. Hyland (2006) states that Jordan (1997) gives fourteen techniques for collecting data and Brown (1995) provides twenty four. Surprisingly, in both these lists there is no mention of text or genre analysis which is now seen as central to Target Situation Analysis. He goes on to list the most widely used sources as: 'questionnaires; analyses of authentic spoken and written texts; structured interviews; observations; informal consultations with faculty, learners and other EAP teachers; and assessment results'(2006, p.78).

The sources need to come from multiple stakeholders including EAP practitioners, subject specialists, current and former students and other stakeholders such as the educational institution or company. Long (2005) concludes that in-depth NA requires both the expertise of the EAP practitioner as an applied linguist and also the expert knowledge of the target situation from subject specialists. This helps to avoid intuition in course design and has become increasingly important due to the analysis of discourse as a source. Jasso-Aguilar (1999) and Long (2005) advocate the use of multiple sources, multiple methods of data collection and triangulation of this data to combat the over-use of questionnaires and the 'restricted reliability and one-dimensional picture' they offer (Hyland, 2006, p.78). Triangulation involves comparing different sources and methods to improve the accuracy of the results (Long, 2005). The methodology and data collection for addressing the different needs analyses identified will be discussed below.

2.3.2.1 Target Situation Analysis

TSA refers to the investigation of the target discipline the learners wish to join (*see A, F and G* in Table 2.1). The communicative needs are identified and involves the collection of 'objective and product-orientated data' of the communicative events the learners need to perform (Hyland 2006, p.74). This involves the understanding of the target academic communities through observation and analysis of language events and how knowledge is created within these communities. This research is usually carried out by one or a combination of these three methods. First, ethnographic studies, which are based on the analysis of language and human behaviour in its natural setting. Second, corpus research, which involves collecting texts and analysing frequency, for example, common word lists or concordancing. Finally, and most common, genre analysis which involves the analysis of target texts.

2.3.2.2 Genre Analysis

Genre analysis gained prominence in the late 1980s and early 1990s, as a tool for analysing both written and spoken discourse in a particular academic setting. Swales (1990) describes genres as "communicative events" that are constructed for a particular discourse community and are composed of patterns of "structure, style, content and intended audience" (p.58). Genre analysis can be used as a framework to help students understand and produce what is expected of them in their particular disciplines. This may be done in a number of ways. First, by analysing the genre types students may have to produce within the discipline, for example, research reports or essays. Second, by structural move analysis to understand how these genres are organised and finally, by

identifying obvious text features such as the use of hedges and personal pronouns. Genre in EAP has mainly focused on written texts to identify the variety of genres across disciplines, and also to analyse similarities and differences between genres, within and across, different disciplines. (Horowitz, 1986; Leki and Carson, 1994; 1997; Hyon, 1996; Zhu, 2004b; Gimenez, 2008; Hyland, 2009; Hyland and Tse, 2009; Gardner and Nesi, 2012)

However, there are some criticisms that genre analysis exposes students to texts written by accomplished writers or 'experts', and not texts that they themselves will be asked to produce. (Paltridge, 2004) This has recently been addressed by the British Academic Written English (BAWE) corpus which is based on texts produced by undergraduate to postgraduate students in a variety of disciplines (Gardner and Nesi, 2012). Another criticism is by offering texts as rigid forms that can be taught prescriptively we are ignoring the social and cultural context upon how the texts are formed. The concept of discourses as communities has been explored to address this argument. By focusing on specific genres written by an *insider* of a discourse community, of which a student wishes to earn *membership,* students can explicitly see what is required to communicate within that community (Lave and Wenger, 1991).

2.3.2.3 Discourse Communities and Academic Literacies

A discourse community can broadly be described as a community that works together to achieve certain goals. The community share common language, social and cultural practices to reach these goals (Swales, 1990). Non-members who do not share these practices cannot communicate with the same meaning as they lack “situational context,

background knowledge context and co-textual context" (Cutting, 2002, p.3). The mechanisms used to construct meaning and report on these goals are called genres; therefore, learning a new discipline requires learning to communicate as a member of this community (Hyland and Hamp-Lyons, 2002).

Borg (2003, p.399) discusses three issues within discourse communities that have not been clearly defined. First, what are the size of discourse communities and where do their boundaries lie? Second, is speech required to maintain a community? Third, is purpose a defining characteristic of a discourse community? In response to the first two issues, research by Lea and Street (1998; 2006) has proposed an academic literacies approach as a development from the 'academic socialisation' approach. Swales' (1990) initial definition of a discourse community was characterised by written genres. Lea and Street (1998) propose the literacy demands of students involve a variety of communicative activities and they do not necessarily reside solely in a discourse community, but need to be viewed within broader discourses at the institutional level, and include social identities and power relations within an institution.

In response to the final question, Johns (1997) notes the term discourse community is being replaced by 'Communities of Practice' (CoP). Wenger (2000) defines a CoP as a group of people working together in a process of "collective learning" and by "participating in these communities, we define with each other what constitutes competence in a given context" (p.229). Competence is defined by combining three elements. First, the community is bound together by their collective knowledge and they are held accountable to each other in this "joint enterprise". Second, the community is

built around “mutual engagement”, and third, communication is achieved through the appropriate use of a “shared repertoire” of communal resources (ibid, p.229). The type of learning that takes place within a CoP is described as 'situated learning' and entry to the CoP can be gained through 'legitimate peripheral participation' much in the same way an 'apprentice' learns from an 'expert' (Wenger, 2006). One criticism of CoP, as opposed to discourse communities, is the role of language has been acknowledged, but not developed into the model (Bruce, 2011). Another, criticism is that innovation within a CoP may stagnate without continuous learning, particularly if more experienced members are not challenged (Wegner, Dermott and Synder, 2002).

In summary, if genre analysis is a way to help show what is specific within a discipline, discourse communities help show how knowledge is constructed and used within a particular community. Therefore, genre analysis and discourse communities are proposed as key arguments for specificity in ESAP because a TSA of a whole HEI is not feasibly possible. It is argued the teaching of writing should be taught within the context of a particular discourse community because to be a competent writer you need to understand the 'situational context', 'background knowledge context' and 'co-textual context' of who is being addressed. If the context is removed, learners may misinterpret academic literacies as a 'skill' that can be learnt and transferred across all disciplines. By acknowledging discipline variation and understanding that disciplines may construct and present knowledge differently, students are able to clearly see the epistemological variety within institutions (Cutting, 2002; Hyland, 2002).

2.3.2.4 Present Situation Analysis

As well as investigating the target situation, the particular needs of the learners also needs to be investigated. PSA may be both objective and subjective in analysing the students' current level of knowledge and their language goals (Hyland, 2006). This corresponds to B and C from Table 2.1. A PSA may be carried out using a variety of methods including; questionnaires, structured interviews, unstructured interviews, observations and assessment results (Hyland, 2006). PSA is seen as an addition to TSA because the target needs and wants of learners are seen as the end product, and the lacks and learning needs are seen as the present. This gap between needs is what part of the syllabus can be created around and is often called Deficiency Analysis (West, 1994: Jordan, 1997). Table 2.2 below highlights some key questions for PSA and TSA.

Table 2.2: A Framework for Needs Analysis (Hutchinson and Waters 1987 cited in Hyland, 2006, p.75)

Present Situation Analysis	**Target Situation Analysis**
Why are learners taking the course? Compulsory or optional Whether obvious need exists Personal/academic goals Motivation and attitude What they want to learn from the course	***Why do learners need the language?*** Examination, postgraduate or undergraduate course, etc.
How do learners learn? Learning background and experience Concept of teaching and learning Methodological and materials preferences Preferred learning styles and strategies	***What genres will be used?*** Lab reports, essays, seminars, lectures, etc.

Who are the learners? Age / sex / nationality / L1 Subject knowledge Interests Sociocultural background Attitudes to subject or discipline	***What is the typical structure of these genres?*** Move analysis, salient features, linguistic features,
What do the learners know? L1 and L2 literacy abilities Proficiency in English Writing experiences and genre familiarity	***What will the content area be?*** Academic subject, specialism within discipline, secondary school subjects
	Who will the learner use the language with? Native or non-native speakers Reader's knowledge - expert, beginner, etc. Relationship: peer, teacher, supervisor, examiner
	Where will the learner use the language? Physical setting: school, university, conference Linguistic context: overseas, home Human context: known/unknown readers

2.3.2.5 Learning Situation Analysis

LSA relates to E in Table 2.1 and is the analysis of how the target language and skills are learnt, and what strategies are used to facilitate this. These non-linguistic features focus 'not just on what people do with the language but how they learn it' (Belcher, 2006, p.136). This includes analysis of methodology (Nunan, 1988 cited in Jordan, 1997) and learning styles and strategies (Allwright, 1982 cited in Jordan 1997). West (1994) describes this as 'strategy analysis' and encompasses the teaching and learning approaches from the students' cultural perspective. This includes research in cross-cultural communication and contrastive rhetoric. Hutchinson and Waters (1987, p.54) described this approach as understanding 'what the learner needs to do in order to learn'. Long (2005, p.22) goes on to argue that syllabuses only built around linguistic analysis

fail to consider advances in second language acquisition and NA methodology needs to consider 'some non-linguistic unit of analysis'. A key component of this process-oriented approach is the understanding of how students learn and therefore, they are central to the analysis. Students are a reliable source of information for how they learn and should be involved in the NA process, as it encourages both teacher and learner awareness which may result in increased participation through awareness raising and reflective practice; however, it may depend upon the students' situation and their level of awareness on how reliable they may be (Long, 2005; Belcher, 2006).

2.3.2.6 Means and Rights Analysis

Means analysis aims to investigate the local educational culture in which the programme will be run and involves consideration of: institutional factors, including how the institution and students prioritise language courses, and the institutions teaching culture; the role of EAP and subject practitioners, including their level of expertise and willingness to co-operate or team teach; and the length of the course. All these are important factors in NA as Dudley-Evans and St John (1998) state that a programme that is appropriate in one institution or environment may not necessarily work in a different one. Means analysis may be conducted using observations of the teaching environment and interviews with stakeholders to understand the local academic culture, how teaching staff view the role of language and EAP within their disciplines, and openness to collaborative teaching.

The final, and often least discussed, area for consideration is Rights Analysis. Rights analysis is used to frame NA from the perspective of the student and how traditional

power relations within an institution place students as 'compliant subjects' rather than 'active participants' in decision making (Benesch, 1999, p.315). Benesch (1999) describes conducting a rights analysis by observing a lecture and taking notes of the interactions that occur and subsequently, students can respond orally or in written form about their reactions to the course. This helped identify student difficulties such as the speed of the lecture, assigned pre-reading and asking questions. These were then relayed back to the subject lecturer; as a result, this made the course more negotiable and allowed students to 'participate more actively as members of an academic community' by accessing their options and prioritising their needs (Hyland, 2006, pp.79-80). Rights analysis supports an academic literacies approach to challenging the dominant literacy practices within academic communities.

2.4 Previous Needs Analysis Studies of Academic Writing

Research on academic writing has increased as a response to the understanding that students need a discipline-specific specialised literacy. This research has highlighted the 'sociocultural dimension of academic writing' and that disciplines are governed by a shared communicative purpose of knowledge creation (Swales, 1990; Geisler, 1994; Berkenkotter and Huckin, 1995 cited in Zhu, 2004a, p.29; Hyland, 2000; Wardle, 2009) A large amount of research has been done on academic genres, including genre text types, structures and features within genres. The research shows variation of genres between and across academic disciplines and that the difference highlights the variation in values and beliefs in different academic communities (Conrad, 1996; Hyland, 1997; Chang and Swales, 1999 cited in Zhu, 2004a; Peacock, 2002; Hyland, 2009). However,

one criticism of these studies is the reliance on professional genres or published research articles.

Consequently, research on genre families of student writing has been carried out to identify the writing tasks students need to complete in higher education. An early study by Horowitz (1986) identified seven categories of writing genres across seventeen departments at an American university. A more recent and comprehensive study was carried out by Nesi and Gardner (2012) which was based on the analysis of the British Academic Written English (BAWE) corpus of student writing. Their study highlighted thirteen genre families (see Appendix A) which they believe are applicable to all university contexts; however, they do concede that further investigation of disciplinary contexts may reveal genres not yet identified, and genres of the same name may have different linguistic features in different disciplines. Further research has been carried out on student writing tasks at both the undergraduate and graduate level (Braine, 1995; Hale, Taylor, Bridgeman, Carson, Kroll, and Kantor, 1996; Nesi and Gardner, 2006; Cooper and Bikowski, 2007; Gardner, 2008; Gillet and Hammond, 2009). These studies concentrated on genres across a wide range of disciplines. Conversely, research has been carried out on student writing in specific disciplines and these include: Zhu (2004b) who investigated assignment types within a Business course and what skills were required to complete them; Gimenez (2008) who investigated discipline writing in Nursing and Midwifery; and both Jackson, Meyer and Parkinson (2006) and Rahman, Ming, Aziz and Razak (2009) who investigated student writing in the sciences. Very little research has been conducted on student writing within Engineering. The research that has been carried out tends to focus on corpus analysis and the development of Engineering word lists from

textbooks (Ward, 2009; Shamsudin, Manan, and Husin, 2013; Hsu, 2014). Therefore, this study attempts to address this gap by analysing the writing genres in a first year Engineering course and combining this with analysis of both faculty and student views on academic writing, and how these views converge and contrast.

Previous studies have been undertaken by analysing students' writing needs from different perspectives: tutor expectations (Vardi, 2000; Zhu, 2004a; Nesi and Gardner, 2006); students' understanding and perception of writing needs (Leki and Carson, 1994; Asaoka and Usui, 2003). One possible weakness of these studies is the lack of cross analysis of between faculty and students. However, one study contrasted the views of both tutors and students (Bacha and Bahous, 2008), but this was based more on the perception of language proficiency, rather than taking an academic literacies approach of analysing the differences between faculty and students' understanding of the writing process, and what is required for a particular genre (Lea, 2004). This study aims to identify these differences and as a result improve the teaching and learning within the Engineering department. The next section discusses the research methodology used for the NA and how the data collected will be analysed.

Chapter 3

Methodology

3.1 Introduction

The current study uses a case study approach and collected qualitative data through the analysis of institutional artefacts and interviews with faculty members and students to form part of a needs analysis of a first year Engineering degree programme at an English-medium university in Kazakhstan. A case study is a 'study of a case in context' and this research strategy was chosen to investigate a particular phenomena in context, a first year Engineering course, and to probe and deeply analyse the relationships within this unit (Cohen, Manion and Morrison, 2011, p.289). The case study aims to create a taxonomy of student writing tasks based on Nesi and Garner's (2012) Genre Family Classification (see Appendix A) by analysing course syllabi, coursework and exam instructions given to students. Then, the views of Engineering professors on disciplinary expectations were compared with students' current understanding of these genres. The results of the case study aim to influence writing instruction and reduce student difficulty in writing the required genres in the School of Engineering.

3.2 Context

The School of Engineering (SOE) is one of three schools: School of Science and Technology; School of Humanities and Social Science; at a new English-medium university in Kazakhstan. The university opened in 2010 and has approximately 2500 students, including both Foundation and Undergraduate degree programme students. In

2014-15, 175 students enrolled on the first year Engineering programme. The SOE offers degrees in all four branches of Engineering: Civil, Mechanical, Chemical, Electrical and Electronics. All first year students complete ten core modules over two semesters (see Table 3.1 below). There are eight professors teaching the ten modules with two professors teaching two each: Engineering Mathematics and Vector Calculus; and Engineering System Design 1 and 2. There are no English class requirements and no in-sessional writing support within the school. Therefore, the results of this study may help inform curriculum design at the Foundation level or highlight the need and guide instruction for Pre or In-sessional support.

Table 3.1: First Year Engineering Core Modules

Semester	Core Module
Autumn	Engineering Mathematics
	Engineering Graphics and Models
	Engineering System Design 1
	Modelling and Software Development
	Applied Mechanics
Spring	Introduction to Electrical Systems
	Engineering Practice Management
	Vector Calculus
	Engineering System Design 2
	Engineering Materials

3.3 Participants

The case study involved two types of participants: five subject professors and nine first year students both purposefully sampled from the School of Engineering. Before the research began ethics approval was granted from both the institution where the study took place and the University of Nottingham. Informed consent was given from all participants and anonymity and confidentiality was assured.

3.3.1 1st Year Undergraduate Engineering Students

All nine students were Kazakhstani citizens aged 18 to 22 and all have undergone eleven years of compulsory state education. This education may vary depending on what type of school they attended; however, the students will have studied General English to a minimum of 5.5 on the International English Language Testing System (IELTS) to gain entry to the one-year Foundation programme. Prior to entering the SOE, all students completed the one-year Foundation programme at the same institution. The Foundation programme is an English for General Academic Purposes (EGAP) course, combined for prospective Engineering students, with both a Mathematics and Physics course that have a curriculum similar to A-Level in the UK. The two courses run independently and both courses carry equal weight. The EGAP programme is a 'broad focused' or 'common core' approach and consists of improving the students' reading, writing, speaking and listening skills to enter the academic community, although with no specific discipline in mind. The students will have been exposed to communicative methods of teaching including task and problem based collaborative learning. To progress to the SOE, the students must attain 70% in both subjects and 65% in English. 175 students, 117 male

and 58 female, were accepted into the school for the 2014-15 academic year. This ratio was also achieved for the focus groups with 6 male and 3 female participants. Of the 175 students, 153 came from the Foundation programme and only these students were asked to participate in the study. The students are highly motivated and all the places are on full scholarship. These 'in-service' learners are a useful source of information and due to the completion of the Foundation programme; they should have some understanding of the meta-language used to describe academic writing (Long, 2005, p.20).

3.3.2 Subject Professors

The other stakeholders involved in the analysis are domain experts. All eight Engineering professors who teach the ten first year core modules were asked to participate. Two of the professors are native English speakers and three NNES: Egyptian, Korean and Chinese. The professors are responsible for designing the syllabus and creating coursework and exams. All the professors have a PhD in their teaching subject area obtained from British, American or Hong Kong universities. Teaching experience ranged from 3 to 20 years and two are also professional Engineers.

3.4 Data Collection Instruments

The research was carried out over a two week period and two instruments were used to collect data. The collection of institutional artefacts was used to answer research question 1 and involved collecting and analysing coursework and exam instructions to identify the assessed writing tasks the students had to complete. The second instrument used to answer research questions 2 and 3, were interviews of faculty and students. Triangulation

of both methods, document analysis and interviews, and sources, faculty and students, was used to increase the credibility of data analysis (Long, 2005, pp. 28-30).

3.4.1 Institutional Artefacts

The first part of the Target Situation Analysis involved the collection of the assessed writing tasks required for the ten modules. First, the senior administrator in the School of Engineering was emailed and asked to send the syllabus for each of the ten modules. From each module syllabus, all assessed work and weighting was mapped out for each module (see Appendix B). The senior administrator was able to provide all final exams, where applicable, for each module. Finally, each professor was contacted directly via email or in person to collate all other assessment exams or coursework prompts. Coursework instructions and exams were collected from eight of the ten modules: Engineering System Design 2 and Engineering Materials did not respond; however, the *Research Proposal* and *Essay* were identifiable from the syllabi (see Analysis of Institutional Artefacts 3.5.1).

3.4.2 Faculty Interviews

The second part of the TSA and the Means Analysis involved interviews with domain experts. All eight faculty members, who teach the ten core first year modules, were asked to participate in the study and were contacted directly by email. Five faculty members responded and participated in the study. 'Qualitative interviews' were used with a semi-structured: main questions (see Appendix F), probes and follow-up questions design. This takes a naturalist paradigm and 'interpretive constructionism' approach to research which

aims to understand the interviewees' views and interpretations of the context under study (Rubin and Rubin, 2012). The main questions were based on the aims of the study to investigate the faculty's expectations of the assessed genres, the importance of writing in Engineering, and their view on faculty's role in helping students develop academic writing skills. A core set of six questions were asked about disciplinary expectations based on the identified genre types, so these could be compared against students' understanding of the same genres. The five most common genres across Engineering were chosen: *Case study, Design Specification, Methodology Recount, Problem Question, and Proposal.* Also, *Research Report* was included as it is similar to published research articles, which are key for legitimizing knowledge within a discipline (Berkenkotter and Huckin, 1995; Hyland, 1996). Probes and follow-up questions were asked to elicit further information. The interviews were recorded and lasted between 8 and 17 minutes. My role during the interviews was to raise questions, ask follow-up questions and to rephrase or clarify questions that were misunderstood.

3.4.3 Student Focus Groups

Focus groups were used for the Present Situation Analysis (PSA) and followed after the faculty interviews. For the focus groups, students were recruited by volunteer sampling by email for convenience and willingness to participate. Only the 153 first year Engineering students who entered through the university's Foundation programme were asked to participate. This segmented sample was chosen from the population to create a group with a homogeneous background because the learning background of the 22 students who entered the SOE directly is unknown (Stewart and Shamdasani, 2014). If

included, these could have affected the PSA in regards to current proficiency in English, previous writing experience and genre familiarity. It was intended that each focus group would contain at least six students and the main questions asked (see Appendix G) were the same questions the subject professors were asked about genre expectations, except this time students were asked about their understanding and experience of each particular genre. Additional questions were asked about why the students were taking the course, and future goals and ambitions based on the PSA questions in Table 2.2. However, only two students responded to the initial email and they were asked to bring their peers to the focus group. The first focus group consisted of four students and lasted 20 minutes and the second consisted of five students and lasted 25 minutes. Due to the semi-structured nature of the questions and homogeneity of the population only two focus groups were conducted as the responses to the questions were similar. Although, two groups is perhaps too little to call 'saturation' the similarity of responses suggests that group dynamics did not alter responses (Stewart and Shamdasani, 2014).

3.5 Data Analysis

The following section outlines the data analysis procedure. Initially, the institutional artefacts were analysed to identify genre types the students were required to complete for assessment. The genre families identified were then used to design the faculty interview, (see Appendix C) and the student focus group questions (see Appendix D). All the interview and focus group data was analysed separately then compared to identify similarities and differences between the two stakeholder views, faculty members and students. The results of the analysis are reported in Chapter 4.

3.5.1 Analysis of Institutional Artefacts

Initially, from analysis of the syllabi, assessment type and weighting (see Appendix B), all non-written assessment i.e. *presentations*, *participation*, and assessment weighted under 4% were removed from the analysis (see Appendix C). Then similar to previous studies, coursework instructions, exams (Horowitz, 1986; Braine 1995; Hale et al, 1996) and syllabi (Zhu, 2004b, Cooper and Bikowski, 2007) were analysed and student writing tasks were coded into 13 genre families based on Nesi and Gardner's (2012) classification (see Appendix A). Many of the syllabi and handouts included descriptions of the writing tasks and some included criteria for assessing the tasks. Also, the majority of laboratory handouts included directions for what to include in the written laboratory reports. A total of: 10 syllabi, one for each module; 19 exams, including lecture tests; and 22 coursework instructions were analysed and assessment types were coded into genre type (see Appendix C). The analysis was split into the short answer Exam question types and coursework (see Appendix D and E). The results of the genre analysis were then used to design the faculty interview and student focus group questions.

One criticism of analysing just the syllabi, assessment exam questions and coursework instructions without student writing examples, is that the genre name given in the instruction may not be clear and also the researcher is relying on the 'faculty member or course developers' genre expectations (Gardner and Nesi 2012, p.7). To combat this: first, interviews of faculty genre expectations were included in the research design and second, if the nature of the writing assessment genre was unclear from the syllabus or instructions, initially an informal discussion was held with a current student and if it still

remained ambiguous, the relevant professor was contacted and an example of student writing was analysed. In all, three informal clarifications took place with a student and once an email was sent to a professor to ask for clarification and a student paper was analysed. This was for a *problem question* genre which is similar to a *case study* and this will be discussed further in Chapter 4.

3.5.2 Analysis of Faculty Interviews and Student Focus Groups

The interviews with faculty and the focus groups with students were recorded with consent and then transcribed (see Appendix H). First, during the faculty interviews and focus groups, notes were taken on any particular assessment discussed and the Genre Analysis of Institutional Artefacts (see Appendix C) was checked for accuracy. Formal analysis began when the transcripts, totaling 22 single-spaced pages, were coded. The 'open coding' was based on identified genres in 3.5.1 and other 'Examples, Events and Topical Markers, and Concepts and Themes' raised in analysis of the first two faculty interviews (Cohen, Manion and Morrison, 2011, p.565; Rubin and Rubin, 2012, p.193). These categories where then applied and analysed across both the faculty interviews and student focus group transcripts. New categories were added as the process continued. The coded data was extracted from the transcripts and sorted into a single data file. Then, this was compared within each group, faculty and students, and across the two groups, for similarities and differences in responses and the results are presented in the next chapter.

Chapter 4

Results

4.1 Introduction

The following chapter details the results of the data collected. First, the genre analysis results are presented for the assessed coursework and exams to form the first part of the target situation analysis. Next, the faculty views on English and the genre expectations, which comprises the second part of the TSA, and the Means Analysis of the role of instruction, are presented. Finally, the students' views on the same questions are presented to constitute the present situation analysis and then these are cross analysed with the faculty responses for areas of convergence or disparity from which teaching implications can be drawn.

4.2 Results from the Genre Analysis

The following section details the results from the genre analysis to form part of the TSA in response to research question 1:

1. **What are the assessed writing genres required of 1st year undergraduate Engineering students?**

Through analysis of the 13 formal exams and 6 tests administered in class or after lectures, 3 genre types were identified: *Design Specification, Exercise, and Explanation.* Then, within the *Exercise* genre the question types were broken down into 4 sub-genres: *Calculations*; *Mixed*, which consist of a calculation and short answer; *Multiple Choice*; and *Statistics Exercise,* which included calculating the standard deviation for statistics.

See Appendix C for a breakdown of each individual question and D for a summary. Figure 4.1 below shows the distribution of the genres and sub-genres across all 19 exams.

The results show that over 50% of questions were *Calculations*, which can be expected of a discipline based on Mathematics and Physics. The *Design Specification* question was program code and the *Statistics Exercise* was based on numerical data and calculations, so writing is not directly involved.

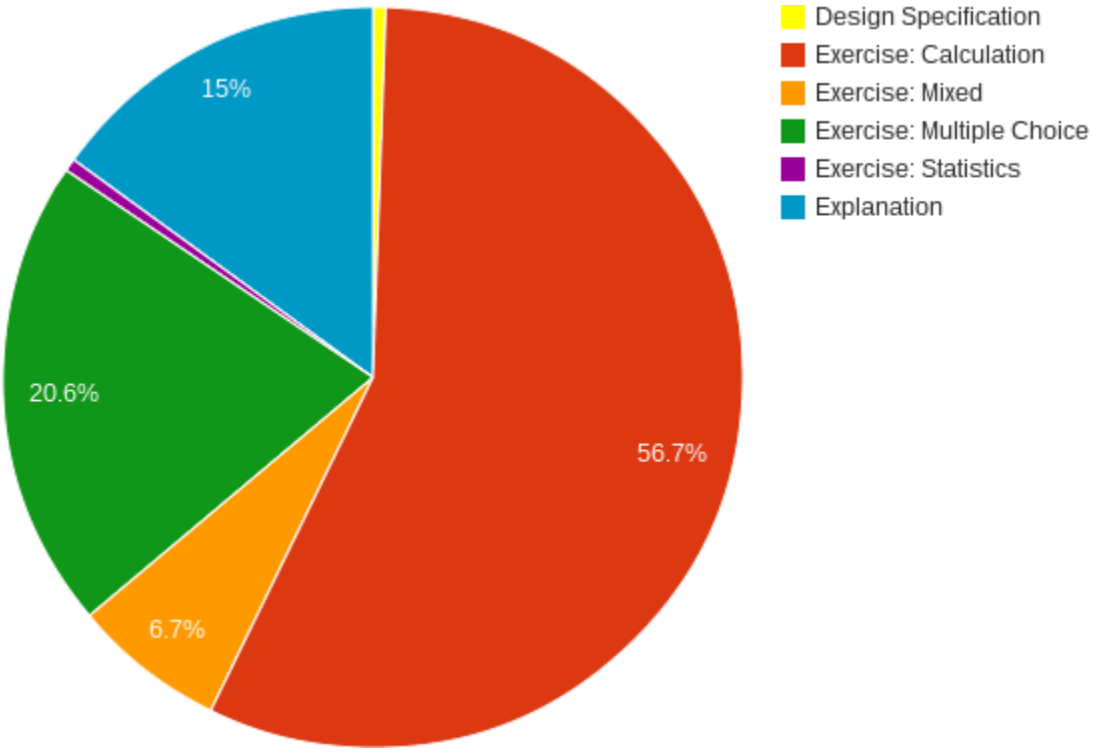

Figure 4.1: Distribution of Identified Genre Types: Exams

However, *Explanation* and *Exercise: Mixed* account for over 20% of all questions and writing plays an important role and is discussed further in 4.3. An *Explanation* question was a short answer question where the student had to demonstrate an understanding of theory such as in Engineering Systems Design 1: Lecture Test 2, Q8, students had to 'Briefly describe the stages of underground coal gasification'.

Through analysis of the 22 coursework assessments, 9 genre types were identified: *Case Study, Critique, Design Specification, Essay, Methodology Review, Narrative Recount, Problem Question, Proposal, and Research Report.* See Appendix C for a breakdown of each individual coursework assessment and E for a summary. Figure 4.2 below shows the total number of each coursework assessment genre.

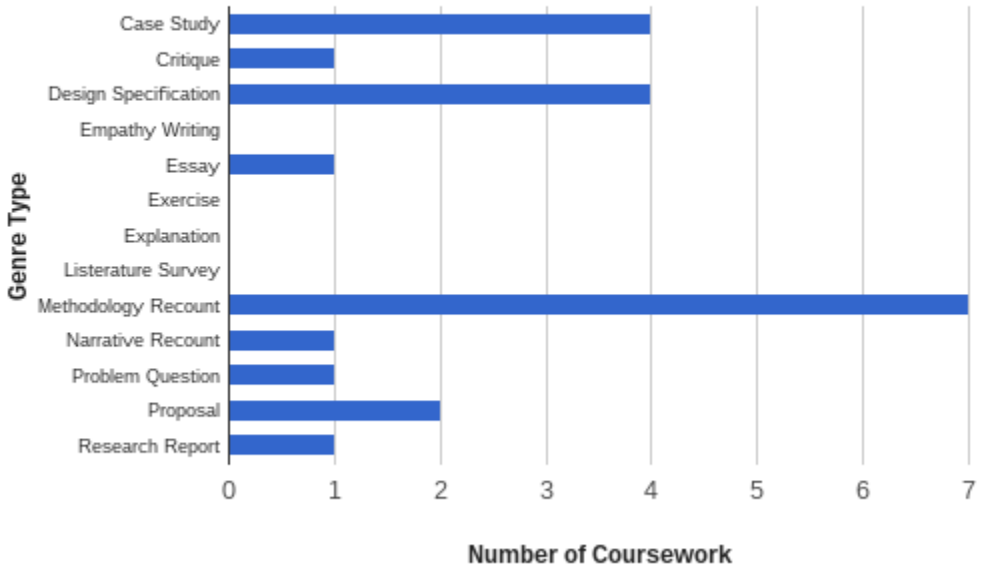

Figure 4.2: Distribution of Identified Genre Types: Coursework.

The results show the most common genre the students are expected to complete is a *Methodology Recount* of which all 7, 7/22 assignments = 32%, were laboratory reports. The *Design Specification*, 4/22 = 18%, again included 2 computer programming assignments which did not involve any writing, but rather computer code. The other 2 assignments were based on computer modeling, but also included writing tasks such as a cover letter which would be classed as *Empathy Writing* in Nesi and Gardner's (2012)

classification. However, the main aim of the assignment was a design specification and therefore recorded as such. Finally, the *Case Study,* 4/22 = 18%, genre was common in the Engineering Practice Management course and after initial analysis it seemed there were 3 *Case Studies* and 2 *Problem Question* genres and therefore both were included in the semi-structured interview questions. After analysis of a student paper, informal consultation with both students and the subject professor, and clarification of the genres in the interviews, which is discussed in 4.3, the result was finalised as 4 (18%) *Case Study* and 1 (4.6%) *Problem Question* genre.

4.3 Results from the Faculty Interviews

The following section details the results from the faculty interviews in response to research question 2 and forms the second part of the TSA and the Means Analysis:

2. **What are faculty views on the role of English and disciplinary expectations for the identified genres above and how are they expressed?**

4.3.1 The View of English within the Discipline

The first interview question discussed the importance of English writing within the Engineering field and within the faculty member's course. All faculty members expressed that English within the Engineering profession is 'very important' and students 'should be able to communicate with other people' (Interview 1, p.88 and 4, p.93). Understanding of their target audience and being able to communicate effectively with a specific audience, which may include other Engineers, suppliers and customers, was perceived as a key skill for Engineers. However, the importance of writing within each course at the undergraduate level differed. For Engineering Mathematics, Vector Calculus,

Introduction to Electrical Systems, and Modelling Software Development, which three out of the five faculty members teach, writing is not as important for 1st year students. In Engineering Mathematics and Vector Calculus the course consists of 'mostly calculations', and students often have to add short written answers to explain the theory behind it, but 'beyond that not a great deal of writing' (Interview 2, p.90). The professor also highlighted that when designing exams, short answers are discouraged because of poor writing skills, thus creating difficulty in marking the questions. In Modelling Software Development a similar theme emerged, the main focus is on computer software programming, so writing 'is not crucial, but still there are some problems' (Interview 3, p.91). Again the professor highlighted reservations about setting 'questions where they have to write' because of student difficulty answering them and poor handwriting skills (Interview 3, p.93).

All the faculty members stated that writing becomes more important as students' progress through the four year programme, and the first year 'is much more on understanding basic theory' (Interview 1, p.88), 'it's like a pyramid in reverse, they start at the top and get a bit more each year' (Interview 2, p.90). For Engineering Graphics and Models, and Engineering Practice Management writing was more important and for the latter, each assessment was based on a writing task with a clear marking criteria of which 15% of the final grade is assessed on 'proper organisation and professional writing' (Interview 5, p.95). This includes grammar, organisation and appropriate lexis. This was the only module where students' writing was assessed formally, most others would overlook poor structure and grammar, 'as long as I understand the idea that they are trying to present' (Interview 2, p.90). However, one professor noted that organisation is important and

students should structure their answers ‘I am not try to find your answers, you should show your answers to me. So, here they don’t understand that’ (Interview 4, p.94).

4.3.2 Disciplinary Expectations of the Genres

The second part of the interviews concentrated on disciplinary expectations of the genres identified in 4.1. Below are some brief descriptions of what is expected for the six genres discussed.

Design Specification

This type of assignment was found in Engineering Graphics and Models, and the Modeling and Software Development modules. In Engineering Graphics and Models, part of the design specification would include a cover letter along with a computer model design. The purpose of the cover letter is for students to understand and target their product to a particular audience, for example, they ‘may assume I am a professor or a mayor from the city of Astana’ and try to persuade them to buy their design (Interview 4, p.94). In Modelling and Software Development and Introduction to Electrical Systems, students are more likely to be given a design specification and they have to design a programme or a circuit to meet the specification.

Methodology Recount

The methodology recount accounts for 32 % of the written assessment in the first year course. This type of assessment focused on laboratory experiments. Faculty members expect a ‘synopsis of what they did and what they were trying to do, what they were trying to learn, what they expected to get out of the experiment and then at the end, the conclusions, what they learnt, what they observed’ (Interview 1, p.89). Lab reports are

often done in groups and the labs themselves are structured with calculations and questions to answer in the laboratory and then students are expected to submit a lab report on 'what they did, what they learnt' (Interview 5, p.98). This should be grounded in theory and they 'would expect them to include enough theory in their write up to include what they saw in the experiment' (Interview 1, p.88).

Case Study and Problem Question

The Engineering Practice Management module concentrates on Engineering 'ethics' and 'operations management and risk management, so different aspects of management' (Interview 5, p.97) and involves the most written coursework genres with 7 in total. The *case study* and *problem question* was only found in the Engineering Practice Management module. Initially, after the genre analysis there was some confusion on the difference between the two. For a *case study* in Engineering Practice Management the professor 'expects them to read the case carefully and understand it of course, and make analysis of what is going on, why it happened and what are possible ways to predict this disaster in the future' (Interview 5, p.96). They are given a case to analyse and this is perhaps the distinction between a *case study* and *problem question* 'in the first year we analyse previous cases rather than getting students to suggest solutions to current or new problems. This is something they may do in later years' (Interview 5, p.96). However, one *problem question* is set in this module and is based on Risk Management. The students are expected to choose a real life Engineering project and apply the theory taught in lectures to run a risk management simulation. Finally, one issue that was highlighted across these two genres and the *Proposal* and *Research Report* genres, are the different levels students would be expected to complete a particular genre for a particular subject

module. For example, professor 1 (p.90) states that he would not usually ask a student to submit a case study until the 4th year when a student 'would be better prepared to do justice to a case study'.

Proposal

Students have to submit a *proposal* in Engineering Practice Management and Engineering System Design 2. For Project 2 in Engineering Practice Management students are expected to write a *proposal* for a new product and 'evaluate the market and to target a particular audience' (Interview 5, p.98). Conversely, as also described above, students In Introduction to Electrical Systems, would not be expected to submit proposals 'until later in the third or fourth year, this year mainly more analysis of theory than them designing experiments' (Interview 1, p.90). This possibly highlights disciplinary variations within Engineering and what students are expected to do at certain levels of their socialisation into the Engineering community.

Research Report

The final genre discussed was a *research report* and students have to complete one in Engineering Systems Design 1. Unfortunately, this professor did not volunteer and was unavailable for an interview. A *Research Report* is not completed in any other modules in the 1st year; however, the faculty members commented that 4th year students are expected to complete a capstone project in year 4 which may consist of an empirical research assignment. They would be expected to include: 'a literature review and a full explanation of what they did, their results and importantly their findings' (Interview 1, p.90), 'present their work in relation to the theory' (Interview 3, p.93), and 'write up their

results' (Interview 5, p.98). Although not explicitly stated, it would appear they expect an Introduction, Methods, Results, and Discussion (IMRD) report. Finally, 2 out of the 5 professors expressed concerns about the quality of student writing within these final year reports especially after four years of study (Interview 3, p.92; Interview 4, p.95.) This will be discussed in further detail in the next section.

4.3.3 Faculty Role in Learning How to Write Within the Discipline

The final part of the interview discussed how professors expressed these genre expectations highlighted above and how they view their role in developing academic writing in the School of Engineering. For only one module, Engineering Practice Management, the students are given a 'rubric, so they know for each section how many percent and what exactly what each section is worth', this covers the *case study*, *problem question* and *methodology* recount genres (Interview 5, p.97). Also, for this module they 'are usually given specific questions that they have to include in the report' (Interview 5, p.97). This is at the far end of the spectrum with other professors advising basic structure and assignment length 'I just give a simple outline and say ten pages' (Interview 4, p.96) and one total freedom 'I never tell them how to write' (Interview 1, p.90).

The final question faculty members were asked was 'What do you think is the role of content course instructors, such as yourself, in helping students develop academic writing skills i.e. writing for Engineering purposes?' There was a consensus across all five professors that it was not their responsibility to develop their students' writing skills. One professor mentioned he could point out small mistakes 'but actually develop them in a systematic and serious way then I don't see that as my job' (Interview 2, p.92). One

professor went on to state that ‘we do expect them to already be able to write a report and express what their ideas and thoughts are’ when they arrive at the SOE after the one year Foundation programme, but conceded that ‘there are students who are weak’ (Interview 5, p.98). Whether students have enough experience and understanding of these genres will be discussed in the next section 4.4.2. However, when I suggested that writing within Engineering ‘is very different than what we do at the Foundation’ one professor did express that the Foundation is of use to students providing ‘a bag of tricks and they start to get confident’ and ‘we are building on that’ (Interview 1, p.90). Although none felt they were directly responsible for developing student writing, two professors stated the importance of lectures and course reading in socialising the students into how Engineers think and present knowledge, ‘One of the things that during the lectures I lay down the theory and foundations of what is going on, so hopefully when they do get the homework they can appreciate where I am coming from’ (Interview 1 p.90) and ‘Even though the cases that we provide they have to read very thick lengthy case studies, so that can help them understand how to write in Engineering’ (Interview 5, p.98).

Finally, three of the five professors suggested an academic writing course should be available within the SOE, ‘To be honest it would be better to have an academic writing course because I checked the curriculum at the moment and there is no academic writing course’ (Interview 3, p.93). Writing assistance has been brought in to help the final year students because ‘the English is awful’ (Interview 3, p.93) and ‘otherwise they cannot submit their work even if their design is very good’ (Interview 4, p.96). This certainly highlights a need for in-sessional support throughout the four year programme rather than trying to remedy writing problems after four years of study.

4.4 Results from the Student Focus Groups

The following section details the results from the PSA student focus groups in response to research question 3 below, and compares the results for similarities and differences:

3. **What is the students' current understanding and experience of these genres?**

4.4.1 Student Motivation for Taking the Course and Importance of English in Engineering

The first part of the student focus groups concentrated on students' reasons for taking the course, experience of studying English, and their perception of the importance of writing within Engineering. All the students responded they were taking the course with the purpose of gaining future employment within the Engineering field. The applied or vocational nature of Engineering was expressed in both the student focus groups, 'It is not just science; it is the application of this science' (Focus Group 1, Student 2, p.99) and faculty interviews, 'they get real hands on experience to do programming' (Interview 3, p.92) and 'they use data from the USA and UK and try to tailor it for the Kazakh market' (Interview 5, p.98). As previously mentioned they may be targeting different audiences, and therefore register in writing plays an important role. This will be discussed further in Chapter 5.

All the students have been studying English from between 7 and 12 years depending on their previous schooling experience. Again, communication between different stakeholders in both an academic, students and professors, and professional, Engineer and customer, context is seen as important. More specifically, the importance of writing when

answering questions was highlighted because ‘if you write unclearly then the professors might lower your mark’ (Focus Group 2, Student 2, p.104) and ‘it is kind of crucial to write properly’ (Focus Group 2, Student 3, p.104). Students understand the importance of writing clearly, yet as described in section 4.3.1, subject professors have highlighted difficulties in understanding student writing. Also, similar to faculty responses both Focus Groups noted the importance of writing may be dependent on a particular coursework or module. For example, writing skills for lab reports were not as important as the data and calculations, ‘2 or 3 sentences for comments’ (Focus Group 1, Student 1, p.100) and ‘In research reports they also look at your writing skills, but in lab report they don’t’ (Focus Group 2, Student 5, p.107).

4.4.2 Students’ Experience and Understanding of the Identified Genres

The same six genres discussed with the faculty members in 4.3.2 were discussed with the two focus groups. Below are brief summaries of students’ previous experience and current understanding for each genre.

Design Specification

All nine students have had no previous experience in computer programming and modelling, and stated that ‘understanding the software’ (Focus Group 1, Student 3, p.100) was more important and ‘It is not related to writing’ (Focus Group 2, Student 2, p.105). In Engineering Graphics and Models, students were expected to submit a cover letter with their design. None of the students have had any experience of writing cover letters and one noted ‘Actually, no. Cover letter writing was not in Foundation’ (Focus Group 2, Student 2, p.100). However, the students had a good understanding of the purpose,

'persuading him it's a good idea to buy it' (Focus Group 2, Student 2, p.105) and register, 'we can address him not as a professor...dear mayor I build this for your city' (Focus Group 2, Student 2, p.105). The EGAP Foundation programme tends to focus on the essay genre and non-academic register is discouraged.

Methodology Recount

The methodology recount is the most common writing genre for first year Engineers. All the students have had previous experience writing laboratory reports for Physics in the Foundation programme and some students have had previous experience writing these in their native language before university. One student commented that the laboratory reports in Foundation Physics 'were a little bit harder because they need a little bit description in English' (Focus Group 1, Student 2, p.100); however, in Focus Group 2, Student 2 noted the structure was similar, 'the template that was in Foundation is very similar' (p.106). Perhaps due to this previous experience the students understanding of this genre was good and met the faculty's expectations. Across both groups they highlighted the need for description of process 'what happened during the certain process'(Focus Group 1, Student 2, p.101), results 'we compared theoretical value with practical value' (Focus Group 2, Student 2, p.106), and what they learnt.

Case Study and Problem Question

The case study genre was new to all students; however, one student from each focus group referred to writing the Research Project, a component of the EAP course in the Foundation programme. In Focus Group 1, Student 1 stated that 'In Foundation...we have a problem and we should provide a solution...Now we have case studies...and already

have solutions for them and we just have to evaluate them'(p101.). In Focus Group 2, Student 3 commented that 'the structure of the case study is very similar to the Research Project in the Foundation year'(p.105). Therefore, it seems students have some experience of writing a *Case Study*, but not in full and is perhaps closer to a *Problem Question* in which solutions are presented rather than a full analysis of a case. The previous genre experience the students may be referring to is a Situation, Problem, Solution, Evaluation (SPSE) rhetorical structure often taught by EAP teachers in the Foundation programme.

Regarding students' current knowledge of what is required of the *Case study* and *Problem Question* genre; all students showed a clear understanding of its function. 'A case study is deep analysis of a problem it is to help us understand the importance of making ethically proper decisions' (Focus Group 1, Student 3, p.100), and this corresponds with the faculty members expectations of assessing risk and developing Engineering ethics. The students also had a clear understanding of what to include 'first of all we find the background...then will move onto the analysing part' (Focus Group 2, Student 2, p.104).

Research Report

Although the students completed a Research Project in the Foundation programme, it was not based on empirical research. This is closer to an *Essay* or *Literature Survey* (see Appendix A) genre and was based on published academic sources. Therefore, all students expressed they have had experience writing a *Research Report*, but when Focus Group 2 were asked what would be expected in an Engineering *Research Report* they expressed

only the researching aspect; whereas, Focus Group 1 understood the disciplinary expectation of not just providing theory, but describing an experiment and presenting and interpreting the results 'We wrote about some theory and then what we did and our result' (Focus Group 1, Student 3, p.102).

Proposal

The students have to write a *Research Proposal* for Engineering System Design 2 and Engineering Practice Management. Both focus groups commented that they had previous experience writing a *proposal* for their Research Project, described above, in the Foundation programme. However, this was their only experience and at the time the focus group was held, this coursework assessment was forthcoming in both modules. This affected the students understanding of the genre with students in Focus Group 1 unclear on what they were required to submit; whereas, students in Focus Group 2 were clear on what was required for Engineering Practice Management, 'design some product that will solve a problem in Kazakhstan and then we will have to convince the audience that they have to buy a product.' (Student 1, p.106) and stated that for Engineering System Design 'our teacher gave us again like a template so everything, it explains what we should write for every section' (Student 5, p.106). Consequently, even though students may not be fully aware of the disciplinary expectations for a *proposal*, writing instruction for this particular assessment has been given and will be discussed below.

4.4.3 Focus Group Results on Writing Instruction within Engineering

The final section to be discussed are the student responses to questions about how these genres are taught, and who they perceive are responsible for developing their academic

writing skills. What was clear from the two Focus Groups was that none of the genres are taught explicitly and how students were assisted in writing these genres corresponds to the faculty views on their role in developing academic writing. In Engineering Practice Management they are given a rubric as a guide, but there are no explicit instructions of how to write a *case study* or *problem question*. They are usually given a specific case and questions to help guide them and 'help us to understand what we should write' (Focus Group, 1, Student 4, p.102). Also, for the laboratory reports across modules they are usually given questions to answer and a template, 'it's good they give us content, template' (Focus Group, 2, Student 5, p.106).

However, for all bar two modules, Engineering System Design 1 & 2, they are not given any guidelines on how to structure their coursework, 'I think that was the only course was the detailed description of writing' (Focus Group, 1, Student 2, p.102). For these two modules the professor posts a writing guide onto Moodle, a virtual learning environment, which can help them to write, 'it explains what should we write for every section' (Focus Group, 2, Student 5, p.106). For all other coursework the students have to rely on their previous experience described above in the Foundation programme, 'For some of them the Foundation course was helpful' (Focus Group, 2, Student 5, p.107), or ask for help from more experienced others 'sometimes we ask from the higher grade' (Focus Group, 2, Student 3, p.107), and the use of the internet, 'Well we can still search from the Google' (Focus Group, 2, Student 2, p.107). This lack of guidance perhaps leads students to perceive that structure is not important, 'Actually the structure isn't so much important in writing' (Focus Group, 1, Student 2, p.102) and only the word limit is important, 'Actually, we had constraints for the word, word limits' (Focus Group, 1, Student 2,

p.102). This contrasts quite sharply from the professor in interview 4's view that organisation is important and students should not worry so much about how much they have to write, 'Don't think ten pages, when you write sometimes you may write more than ten pages, sometimes maybe nine pages...I think they stay too disciplined' (Interview 4, p.96). This lack of instruction may be causing some of the students' problems answering short answer questions and the quality of writing in year 4.

Another contrasting view that was highlighted was faculties' understanding that feedback is central to the process of learning and students learn from the experience of writing and correcting their mistakes. This was a theme in 3 out of the 5 faculty interviews: 'Writing to me is something you teach yourself from a lot of feedback from other people' (Interview 1, p.91), 'I think the feedback that we give them is very important' (Interview 5, p.98), and 'If you make the same mistake once it is OK, twice maybe, three times stop it' (Interview 5, p.95). However, both groups of students felt they were not getting any feedback on their writing, 'Yes, no feedback, good or bad.' (Focus Group 1, Student 1, p.103) and as a result cannot learn from their mistakes, 'We already wrote five lab reports, but no grades and now we are going to write a sixth report and what if we are writing the same way and what if all of them were bad' (Focus Group 2, Student 1, p.108). This appears to be an area for improvement, but as one professor highlighted it may come down to workload, 'lab reports for a very large class are often marked by the TA [Teaching Assistant] just because of the huge numbers involved.' (Interview 1, p.89)

The final question asked was 'who do the students think is responsible for developing their academic writing?' The students expressed that the faculty members are busy and

perhaps should not be responsible for teaching them English, 'he can't teach us English as he already has a lot to do' (Focus Group 2, Student 5, p.109). Also, they are aware that weaknesses in their writing are not the fault of their professors, 'it is not professor fault that we write badly' (Focus Group, Student 2, p.109). To address this problem, the students in Focus Group 2 suggested the same views as the professors that an 'academic writing centre' would be of use in the SOE (Focus Group 2, Student 4, p.109). One student went on to suggest collaboration between a writing teacher and a content teacher with each practitioner taking responsibility for either the English and the content and working closely together to make sure their expectations and teaching are the same:

> It would be great if one or two professors would work together with other professors from other course, like this one professor responsible for writing, the teaching of writing and other for course content and they communicate with each other and he will tell him what he expects from this and then the other professor will teach us how to write. (Focus Group 2, Student 3, p.109)

Finally, one student highlighted the difficulty in team teaching and expressed the importance that the two practitioners work collaboratively, so they do not receive mixed messages and they expect the same things, 'what if professor expects one thing, but the English teacher teaches other thing' (Focus Group 2, Student, 5, p.109).

4.5 Summary of Results

The following section briefly summarises the results of the study by answering the three research questions stated in Chapter 1, based on the results of the data analysis presented above.

Research question 1 analysed the assessed writing genres required of a 1st year undergraduate Engineering programme. The results showed that the majority of exam questions (56%), were *calculations*. However, *explanations* and short answers with calculations accounted for over 20 % of questions and writing is an important factor when completing this questions. For the coursework assessments, 9 genre types were identified with *methodology recount*, and *case studies* being the most prominent.

The results from research question 2 show that writing in English is an important aspect of communication for Engineers; however, the importance of writing varies within each 1st year module. Clear disciplinary expectations are highlighted for the 6 most common genres, but again how these expectations are expressed varies from faculty member. Finally, all faculty members stated it is not their responsibility to directly develop student writing and suggest a need for academic writing support within the School of Engineering.

Finally, the results from research question 3 show students see the vocational value of taking the course and that they understand the importance of writing within the field. Students have had varied experience of writing the identified genres, but show a good understanding of what is expected with only minor discrepancies between their understanding and disciplinary expectations. However, the main area of contrast was instruction, with students' receiving little guidance on how to write the genres and feedback when they do. Again students highlighted a need within the SOE for writing instruction. From cross analysis of the results of the present situation analysis and target

situation analysis some ‘learner lacks’ and teaching implications have been identified which will form part of the discussion in chapter 5.

Chapter 5

Discussion and Conclusion

5.1 Introduction

The aim of this research was to undertake a needs analysis of a 1st year undergraduate Engineering programme at an English-medium university. The NA included a genre analysis of the assessed writing genres which were then used to generate interview and focus group questions for two stakeholders, the faculty and students. All these instruments, institutional artefacts, interviews and focus groups, were based on NA methodology and formed part of a target situation analysis, present situation analysis and means analysis. This final chapter offers discussions and conclusions to the research questions, pedagogical implications, the limitations of the study, and recommendations for further studies.

5.2 Discussion

5.2.1 Discussion of the Genre Analysis

The results of the genre analysis identified 9 different coursework genre types found on the 1st year programme. These are in order of frequency: *Methodology Recount* (32%),

Case Study and *Design Specification* (18%), *Proposal* (9%) *Critique, Essay, Narrative Recount, Problem Question,* and *Research Report* (4.6%). In comparison to Nesi and Gardner's (2012) study the results for 1st year Engineering genres are similar. The results from the BAWE Engineering corpus are discussed in Gardner (2008) and again *Methodology Recount* were the most common genre with 48.4% of first year genres. The *Case Study* genre was second with 16.1% and *Design Specification* came third, with 9.7%.

The Case Study genre was only found in the Engineering Practice Management module which title suggests it relates to professional practice, and this corresponds to Nesi and Gardner's (2012, p.39) categorisation of *Case Studies, Design Specifications, Problem Questions* and *Proposals* as genres that are 'preparing for professional practice'. This proportionally large amount of *Case Study* genres is perhaps a positive aspect of the course, particularly as Engineering is vocational in nature, and as Gillet and Hammond (2009, p.129) found in their study of assessment in one university in the UK that 'case studies appear to be underused given their relevance for employability'. This distinction of Engineering as a 'professional' discipline has implications for writing, as rather than pure disciplines, it is 'concerned with acting rather than knowing' (Squires, 2005, p.130) and writers need to 'act' within the same body of knowledge and disciplinary conventions as their readers. Also, Nesi and Gardner's (2012) assertion that the *Design Specification* genre are concentrated within areas of 'manufacturing and computing' correspond to the results of this study with these genres only found in Engineering Graphics and Models, and Modelling and Software Development, two modules based on computing (ibid, p.39).

One criticism on Nesi and Gardner's (2012) taxonomy that arose from this study is their lack of classification of 'hybrid genres' (Hetherington and Moron, 2005, p.15). This was highlighted in one assessment where students had to write a cover letter, which would be classified as *Empathy Writing*, as part of a *Design Specification.* However, they do acknowledge that less complex genres such as a *Literature Survey* and *Methodology Recount,* may be combined to form part of a *Research Report,* which is seen as a 'more elaborate genre encountered later in their education' (Gardner and Nesi 2012). This is also reflected in this study with only 1 *Research Report* genre in the first year; however, it was commented that students had to complete a *Research Report* in their final year and that they were having difficulty writing this more complex research genre. This will be addressed below in section 5.2.2 and 5.3.

5.2.2 Discussion of the Target Situation Analysis, Present Situation Analysis and Means Analysis

The role and importance of English within Engineering varied across the discipline. This distinction was perhaps seen between the pure disciplines such as Vector Calculus and computer based modules such as Modelling Software Development, which view the role of English as less important, and the applied modules such as Engineering Practice Management, which is the only module to include quality of writing and organisation into their assessment criteria. This correlates with all the professors views that English and communication are 'very important' in the Engineering profession. This contrast between the importance of writing at the undergraduate level and the Engineering profession was also shared by Engineers in Zhu's (2004a) study and this 'tension between the discourse

requirements of the professional and academic discourse communities' has also been noted by Lea and Stierer (2000 quoted in Nesi and Gardner, 2006, p.106). However, although within the first year the importance of English varies, all faculty stated that writing becomes more important as they move through the undergraduate programme and students in the final year have to write an extended research genre. Although not directly related to the aims of this study, 2 out of 5 professors raised concerns about the quality of student writing in these final year research reports and due to this an EAP practitioner has been brought in especially to help students. This has ramifications on how the SOE views the teaching of writing and takes what Lea and Street (1998, pp.158-159) call a 'study skills' approach and attempts to 'fix' problems with student writing, which in this case, is after four years of studying Engineering. Possibly due to this remedial approach to writing, it was highlighted that after the Foundation programme students receive no further English writing instruction while studying in the SOE and this certainly has pedagogical implications which will be discussed further below.

The cross analysis of the faculty views of genre expectations, the target situation analysis, and the students' understanding of these genres, the present situation analysis, identified some 'lacks' or 'deficiencies' between the two views (Hutchinson and Waters, 1987; West, 1994; Jordan, 1997). However, these 'lacks' were not significant as students' only had no previous experience of writing the *Design Specification* and *Case Study* genres whereas, they had previous writing experience of all the other genres. Previous exposure to these genres was from the EGAP classes and Lab report writing in Physics from the Foundation year. This perhaps highlights the usefulness of the Foundation programme in transitioning from school to tertiary education, which was echoed by 2 professors

(Interview, 5 and 1) who stated they expect students to be competent writers when they arrive at the SOE and that they can build on that foundation. This matches Dudley-Evans and St.Johns (1998, pp.4-5) variable characteristics of ESP instruction who suggest that courses are for intermediate or advanced students with some basic language knowledge. Another positive result from the deficiency analysis was students had a clear understanding of the function of all the genres except the *Proposal,* which was a forthcoming assessment at the time of the focus group.

Finally, perhaps the results with the greatest pedagogical implications came from the means analysis. A view also supported by White (1988) who suggests means analysis may be the most important consideration of a NA. These responses outlined the methodology and responsibility behind writing instruction. None of the genres identified are taught explicitly in any module. Students' are expected to rely on previous writing instruction in the Foundation programme or through self-study. However, two professors (Interview 1 and 5) noted the importance of attending lectures and course readings in helping students understand the way Engineers communicate. Another area that was causing students difficulty was the lack of guidelines on the structure of the genres which may have lead some students to believe structure is not so important. Also, it was revealed that students were not receiving any feedback from assessed coursework, even though the importance of learning from feedback was expressed by one professor (Interview 1). None of the professors interviewed felt it was their responsibility to teach or help students develop their writing. This contrasts with the Engineering professors in Zhu's (2004a, p.34) study who believed they did play a role in helping students write due to their knowledge of writing within the discipline; however, this role was obviously

secondary to content knowledge. Finally, both students and faculty highlighted the need for writing support in the SOE.

5.3 Pedagogical Implications

The results of the NA clearly show the need for writing support. Lack of instruction on genre types, organisation and feedback seemed to be causing the students the most difficulty. One student went on to suggest almost a Content and Language Integrated Learning (CLIL) approach or close collaboration between an EAP practitioner and subject specialist. This could be a viable option within the SOE, but as one student commented it is important that they work together so they have the same writing expectations and do not give conflicting advice to students. For example, in Lea and Street's (1998) study they found that different advice and expectations of tutors across modules was causing confusion for students on how to write within their field of study. In-sessional support would be more favourable than a Pre-sessional ESP course or adaptation to the current EGAP Foundation programme due to the problems highlighted in the 4th year of study.

In-sessional support could help to improve the teaching of short answer questions, which may influence on examination design, and also to teach *Empathy Writing* genres such as cover letters and expert advice to industry, where students have to alter their register and target different audiences. This would be useful as all the students stated their aim for taking the course was to become Engineers and targeting a variety of stakeholders was highlighted by faculty as an important skill for an Engineer. Initially, a genre-based approach could be used until students are competent in the disciplinary discourse, then a

more critical academic literacies approach may be used (Wingate, 2012). Finally, this in-sessional support would allow students to improve writing skills through practice and receiving feedback, which is uncommon in content classes (Zhu, 2004a; Ferris, 2006). As well as these contributions highlighted above, this study has contributed and extended knowledge on the disciplinary expectations of writing genres for 1st year Engineers in a new context.

5.4 Limitations and Recommendations for Further Studies

This study collected institutional artefacts, and interview and focus group data from faculty and students on a 1st year Engineering course at an English medium university in Kazakhstan. As a result, this needs analysis is based on this particular context and therefore may not be generalisable to other contexts. Ideally, the NA should have been carried out at the beginning of the year rather than half way through, as this may have influenced students' understanding of genre expectations. Also, only five of the eight professors from the first year Engineering programme were available for study and only two focus groups were conducted due to limited volunteers. Finally, this study only identified the assessed genres in the first year of study and a detailed present situation analysis was not carried out.

These limitations may allow for further study in this particular context in a number of areas. First, further research could be carried out across all four years of study to build a more comprehensive picture of writing genres in Engineering, and how these genres progress as students work towards becoming Engineers. Also, a comprehensive corpus of student writing could be collected to allow deeper analysis of each particular writing

genre. This could include corpus, genre or move analysis of student writing. Finally, further research is needed in needs analysis methodology, with no notable contributions since Dudley-Evans and St.John's (1998) addition to Hutchinson and Waters (1988) earlier methodology.

5.5 Conclusion

The following case study carried out a needs analysis of the assessed writing genres in a first year undergraduate Engineering course at an English-medium university in Kazakhstan. The results highlighted 9 writing genres for student coursework and 3 genre families for examinations. Then, the role of English within Engineering and faculty expectations of the most common genres were investigated and analysed with students' understanding and experience of these genres. The results affirm the importance of writing within Engineering is seen as crucial to success, although the lack of genre instruction and assessment feedback may cause student difficulties in writing. As a result, it is suggested that in-sessional support is necessary within the SOE to address these problems. This study has highlighted areas for curriculum design including increased collaboration between EAP practitioners and faculty, and a range of genres that could be taught. Finally, this research lays a foundation for further NA across all four years of the Engineering programme to improve academic success within the SOE.

6. References

Asaoka, Chitose, and Usui, Yoshiko. (2003) Students' Perceived Problems in an EAP Writing Course. *JALT Journal* 25 (2): pp.143- 172.

Bacha, Nahla Nola, and Rima Bahous. (2008) Contrasting views of business students' writing needs in an EFL environment. *English for Specific Purposes* 27 (1) (2008): pp.74-93.

Basturkmen, H. (2010) *Developing Courses in English for Specific Purposes*. Hampshire: Palgrave Macmillan.

Belcher, Diane. D. (2006) English for Specific Purposes: Teaching to Perceived Needs and Imagined Futures in Worlds of Work, Study and Everyday Life. *TESOL Quarterly* 40 (1): pp.133-156.

Benesch, S. (1999) Rights Analysis: Studying Power Relations in an Academic Setting. *English for Specific Purposes* 18 (4): pp.313-327.

Berkenkotter, C. and Hucklin, T.N. (1995) *Genre Knowledge in Disciplinary Communication: Cognition/Culture/Power*. Hilsdale, NJ: Lawrence Erlbaum.

Berkenkotter, C., Hucklin, T., and Ackerman, J. (1991) Social context and socially constructed texts: The initiation of a graduate student into a writing research community. In C. Bazerman and J. Paradis (Eds.), *Textual dynamics of the professions* (pp.191-215), Madison: University of Wisconsin Press.

Borg, E. (2003) Key Concepts in ELT: Discourse Community. *ELT Journal* 54 (4): pp.398-400.

Braine, G. (1995) Writing in the natural sciences and Engineering. In D. Belcher, and G. Braine (Eds.), *Academic Writing in a Second Language* (pp. 113-134). Norwood: Ablex Publishing Corporation.

Bruce, I. (2011) *Theory and Concepts of English for Academic Purposes*. New York: Palgrave Macmillan.

Chambers, F. (1980) A Re-Evaluation of Needs Analysis in ESP. *The ESP Journal* 1 (1): pp.25-33.

Cohen, L., Manion, L. and Morrison, K. (2011) *Research Methods in Education*. 7th Ed. Oxon: Routledge.

Coleman, James. A. (2006) English-medium teaching in European Higher Education. *Language Teaching* 39 (1): pp.1-14.

Conrad, S. (1996) Investigating academic texts with corpus-based techniques: An example from biology. *Linguistics and Education* 8: pp.299-326.

Cooper, A. and Bikowski, D. (2007) Writing at the graduate level: What tasks do professors actually require? *Journal of English for Academic Purposes* 6: pp.206-221.

Cutting, J. (2002) *Pragmatics and Discourse: Resource Book for Students*. London: Routledge.

Dudley-Evans, T. and St John, M. (1998) *Developments in English for Specific Purposes*. Cambridge: Cambridge University Press.

Ferris, Dana, (2006) Does error feedback help student writers? New evidence on the short and long-term effects of written error correction. In: Hyland, K. and Hyland, F. (Eds.) *Feedback in Second Language Writing: Contexts and Issues*. Cambridge: Cambridge University Press.

Flowerdew, J., and Peacock, M. (2001) *Research perspectives on English for academic purposes*, Cambridge: Cambridge University Press.

Gardner, S. (2008) Integrating ethnographic, multidimensional, corpus linguistic and systemic functional approaches to genre description: an illustration through university history and engineering assignments [Online], in E. Steiner and S. Neumann (eds), *Proceedings of the 19th European Systemic Functional Linguistics Conference and Workshop*. 23- 25 July 2007, Universität des Saarlandes, Saarbrücken, Germany, pp 1–34. Available at: http://scidok.sulb.uni-saarland.de/ volltexte/2008/1688/ [Accessed January 16, 2015)

Gardner, S. & Nesi, H. (2012) A Classification of Genre Families in University Student Writing. *Applied Linguistics* 34 (1): pp.1-29.

Gillet, Andy. and Hammond, Angela. (2009) Mapping the maze of assessment. *Learning in higher education* 10 (2): pp.120-137.

Geisler, C. (1994). *Academic literacy and the nature of expertise*. Hillsdale, NJ: Erlbaum.

Gimenez, J. (2008) Beyond the academic essay: Discipline-specific writing in nursing and midwifery. *Journal of English for Academic Purposes* 7: pp.151-164.

Graves, K. (2000) *Designing language courses: A guide for teachers*. Boston: Heinle and Heinle Thomson Learning.

Hale, G., Taylor, C., Bridgeman, B., Carson, J., Kroll, B. and Kantor, R. (1996) *A study of writing tasks assigned in academic degree programmes*. TOEFL Research Report No. 54. Princeton: Educational Testing Service.

Harwood, N. & Hadley, G. (2004) Demystifying institutional practices: critical pragmatism and the teaching of academic writing. *English for Specific Purposes* 23: pp.355-377.

Hetherington, Anne., and Moran, Charles. (Eds.) (2005) *Genre Across the Curriculum*. Logan, Utah: Utah State University Press.

Horowitz, D.M. (1986) What Professors Actually Require: Academic Tasks for the ESL Classroom. *TESOL Quarterly* 20 (3): pp.445-462

Hsu, Wenhua. (2014) Measuring the vocabulary load of engineering textbooks. *English for Specific Purposes*, 33: pp.54-65.

Hutchinson, T. & Waters, A. (1987) *English for Specific Purposes.* Cambridge: Cambridge University Press.

Hyland, K. (1996) Talking to the academy: forms of hedging in science research articles. *Written Communication* 13 (2): pp. 251-281.

Hyland, K. (1997) Scientific claims and community values: Articulating an academic culture. *Language & Communication* 17: pp.19-21.

Hyland, K. (2000) *Disciplinary discourses: Social interactions in academic writing*. Essex: Pearson Education Limited.

Hyland, Ken. (2002) Specificity revisited: how far should we go now? *English for Specific Purposes* 21: pp.385-395.

Hyland, K. (2006) *English for Academic Purposes: an advanced resource book*. Oxon: Routledge.

Hyland, K. (2009) Writing in the disciplines. Research evidence for specificity. *Taiwan International ESP Journal* 1 (1): pp.5-22.

Hyland, K. (2012) "The past is the future with lights on": Reflections on AELFE's 20th Birthday. *Iberica* 24: pp.29-42.

Hyland, K. and Hamp-Lyons, Liz. (2002) EAP: issues and directions. *Journal of English for Academic Purposes* 1: pp.1-12.

Hyland, K. & Tse, P. (2009) Academic Lexis and Disciplinary Practice: Corpus Evidence for Specificity. *International Journal of English Studies* 9 (2): pp.111-129.

Hyon, S. (1996) Genre in Three Traditions: Implications for ESL. *TESOL Quarterly* 30 (4): pp.693-722.

Jackson, L., Meyer, W. and Parkinson, J. (2006) A study of the writing tasks and reading assigned to undergraduate science students at a South African University. *English for Specific Purposes*, 25: pp. 260-281.

Jasso-Aguilar, R. (1999) Sources, Methods and Triangulation in Needs analysis: A Critical Perspective in a Case Study of Waikiki Hotel Maids. *English for Specific Purposes* 18 (1): pp.27-46.

Johns, A. M. (1997). *Text, role and context: developing academic literacies.* Cambridge: Cambridge University Press.

Jordan, R.R. (1997) *English for Academic Purposes*. Cambridge: Cambridge University Press.

Lave, J. and Wenger, E. (1991) *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.

Lea, Mary. R. (2004) Academic literacies: a pedagogy for course design. *Studies in Higher Education* 29 (6): pp.739- 755.

Lea, M.R. & Street, B.V. (1998) Student Writing in Higher Education: an academic literacies approach. Studies in Higher Education, 23 (2): pp.157-172.

Lea, M.R. & Street, B.V. (2006) The "Academic Literacies" Model: Theory and Applications. *Theory Into Practice* 45 (4): pp.368-377.

Leki, I. & Carson, J. G. (1994) Students' Perceptions of EAP Writing Instruction and Writing Needs Across the Disciplines. *TESOL Quarterly* 28 (1): pp.81-101.

Leki, I. & Carson, J. (1997) "Completely Different Worlds": EAP and the Writing Experiences of ESL Students in University Courses. *TESOL Quarterly* 31 (1): pp.39-69

Long, M.H. (Ed.). (2005) *Second Language Needs Analysis*. Cambridge: Cambridge University Press.

Morgan, B. (2009) Fostering transformative practitioners for critical EAP: Possibilities and challenges. *Journal of English for Academic Purposes* 8 (2): pp.86-99.

Nesi, Hilary. and Gardner, Sheena. (2006) Variation in disciplinary culture: University tutors' views on assessed writing tasks. *British Studies in Applied Linguistics* 21: pp.99-117.

Nesi, Hilary. and Gardner, Sheena (2012) *Genre Across the Disciplines: Student Writing in Higher Education*. Cambridge: Cambridge University Press.

Paltridge, B. (2004) Academic Writing. *Language Teaching* 37: pp.87-105.

Peacock, M. (2002) Communicative moves in the discussion section of research articles. *System* 30: pp.479-497.

Rahman, Momtazur., Md., Ming, Thang. Siew., Aziz, Mohd. Sallehhudin. Abd, and Razak, Norizan. Abdul. (2009) Needs Analysis for Developing an ESP Writing course for foreign Postgraduates in Science and Technology at National University of Malaysia, *The Asian ESP Journal* 5 (2): pp.34-59.

Ramoroka, Boitumelo. (2012) Teaching Academic Writing for the Disciplines: How far can we be specific in an EAP writing course? *English Linguistics Research* 1 (2): pp.33-43.

Richards, J.C. and Schmidt, R. W. (2002) *Longman Dictionary of Language Teaching and Applied Linguistics* (3rd edn). New York: Longman.

Rubin, Herbert. J. and Rubin, Irene, S. (2012) *Qualitative Interviewing: The Art of Hearing Data*. 3rd ed. Los Angeles: SAGE Publications.

Shamsudin, Sarimah., Manan, Amerrudin, Abd.,Husin, Noraini. (2013) Introductory engineering corpus: A needs analysis approach. *Procedia-Social and Behavioural Sciences* 70: pp.1288-1294.

Songhori, M.H. (2008) Introduction to Needs Analysis. *English for Specific Purposes World* [Online], 4 (7). Available at: http://www.espworld.info/Articles_20/DOC/Introduction%20to %20Needs%20Analysis.pdf [Accessed: 20th January 2015]

Spack, R. (1988) Initiating ESL Students into the Academic Discourse Community: How Far Should We go? *TESOL Quarterly* 22 (1): pp.29-52.

Squires, G. (2005) Art, science and the professions. *Studies in Higher Education* 30: pp. 127-136.

Stewart, David. W. and Shamdasani, Prem. N. (2014) *Focus Groups: Theory and Practice*. 3rd ed. Los Angeles: SAGE Publications.

Swales, John. M. (1990) *Genre Analysis: English in academic and research settings*. Cambridge: Cambridge University Press.

Vardi, Iris. (2000) What lecturers' want: an investigation if lecturers' expectations in first year essay writing tasks [Online]. *First-year Experience Conference 2000*. Available at: chrome-extension://bpmcpldpdmajfigpchkicefoigmkfalc/views/app.html [Accessed January 21st 2015]

Wachter, B. and Maiworm, F. (2008) *English Taught Programmes in European Higher Education. The Picture in 2007*. Bonn: Lemmens.

Ward, Jeremy. (2009) A basic engineering English word list for less proficient foundation engineering undergraduates. *English for Specific Purposes* 28: pp.170-182.

Wardle, Elizabeth. (2009) "Mutt Genres" and the Goal of FYC: Can We Help Students Write the Genres of the University? *College Composition and Communication*: pp.765-789.

West, R. (1994) Needs Analysis in Language Teaching. *Language Teaching* 27 (1): pp.1-19.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.

Wenger, E. (2000) Communities of Practice and Social Learning Systems. *Organization* 7 (2): pp. 225-246.

Wenger, B. (2006) *Communities of Practice. A brief introduction* [Online]. Available at: http://http://www.ewenger.com/theory/ [Accessed 2nd January 2015]

Wenger, E., McDermott R., and Snyder, W. (2002) *Cultivating communities of practice: A guide to managing knowledge*. Harvard: Harvard Business School Press.

White, R. (1988) *The ELT curriculum*. Oxford: Blackwell.

Widdowson, H.G. (1983) *Learning Purpose and Language Use*. Oxford: Oxford University Press.

Wingate, Ursula. (2012) Using Academic Literacies and Genre-based Models for Academic Writing Instruction. *Journal of English for Academic Purposes* 11: pp. 26-37.

Wingate, Ursula. and Tribble, Christopher. (2012) The best of both worlds? Towards an English for Academic Purposes/Academic Literacies writing pedagogy. *Studies in Higher Education* 37 (4): pp. 481-495.

Zhu, Wei. (2004a) Faculty views on the importance of writing, the nature of academic writing, and teaching and responding to writing in the disciplines. *Journal of Second Language Writing* 13: pp. 29-48.

Zhu, Wei. (2004b) Writing in business courses: an analysis of assignment types, their characteristics, and required skills. *English for Specific Purposes* 23: pp.111-135.

7. Appendices

Appendix A: The Classification of Genre Families (Nesi and Garner, 2012a)

Genre Families	**Educational Purpose/ Generic Structure/ Genre Network**	**Genre Examples**
1. Case Study	- To Demonstrate/develop an understanding or professional practice through the analysis of a single exemplar - Description of a particular case, often multifaceted, with recommendations or suggestions for future action -Typically corresponds to professional genres (e.g. in business, medicine and Engineering)	*Business Start-up* *Company Report* *Organisation Analysis* *Patient Report* *Single Issue*
2. Critique	-To demonstrate/develop understanding of the object of study and the ability to evaluate and/or assess the significance of the obejct of study -Includes descriptive account with optimal explanation and evaluation with optional tests -May correspond to part of a Research Report, professional Design Specification or to an expert evaluation such as a book review	*Academic Paper Review* *Approach Evaluation* *Organisation Evaluation* *Financial Evaluation* *Interpretation of Results* *Legislation Evaluation* *Policy Evaluation* *Building Evaluation* *Project Evaluation* *Book/Film/Website Review* *System Evaluation*
3. Design Specification	-To demonstrate/develop the ability to design a product or procedure that could be manufactured or implemented -Typically includes purpose, design development and testing of design -May correspond to a professional design specification, or to part of a Proposal or Research Report	*Application Design* *Building Design* *Database Design* *Game Design* *Label Design* *Product Design* *System Design* *Website Design*
4. Empathy Writing	-To demonstrate/develop understanding and appreciation of the relevance of academic ideas by translating them into a non-academic register, to communicate to a non-specialist readership -May be formatted as a letter, newspaper article or similar non-academic text -May correspond to private genres as in personal letters	*Expert advice to industry* *Expert advice to lay person* *Information Leaflet* *Job Application*

	to publically available genres such as information leaflets	*Letter to a Friend* *News Report*
5. Essay	-To demonstrate/develop the ability to construct coherent argument and employ critical thinking skills -Introduction, series of arguments, conclusion -May correspond to a published academic/specialist paper	*Challenge* *Commentary* *Consequential* *Discussion* *Exposition* *Factorial*
6. Exercise	-To provide practice in key skills (e.g. the ability to interrogate a database, perform complex calculations, or explain technical terms or procedures), and to consolidate knowledge of key concepts -Data analysis of a series of responses to questions -May correspond to part of a Methodology Recount or Research Report	*Calculations* *Short Answers* *Mixed* *Data Analysis* *Statistics Exercises*
7. Explanation	-To demonstrate/develop understanding of the object of study and the ability to describe and/or account for its significance -Includes descriptive account and explanation -May correspond to a published Explanation, or to part of a Critique or Research Report	*Business Explanation* *Instrument Description* *Methodology Explanation* *Organism/Disease Account* *Site/Environment Report* *Species/Breed Description* *System/Process Explanation* *Account of Phenomenon*
8. Literature Review	-To demonstrate/develop familiarity with literature relevant to the focus of study -Includes summary of literature relevant to the focus of study and varying degrees of critical evaluation -May correspond to a published review article or anthology, or to part of a Research Report	*Analytical Bibliography* *Annotated Bibliography* *Anthology* *Literature Review* *Literature Overview* *Research Methods Review* *Review Article*
9.	-To demonstrate/develop familiarity with disciplinary	*Computer Analysis*

Methodology Recount	procedures, methods, and conventions for recording experimental findings -Describes procedures undertaken by writer and may include Introduction, Methods, Results, and Discussion sections -May correspond to part of a Research Report or published research article.	*Report* *Data Analysis Report* *Experimental Report* *Field Report* *Forensic Report* *Lab Reports* *Materials Selection Report* *Program Development Report*
10. Narrative Recount	-To demonstrate/develop awareness of motives and/or behaviour in individuals (including self) or organisations -Fictional or factual recount of events, with optional comments -May correspond to published literature, or to part of a Research Report	*Accident Report* *Account of Literature Search* *Account of Website Search* *Biography* *Character Outline* *Plot Synopsis* *Reflective Account*
11. Problem Question	-To provide practice in applying specific methods in response to professional problems -Problem (may not be stated in assignment), application of relevant arguments or presentation of possible solutions in response to scenario -Problems or situations resemble or are based on real legal, engineering, accounting or other professional cases	*Business Scenario* *Law Problem Question* *Logistics Simulation*
12. Proposal	-To demonstrate/develop ability to make a case for future action -Includes purpose, detailed plan, persuasive argumentation -May correspond to professional or academic proposals	*Book Proposal* *Building Proposal* *Business Plan* *Catering Plan* *Legislation Reform* *Marketing Plan* *Policy Proposal* *Research Proposal*
13. Research Report	-To demonstrate/develop ability to undertake a complete piece of research including research design, and an appreciation of its significance in the field -Includes student's research aim/question, investigation, links and relevance to other research in the field -May correspond to a published experimental research article or topic based research paper.	Research Article Student Research Project Topic-based Dissertation

Appendix B: First Year Engineering Module Assessment

Module	**Assessment and *Weighting***
Engineering Mathematics	First Test *(10%)*
	Second Test *(10%)*
	Final Exam *(70%)*
	Practical Skills Assessment x 4 *(10%)*
Engineering Graphics and Models	Pop Quizzes x 10 *(20%)*
	Computer Lab Exam *(20%)*
	Final Project *(30%)*
	Final Exam *(30%)*
Engineering Systems Design 1	Lecture Test x 2 *(30%)*
	Workshops x 9 *(30%)*
	Final Project *(25%)*
	Robotics Program: Workshops x 3 *(10%)*
	Class Portfolio *(5%)*
Modelling and Software Development	Quizzes x 6 *(20%)*
	Project 1 *(20%)*
	Project 2 *(20%)*
	Final Exam *(40%)*
Applied Mechanics	Mid-term Exam *(10%)*

	Final Exam *(65%)*
	Laboratories x 3 *(15%)*
	Weekly Quizzes x 10 *(10%)*
Introduction to Electrical Systems	Mid-term Exam *(20%)*
	Final Exam *(40%)*
	Lecture Tests x 4 *(24%)*
	Lab Reports x 4 *(16%)*
Engineering Practice Management	Quizzes x 10 *(15%)*
	Project 1 *(20%)*
	Project 2 *(25%)*
	Assignments x 5 *(30%)*
	Participation *(10%)*
Vector Calculus	Final Exam *(70%)*
	Mid-term Exam 1 *(10%)*
	Mid-term Exam 2 *(10%)*
	Practical x 4 *(10%)*
Engineering System Design 2	Workshops x 16 *(60%)*
	Project Proposal *(30%)*
	Presentation *(10%)*

Engineering Materials	Final Exam *(80%)*
	Homework x 4 *(10%)*
	Essay *(10%)*

Appendix C: Genre Analysis of Institutional Artefacts

Module	**Assessment and *Weighting***	**Questions and Genre Type**
Engineering Mathematics	First Test *(10%)*	Q1: **6** Q2: **6**, Q3: **6** - *Calculations*
	Second Test *(10%)*	Q1: **6** Q2: **6** Q3: **6** - *Calculations*
	Final Exam *(70%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** - *Mixed* Q7: **6** -*C* Q8: **6** -*C* Q9: **6** -*C* Q10: **6** -*C*
	~~Practical Skills Assessment x 4 *(10%)*~~	
Engineering Graphics and Models	~~Pop Quizzes x 10 *(20%)*~~	
	Computer Lab Exam *(20%)*	**3** - *Design Specification:Computer Model Building Design*
	Final Project *(30%)*	**3** - *Design Specification: Building Design*
	Final Exam *(30%)*	AQ1: **6** -*C* AQ2: **7** AQ3: **7** AQ4: **7** AQ5: **6** -*C* AQ6: **6** -*C* AQ7: **6** -*C* AQ8: **6** -*C* AQ9: **6** -*C* AQ10: **6** -*C* BQ1: **7** BQ2: **7** BQ3: **7** BQ4: **7** BQ5: **7** BQ6: **7** BQ7: **7** BQ8: **7** + *Sketch* BQ9: **7** BQ10: **7** BQ11: **7** + *Sketch* BQ12: **7** - *Sketch* BQ13: **7** + *Sketch*
Engineering Systems Design 1	Lecture Test x 2 *(30%)*	*Lecture Test 1:* Q1: **6** -*C* Q2: **6** -*MC* Q3: **6** -*MC* Q4: **6** -*MC* Q5: **6** -*MC* Q6: **7** Q7: **6** -*MC* Q8: **6** -*MC* Q9: **7** Q10: **6** -*MC* Q11: **6** -*C* Q12: **6** -*C* Q13: **6** - *C* Q14: **6** -*MC* Q15: **6** -*Stat* Q16: **6** -*MC* Q17: **6** -*C* Q18: **6** -*C* Q19: **6** -*C* *Lecture Test 2:* Q1: **6** Q2: **6** Q3: **6** Q4: **6** Q5: **6** Q6: **6** *(1-6 MC)* Q7: **7** Q8: **7** Q9: **7** Q10: **7** Q11: **7** Q12: **7** Q13: **7** Q14: **7** Q15: **6** -*C*
	~~Workshops x 9 *(30%)*~~	
	Final Project *(25%)*	**13** - *Research Report: Research Project*

	~~Robotics Program: Workshops x 3 (10%)~~	
	Class Portfolio *(5%)*	**10** - *Narrative Recount: Reflection on Learning*
Modelling and Software Development	~~Quizzes x 6 (20%)~~	
	Project 1 *(20%)*	**3** - *Design Specification: Computer Software Programme*
	Project 2 *(20%)*	**3** - *Design Specification: Computer Software Programme*
	Final Exam *(40%)*	Q1a: **7** -*flow chart* Q1b: **6** -*Programme Code* *Q 2-21:* **6** -*MC*
Applied Mechanics	Mid-term Exam *(10%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C*
	Final Exam *(65%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*C* Q9: **6** -*C*
	Laboratories x 3 *(15%)*	**9** - *Methodology Recount: Lab Report*
	~~Weekly Quizzes x 10 (10%)~~	
Introduction to Electrical Systems	Mid-term Exam *(20%)*	Q1: **6** -*Mixed* Q2: **6** -*C* Q3: **6** -*Mixed* Q4: **6** -*C* Q5: **6** -*Mixed*
	Final Exam *(40%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*Mixed* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*C*
	Lecture Tests x 4 *(24%)*	*Lecture Test 1:* Q1: **6** -*Mixed* Q2: **6** -*Mixed* Q3: **6** -*Mixed* Q4: **6** -*Mixed* Q5: **6** -*Mixed* Q6: **6** -*Mixed* Q7: **6** -*C* Q8: **6** -*C* *Lecture Test 2:* Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*C* Q9: **6** -*C* Q10: **6** -*C* *Lecture Test 3:* Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*C* *Lecture Test 4:* Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*Mixed* Q9: **6** -*C*

	Lab Reports x 4 *(16%)*	**9** - *Methodology Recount: Lab Report*
Engineering Practice Management	~~Quizzes x 10 *(15%)*~~	
	Project 1 *(20%)*	**1** - *Case Study: Organisation Analysis*
	Project 2 *(25%)*	**12** - *Proposal: Business Plan*
	Assignments x 6 *(30%)*	*Assignment 1:* **2** - *Critique: Engineering Qualification Comparison* *Assignment 2:* N/A - Fishing Simulation *Assignment 3:* **1** - *Case Study: Business Scenario: Corporate Social Responsibility & Business Ethics* *Assignment 4:* **1** - *Case Study: Deepwater Horizon Disaster* *Assignment 5:* **1** - *Case Study: Indian Metals Corporation* *Assignment 6:* ***11*** - *Case Study: Logistics Simulation: Risk Management*
	~~Participation *(10%)*~~	
Vector Calculus	Final Exam *(70%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **6** -*C* Q5: **6** -*C* Q6: **6** -*C*
	Mid-term Exam 1 *(10%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C*
	Mid-term Exam 2 *(10%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C*
	~~Practical x 4 *(10%)*~~	
Engineering System Design 2	~~Workshops x 16 *(60%)*~~	
	Project Proposal *(30%)* *	**12** - *Proposal: Research Proposal*
	~~Presentation *(10%)*~~	

Engineering Materials	Final Exam *(80%)*	Q1: **6** -*C* Q2: **6** -*C* Q3: **6** -*C* Q4: **7** Q5: **6** -*MC* Q6: **6** -*C* Q7: **6** -*C* Q8: **6** -*C* Q9: **6** -*C* Q10: **7**
	~~Homework x 4 *(10%)*~~	
	Essay *(10%)* *	**5** - Essay

***No Question Instruction Genre from Syllabus Only**

Appendix D: Genre Type: Exams

			Genre Type					
Module	**Exam**	**Total Questions**	**3 P**	**6 C**	**6 Mx**	**6 MC**	**6 St**	**7**
Engineering Mathematics	First Test (10%)	3		3				
	Second Test (10%)	3		3				
	Final Exam (70%)	10		9	1			
Engineering Graphics and Models	Final Exam (30%)	23		7				16
Engineering Systems Design 1	Lecture Test 1 (15%)	19		7		9	1	2
	Lecture Test 2 (15%)	15				7		8
Modelling and Software Development	Final Exam (40%)	21	1			20		
Applied Mechanics	Mid-term Exam (10%)	5		5				
	Final Exam (40%)	9		9				
Introduction to Electrical Systems	Mid-term Exam (20%)	5		2	3			
	Final Exam (40%)	8		7	1			
	Lecture Test 1	8		2	6			
	Lecture Test 2	10		10				
	Lecture Test 3	8		10				
	Lecture Test 4	9		8	1			
Vector Calculus	Final Exam (70%)	6		6				
	Mid-term Exam 1 (10%)	3		3				

	Mid-term Exam 2 (10%)	3		3				
Engineering Materials	Final Exam (80%)	10		8		1		1
Total	**19**	**178**	**1**	**102**	**12**	**37**	**1**	**27**

3 – Design Specification – Programming
6 – Exercise – Calculation
6 – Exercise – Mixed
6 – Exercise – Multiple Choice
6 – Exercise – Statistics
7 – Explanation

Appendix E: Genre Type: Coursework

		Genre Type Number												
Module	**Coursework**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Engineering Graphics and Models	Computer Lab Exam *(20%)*			1										
	Final Project *(30%)*			1										
Engineering Systems Design 1	Final Project *(25%)*													1
	Class Portfolio *(5%)*										1			
Modelling and Software Development	Project 1 *(20%)*			1										
	Project 2 *(20%)*			1										
Applied Mechanics	Laboratories x 3 *(15%)*									3				
Introduction to Electrical Systems	Lab Reports x 4 *(16%)*									4				
Engineering Practice Management	Project 1 *(20%)*	1												
	Project 2 *(25%)*												1	
	Assignments x 6 *(30%)*	3	1									1		
Engineering System Design 2	Project Proposal *(30%)* *												1	
Engineering Materials	Essay *(10%)* *					1								
Total	**22**	**4**	**1**	**4**	**0**	**1**	**0**	**0**	**0**	**7**	**1**	**1**	**2**	**1**

Appendix F: Faculty Interview Questions (TSA - Research Question 2)

The View of English within the Discipline

1. How important is writing *(in English)* in your courses and the Engineering Field as a whole?

    1b) How do you comment on and evaluate student coursework? Does English play a role?

Disciplinary Expectations of the Genres Identified in Research Question 1

2a) Could you tell us about what you expect students to do when you set a *case study* coursework?

2b) *Design Specification*
2c) *Methodology Recount (Lab Report)*
2d) *Problem Question*
2e) *Proposal*
2f) *Research Report*

Faculty Role in Learning How to Write Within the Discipline

3) How do students know what you expect from a particular genre? How is it taught?

4) What do you think is the role of content course instructors, such as yourself, in helping students develop academic writing skills i.e. writing for Engineering purposes?

Appendix G: Student Focus Group Questions (PSA - Research Question 3)

1) Why are you studying Engineering and what do you want to learn from the course?

2) How many years have you been studying English?

3) How important is writing in your course (Engineering)?

Students Experience and Understanding of the Genres Identified in Research Question 1

2a) What experience do you have of writing a *case study* and what do you think this type of coursework is for and what should it include?

2b) *Design Specification*
2c) *Methodology Recount (Lab Report)*
2d) *Problem Question*
2e) *Proposal*
2f) *Research Report*

Instruction

3a) How are these genres taught or how do you know what to include?

6) Who do you think should be responsible for the teaching of writing within Engineering?

Appendix H: Transcribed Faculty Interviews and Student Focus Groups

Faculty Interview 1

I: First of all, how important is writing within Engineering, as you said before the first year less so but?
F: You see the thing is an Engineer when they get out in the profession communication is very very important, writing technical reports, but also sending emails, talking to suppliers, other people that sort of thing. As they go through the years writing and communication becomes more and more important each year. But for the first year course of Introduction to Electrical Systems writing isn't as paramount at that point. The emphasis is much more on understanding basic circuit theory, basic circuit laws and building a foundation, but in the 4th year course communication becomes much more important. You start to appreciate subtleties in different definitions like tenor activity and tenor gain. Although they are very similar they are not the same and students need to learn to distinguish between these things and it becomes more of a writing thing.
I:Interesting, so obviously when you are marking student work in the first year and even beyond, how important is English, does it constitute part of the mark or does it affect the grade?
F: Well again it comes down to the question when you ask them to explain something if it comes to that and then of course writing is very very important, but for the first year course it is usually a circuit that they are analysing and they are supposed to determine what the voltage or a current or the power level is and that sort of thing, so in that sense writing is more in the form of equations. I = E/R Ohms Law things like that and in that sense the writing is in the form of equations.
I: As you say for your course it is mostly equations. OK, just moving onto different types of coursework you may set. I know for the first year you don't set these, but within a 4 year course would you ever give a case study, or a lab report or research report.
F: Yes, we have lab reports even in the first year we have lab reports and I probably should have added in reference to exams and things like that I always grade all the tests and lab reports for a very very large class are often marked by the TA [Teaching Assistant] just because of the huge numbers involved. In the fourth year course, labs and homework where there is more writing I grade much more of that. I do like to keep tabs of what is going on.
I: If you set a lab report what do you expect the students to do? Except them to write?
F: I'd like a synopsis of what they did and what they were trying to do, what they were trying to learn, what they expected to get out of the experiment and then at the end, the conclusions, what they learnt, what they observed.
I: Would you expect any theory in a lab report or would that be more in a Research Report?
F: Well I wouldn't expect them to derive theory, but I would expect them to include enough theory in their write up to explain what they saw in the experiment or what things they got, for instance we look at the input of [inaudible] to an antennae there is theory behind that and they can calculate that. Usually many times there are calculations and

experimental observations and we like to see how they agree and if they don't agree you know why they may not agree and many times things don't agree and there are reasons for that and we try to at least have a handle on that. For a research report I'd expect a literature review and a full explanation of what they did, their results and importantly their findings.

I: Would you ever set a case study within Introduction to Electrical Systems?

F: Right, what I just mentioned a moment ago would apply to any lab report, yeah but it would be more the exception than the rule. In the 4th year the roles tend to reverse and they tend to trade places. In the 4th year we expect there to be more maturity, more understanding and the student would be better prepared to do justice to a case study.

I: Do you ever do any design specifications?

F: Oh yeah, my course last term we did quite a bit of that. That is sort of the metamorphosis when you start the first year with electrical theories and you are only designing a little bit, maybe simple circuits you design, but you really are more building a foundation, but by the 4th year you should be able to say OK design a folded dipole for operation at this frequency or a single stage amplifier. I did that last semester and they had to design an amplifier for a certain frequency and stabilise the amplifier and stuff like that, by the 4th year you can do much more than that.

I: If they are writing a design specification would they have to target a certain audience?

F: Well they are not writing a design specification, usually the specification is given to them, some kind of specification is given to the student from a customer and then from that they might modify the specification or add things to the specification and then design something that will meet that specification.

I: And then presenting it back to a customer?

F: Oh yeah, and they talk about the performance, gain, impedance, return loses, stability and all those kind of things depending on what they are looking at. They would communicate that back, you know at the end did they meet the spec or don't meet the spec, but usually they meet it but sometimes they have a hard time meeting it. You know these are real life things.

I: That is what I have realised since I have begun investigating, it is very different than what we do at the Foundation level.

F: But again your course [Foundation programme] is the other end of the spectrum and we are building on that and the student have a bag of tricks and they start to get confident.

I: Yes, hopefully it does provide a base for students to progress. OK, last type of genre, do you get students to write proposals?

F: Yes, but not until later in the third or fourth year, this year is mainly more analysis of theory, than them designing experiments in later years.

I: OK, moving onto the last two questions. When you set a particular assignment how do students know what to write? Do you teach it or give them guidelines?

F: I never tell them how to write, what I do and I let them do it, let them do whatever they are supposed to do and then tell them what they did right and what they did wrong and the next time they can build on that. One of the things that during the lectures I lay down the theory and foundations of what is going on so hopefully when they do get the homework they can appreciate where I am coming from, for some of the homework I

kind of get them to do some crazy stuff. It seems crazy but once they think about it there is a practice application to it and I think that a lot of this is intuition the see stuff and then they see how this works and then they say how that works and when they see that it inspires the intuition to start to create and to do things on their own part of it is confidence building and the other part is experience.

I: OK, so moving on just to the last question. What do you think the role of content course instructors such as yourself in developing and helping students' academic writing in skills? Do you think it is your particular role or do you think there should be an area for writing instruction within Engineering?

F: Well, I think you know one of the best course I took in college was English composition and I would write something and the instructor would tear it apart and you would see what you did right and what you did wrong and it is like learning to ride a bike. Writing to me is something you teach yourself from a lot of feedback from other people. I think I certainly foster the process with my teaching style, but in the end practice makes perfect.

Faculty Interview 2

I: OK, so the first question is how important is English within your course and Engineering as a whole?

F: Well, obviously it is taught in the medium of English, that is what we are using. So, my course is mostly calculations, so you have to provide some sort of links to the calculations, so you have to do small amounts of writing to link it, to give it structure and make it more understandable and presentable, but beyond that not a great deal of writing. Also, when I design the tests for my courses short answers are discouraged. I am not sure why, but handwriting and student difficulty in answering the questions certainly play a part.

I: It is heavily based on calculations.

F: Obviously the reading skills are important because some questions are heavy in terms of the amount of reading that has to be done and they have to extract the information, some are simple like evaluation and off you go.

I: When you are marking, for example a short answer does English play a role when marking them?

F: As long as I understand the idea that they are trying to present even if it is not well structured say grammatically, then I'll overlook that. I'm just looking do they understand the concepts and the ideas. The courses that I am teaching are at the first year level of course by the time they do a fourth year level project they have to do a major project, a capstone project, and writing is very important, it is heavy there. They get a little bit in the first year and builds up. It's like a pyramid in reverse, they start at the top and get a bit more each year.

I: OK, so you don't expect student to write any lab reports or research reports in your course?

F: No, as I say I only teach first year courses and at this level the most writing they have to do are short answers. Actually, they do some small computer labs and they have to do a little bit of writing but these are very structured and not in a typical lab report or research report style. [Finds an assignment paper]. Again, it is very equation heavy, for

example, this one compares what is the case, predictions, explain your choices, justifying answers.

I: OK, so English is important to some degree?

F: Yes, of course they have to use English, but I suppose the type of skill is taking, they have done something, performed some calculations with visualisation and then being able to interpret that. Knowing what they know about mathematics and being able to interpret that and justify that logically.

I: So your courses are very theoretical? As they go along with Engineering mathematics does it become more applied?

F: Well they only do 3 Engineering Mathematics course as such before they break off into the more specific types and within that some of the course are more theoretical and some of them are more practical.

I: OK, so we can move onto the teaching of writing. As an Engineering professor what do you think your role is as developing academic writing skills?

F: Honestly, I don't know its, for me personally it is hard for me to develop, of course you can point out small mistakes, but actually develop them in a systematic and serious way then I don't see that as my job.

Faculty Interview 3

I: How important is writing in English in your course and Engineering as a whole?

F: OK, but the point is that my course is basically modelling and software development, so its programming so in my course writing is not crucial, but still there are some problems. In terms of writing there is no problem in the final exam they just need to write the code for programs and multiple choice questions a, b, c, d, but still the handwriting is a problem. Their reading skills are bad and some of the questions are long and takes time to read the questions and even though I think, and my colleagues think, the question is clear the students get confused. The problem is I'm not sure why they are confused?

I: So what projects do the students have to do for you?

F: Both my project one and two are code. There is a body mass index stuff and I ask them to generate and develop a program that can be used to generate and develop a program where the user types in their information like how old they are, their name, their gender and what else their weight and height of course and it will generate a report, not only a report but some recommendations to reduce it.

I: So the code creates a program and gives recommendations to the user. OK, did the student have to write the recommendations?

F: Some of the students write their own recommendation, but I give them a formal recommendations that they can copy and paste because the aim is to code, not the recommendation, but some of the students provide their own like 'You are fat, you need to lose weight'. The other stuff is Sudoku, I just ask them to create a programme a simple programme for sudoku, you know sudoku right? The user can select the difficulties like very easy, easy, medium or very hard and the programme will generate a map, not a map, but a matrix and the user has to type the corresponding number in a specific field and the student need to check if the game has finished if yes finish. Therefore, the students really like that kind of projects as they get real hands on experience to do programming and that programming is really close to their daily life.

I: Do they have any experience of programming before? Is it all new?
F: It is all new, they know nothing before my course and it seems like it is the first time they touch programming they start to learn programming.
I: OK, so this is a first year course, but as you go through the course to second, third and fourth year does English become more important or will they use English more to maybe present programmes they develop to the general public or more applied aspects with real life examples?
F: OK, it seems like the student enjoy the course they know how to programme, but they just know the to program the code, but they don't know how to express the code in English in a logical way. They just know how to type, but the physical meaning or the logic behind that code they cannot manipulate because of the English.
I: So, do they have to write more in your course as they get older? Like research reports, case studies, research proposals?
F: Yes, in 3rd or 4th years they would have to do research reports and obviously they require more writing. They do the capstone programme. For reports they had to do a literature review and then present their work in relation to the theory. Also, they may design a computer programme and have to explain the programme to a user or to sell it to a company. They may submit a research proposal to me outlining what computer programme they want to design, what it will do and how they will do it.
I: OK great, and how do students know how to write these types of coursework?
F: They get no direct input, but as they are older they are expected to know this as they become more familiar Engineers. I suppose they get a lot of exposure to the expectations through my lectures, through the reading and also through the questions I set when they have to do tasks.
I: Moving onto the last question. So, what do you think your role of content course instructors is in helping student develop academic writing skills within the department? Do you think it's your responsibility?
F: To be honest it would be better to have an academic writing course because I checked the curriculum at the moment and there is no academic writing course and therefore in the year four, I have two groups in the capstone project and their writing is awful. I mean in terms of academic they are very good they know how to manipulate a quiz and in some experimental work they are also good. In one typical example for the capstone project they are going to build a 3-D printer and they can build and they buy the stuff and assemble the parts they can do that, but the point is they have a conference and they write a paper and the student write a paper and it's not a paper actually it's just a literature review and the English is awful so the supervisor almost help them re-write the whole paper.
I: So there is no support?
F: That is the point and I talked to them and it seems like they would like to have more support in terms of academic writing and no matter if it for exams or quiz or academic publications like conferences or academic manuscripts. They need that kind of support, but maybe it is too late for them to learn in their graduate studies it is better to have a course within the four years [of undergraduate study].
I: Yes, hopefully that is something I'd like to suggest.
F: Yes, their handwriting is terrible and structure is terrible, it is hard to read and sometimes I don't want to set questions where they have to write because it is too hard to

read. If you ask them what is the definition of A, B, C they can't write it, but they may know what it means, but they can't explain it in writing.
I: OK, I think that is everything. Many thanks.

Faculty Interview 4

I: OK, so first of all for your course and maybe just for Engineering as a whole how important is writing in English within your courses and Engineering as a whole?
F: It is not in my course, to me, I am sure this university and the Kazakh government made this university to be internationally competitive Engineers. They should know about English very well and to be good Engineers, usually I emphasise to them they should get enough knowledge about their area Civil Engineering, Mechanical Engineering whatever. Second thing they should know how to communicate with other people, they should be able to give their idea to other people effectively and so on, one is writing or speaking, speaking is more like presentations and it depends on the audience, for example Engineers try to sell their product or their idea to government or like some companies or something like that. When I talk maybe the audience for example you an Engineer and you are very interested in the technology things or if you are an administrator or like a purchaser you are concerned with money. For example, if you are more like an Engineer this method is very good in terms of Engineering if you use this method you structure is very safe, but when I talk with somebody who deals with money or something like that, if you use this method you can save lots of money. It is very important, but somehow the students don't realise this.
I: The target audience.
F: Yes, the target audience, some people even when I got my education in the USA until the undergraduate level usually when my advisor or professor asking for a presentation we concentrate on ourselves first it doesn't matter about our audience, but if you are not interested in this topic you will not listen and then I cannot sell my work to you.
I: OK, so moving onto the disciplinary expectations and for your course is Engineering Graphics and Models, when you set a design specification, for example for your model design, what do you expect the students to do for you? What do you expect them to write?
F: Actually, most of my course when I give them a project I ask them to write a cover letter. It is the same thing it is very good practice for them also because sometime later they should write a cover letter for graduate school, or maybe internships or maybe jobs and I ask them for cover letter it is usually one page and they should know how to put everything in there and I told them the cover letter is one of the most important [parts]. They usually read the cover letter and if they are interested they look further. Today, even today they are supposed to submit an individual projects or group projects and I told them I am going to read your cover letter and I showed them a template and if it's interesting. Of course sometimes they try to copy each other, I told them I read it first and didn't give a mark and see if interesting. So some of the cover letter is very important also for a report, I ask them the contents, cover letter page 1, page 2 and then I can see things quickly.
I: Organisation is important?

F: Yes, I told them even for written exam, some students are very organised and it is very easy to find and follow and some students write something here, something here and something here, and I told them I am not try to find your answer, you should show your answer to me. So, here they don't understand that.

I: OK, so when you set the design specification cover letter do you set them any guidelines of how it should be written?

F: Yes, of course. First time they may assume themselves, they are student, but they are Engineers, so I ask them first you should know who you write the letter to. You may assume I am a professor or a mayor of the city of Astana. So, first you have to make some scenario in your mind and try to sell your work to me. You may assume we know each other or you can read a story about me from the newspaper whatever and somehow you have to introduce yourself clearly and effectively.

I: Persuade them to buy what you have got?

F: Yes, then maybe I am interested. Sometimes they may go to a conference and they may get a name-card. They should network and let's say some students think they want to go to Cambridge university or MIT and they meet someone there and get a name-card and then email them and introduce them first, you are not going to lose anything and if he or she remembers you sometime later he or she may help you. Of course I am from South Korea and long time ago we did the same things and the last moment they ask rather than networking. They are Engineers they should know how to communicate and plan.

I: OK, so even from the first year you try and prepare them for their future role as Engineers.

F: Right and here of course they just get into this university and they are very proud, but I told them, you may be proud of yourself and your parents may be proud, but you should improve and you want to enjoy your life. I did the same and I did lots of mistakes and I don't want my students to make similar mistakes. As a human being we make lots of mistakes, but I told them reduce the amount of mistakes. If you make the same mistake once it's OK, twice maybe, three times stop it. So like cheating, please understand professors are smart and we will see, but if you are smart you can be creative and think a little bit deeper you can create something. Sometimes I compare Bill Gates and Steve Jobs. Steve Jobs in my personal opinion, didn't create anything new but he knows what people want and he took technology from this company and combined and made Ipad.

I: He knew his target audience.

F: First understand who is going to buy this. Of course they should know, prepare knowledge.

I: OK, so maybe not for the first year courses, but do you get students to write lab reports, case studies or research reports for your courses? And what should they include?

F: Yes, we have computer labs, computer labs about how to use modelling software, these are like lab reports, but more questions and instructions on what to do. We don't do case studies, but students in 3rd or 4th year will write lab reports and also for their big capstone project at the end.

I: OK, so moving onto the last question. The Engineering students don't get chance. Ah sorry, OK sorry, so as an Engineer and course instructor whose responsibility do you think it for helping students to write within Engineering?

F: I hope maybe in this university they prepare something for students, so OK English is my second language and sometimes even though I use English regularly, but I know when I mistake even now I make some grammar mistakes and I'm very bad at spelling. I hope my students they don't spend too much time on spelling, but they should know structures and grammar and if they have enough time they should try to improve it. The thing is usually I give my students essays and here I realise they don't have enough practice, so every time I give them 1 month and they use the USA textbook, Civil Engineers for the future. Students sometimes complain it is too heavy or too difficult because the book is from the USA, so it focuses on the USA. So, I told them read this and connect the idea to Kazakhstan. I told them you may summarise the book and read to find an idea and then think how you can contribute for Kazakhstan development or something like that. And they usually ask for a guide and can they have a template and I say it is up to you. But sometimes I realised once they have too much freedom they don't know what to do.

I: Yeah, so you need to guide them a little.

F: They ask for guidance and the thing is I just give them a simple outline and say ten pages. They say cover page is one page? And I told them it is up to you. Don't think ten pages, when you write sometimes you may write more than ten pages, sometimes maybe nine pages, but everything looks OK. Sometimes I think they are too disciplined. I hope they can break this and I ask them what is the meaning of creativity? What is the meaning of innovative? But sometimes I realise they are afraid, I told them they are young, just 1st or 2nd year you can make mistakes, if you make more mistakes in university, you make more mistakes as an Engineer, especially a Civil Engineer we learn from failure. For example, USA or UK they construct many things and sometimes they fail, so we design a better one.

I: Learning from our mistakes. OK, so it was interesting speaking to you students and they mentioned about writing cover letters and it was interesting and in the Foundation programme we don't teach them how to write cover letters, so it was new. Hopefully from my research this is something we can do next year. Really there should be a writing a centre.

F: Exactly, right now we have fourth year students doing a capstone design project and we have invited an English professor to help write the report and we concentrate on the technical aspects and someone should look at the English, otherwise they cannot submit their work even if their design is very good. In my case when I write a paper sometimes I ask my American colleagues or native speaker to check things.

I: Of course, many thanks that was great.

Faculty 5 Interview

I: Alright, so how important is writing in English within your courses you look after?

F: So, in Engineering Practice Management course we have several case studies and student have to write reports and make presentations. For the report 15% of the final mark for the report is for proper organisation and for professional writing. 15% of the whole mark and we evaluate not only grammar and this kind of thing, but also clearness of the explanation and the analysis and of course the usage of correct words.

I: So, organisation is important. So, for each particular one. First of all, when you ask students to write a case study coursework what do you expect them to do?
F: We expect them to read the case carefully and to understand it of course and make analysis of what is going on, why it happened and what are the possible ways to predict this disaster in the future.
I: Are they always given a case?
F: Yes, in Engineering Practice Management we select the case and give them each one, but they also have a midterm and for that one we expect them to write their own case and conduct interviews and search for information themselves.
I: Project 1 is the organisation analysis?
F: It doesn't have to be an organisation, they can find any case relevant to Engineering.
I: So, they look at a case study for business ethics?
F: We had only one case for ethics and the others are operations management and risk management so different aspects of management.
I: Again they have to analyse a specific case?
F: Yes they are usually given specific questions that they have to include in the report.
I: For the Deepwater Horizon disaster and the Indian Metals Corporation did they analyse the case and suggest solutions?
F: Yes, they analysed the case and suggested some solutions to deal with the consequences and to predict or to deal with the consequences of this disaster.
I: Maybe not for this course, but are they ever given a problem question and they have to find solutions rather than looking at past cases.
F: For these cases they have to look for additional information, code of conduct or law issues, but in the first year we analyse previous cases rather than getting students to just suggest solutions to current or new problems. This is something they may do in later years, particularly for their capstone final year project.
I: Perfect, so, ah for the case studies how do they know what a case study is presented or how to write it?
F: At the beginning of the semester we gave them a rubric, so they know for each section how many percent and what exactly what each section is worth.
I: OK, design specification, Are you a civil Engineer or mechanical?
F: Civil
I: So throughout the four years would they ever have to do a design specification?
F: Ah yes, in the capstone project. We will have our first graduates this year and the capstone is the like the final year project and it lasts two semesters, so they actually are now doing the second semester. In the first semester they just have to research the area they are doing, but not to do the design and in this semester they build or design something and most of the weighting is on this. I'm not sure the amount of credits, but it is a lot.
I: Do they then have to write a research report?
F: No, they can choose anything it depends on their topic, especially for civil it could be environmental or building design, more like a portfolio of what they have done.
I: Ah OK, so they could end up with a model or blueprints?
F: Yes, they may have to submit drawings, present a design, but not necessarily in a research report format.
I: OK, so in the first year do you have lab reports?

F: Yes, not only in the first year, but I also teach Soil Mechanics now, for example we have five labs and they submit five lab reports, but they do it in groups. They carry out the experiment and go away and write about what they did, what they learnt. That is for the second year.

I: How do they know what to write in the lab reports? Are they structured?

F: Yes, again at the beginning of the semester they are provided with criteria and they can see what score they have against the criteria for example an A has this and a B has this.

I: Moving back to Engineering Practice Management, for project 2 do they have to do a business plan or some sort of proposal?

F: Yes, they have to create an Engineering company and then they have to create a business model or a plan for a product.

I: So, who are they targeting? You as a business or Engineer or as a company or bank etc.?

F: No, so they work in groups and as a group they select their area and they present it to us, so they have to evaluate the market and to target a particular audience. They are trying to sell a product.

I: So, it is a very real world focus?

F: Yeah and we focus on Kazakhstan, usually they use data from the USA and the UK and try to tailor it for the Kazakh market, but it is often hard for them to find information about Kazakhstan in English.

I: Ah OK, throughout not so much in the first year, but across the four years do they have to write research reports?

F: Yes, some students do one for the capstone. In the first term they look at the literature review and explore the theory of their design and also describe and explain exactly what they will do. Then in the second term depending on what they do they may have to write up their results.

I: OK, so the last question ah so you mentioned that you usually give rubrics and it's quite guided?

F: Yes, we try to give them feedback from all assignments as soon as possible, so they can learn for their mistakes before the next assignments.

I: OK, so the last one. So, what do you think is the role of content course instructors, such as yourself, in helping students develop academic writing skills, so writing for Engineering. So who do you think is responsible professors or somebody else?

F: I think the feedback that we give them is very important and obviously how we present cases in lectures and the quality of information we present in lectures is very important. Even though the cases that we provide they have to read very thick and lengthy case studies, so that can help them understand how to write in Engineering, but for the first year students we do expect them to already be able to write a report and express what their ideas and thoughts are.

I: Yes, they should have a base after Foundation, but there is no writing centre in Engineering.

F: Yes, we do expect them to be at a certain level when they get here, but there are students who are weak.

I: OK, so I think that is everything many thanks for your time.

Student Focus Group 1

I: Why are you studying Engineering and what do you want to learn from the course?
1: Actually, my future job will be related to Engineering and I, I like Engineering for example.
I: So, you find it interesting.
2: Actually, I think that Engineering, is a little bit interesting. For example, from the SST [School of Science and Technology]. Because they always say the professors is the Engineering is the applying science, so making something better and creating something new to the world, so make life easier or something like that.
2: It is not just Science; it is the application of this science.
I: So, it's not just the theory, so you like the applied practice?
2: It is not just the research, but the practice.
I: Ideally after four years what do you want to learn from the course, what is the outcome?
2: The outcome? For example, I want to be an electronic engineering. I have heard mechatronics and in the future, the four years, I will be able to make programmes and programme the robots.
I: So, Ideally, a job in mechatronics?
3: Yes
1: I want to be a civil Engineer and from this four years I want to learn how to work with for example, workers, and how to manage a team, for example, if I had a team how to manage a job, one is a leader, one is help.
4: It is more about management.
I: How many years have you been studying English?
2: 8 years.
1: 7 years.
3: 9 years.
4: Same, about 8 years.
I: And then, OK, you have only been Engineers for since September, so far how important do you think English is in Engineering.
2: English is very important during the communication and during the presenting the product or something like that, as we learn it is the most important part. The second important part is writing the cover letters, so shortly, so short description of the product the main features, something like that.
1: It is hard to understand the teachers and lecturers if you don't know English for a high level, you can easily communicate with the teachers and ask any questions, for example, I, it would awkward moment when you cannot explain your idea or just present your idea or for example, I don't know, present your team even.
3: Communication is important
I: If you have to use English in the classroom. So, we will move on talking about particular writing you have to do in Engineering, OK so we will start of first of all, what experience do you have of writing a case study? In the past have you ever written a case study before?
2: Actually, not.

1: Actually, no.
4: No.
3: No.
I: So both new to you all, so currently what is your understanding of a case study and what do you think it should include?
2: A case study it's like analysing a certain accident or any process, so in the case study we should give, we should firstly analyse, understand the happened accident and give our opinion and answer to the questions which were provided. So, the questions may be like what should you do if you become a new CEO of that company and so there is a more important about our imagination and opinion.
3: Case study is deep analysis of a problem; it is to help us to understand the importance of the responsibility, the importance of making ethically proper decisions. It teach us to be more responsible by showing through the analysis of the accidents, accident causes and its consequences, and how the business and ethical issues effect on the situation, what kind of role plays the human factor and so on.
4: Also, to improve engineering students' practical skills, like making proper calculations, mastering programming and modelling software.
I: OK good, anything to add? OK what about a Design Specification, So for design specification you guys, computer modelling or computer programming.
2: Actually design specification we shouldn't write something in English, we just should programme, so there is nothing really related for writing only codes, for example, 3-D model of a building.
1: So there is not much English writing.
3: Understanding the software.
4: Actually, one time, building design we had to write a cover letter trying to sell, advertise our building.
I: Ah, interesting have you ever written a cover letter before?
2: Actually, no. Cover letter writing was not in Foundation.
4: Yes, no experience.
I: OK, so moving on to methodology recount or basically a lab report, so do you have previous experience of writing a lab report?
2: Previously, during the Foundation course we had physics, so we had to write lab reports, so actually I think the lab reports during the Foundation course they were a little bit harder because they need a little bit description in English, but here we have to just put, we have to just put the number in tables, just give the data about the experiment.
3: We answer the questions and calculations, explain any different.
I: So, is that during the experiment or do you have to go away and write the lab report afterwards?
2: It depends on the course
1: It depends on the experiment, for example a its maybe just a simple experiment where we have to like, the values for the experiment or comments 2 or 3 sentences for comments.
4: So, depending on the lab.
2: The scale of the experiment.
I: You don't have to write the full lab report. If you do have to write a full lab report what does it usually include?

1: The description of the lab experiment so, what happened during the certain process.
2: What were errors, for example.
3: What we did and what happened.
I: OK, anything else?
1: Lab report hmm…
I: OK, so moving onto the next one. I think it is very similar to the case study, but a more of a problem questions, but where you have to provide your opinions and solutions to a problem. What previous experience do you have of writing these types of assignment?
1: In Foundation, I think I remember we have to write, for example, research project yes and here we have a problem and we should provide a solutions for this and yes, two or three solutions and evaluate them. Now we have case studies were we already have a case and already have solutions for them and we just have to evaluate them. For example which is better, which is worse, cost, more expensive and we just have to find better, the best solution.
I: For example, did you have the Deepwater Horizon one, what did you have to do for that assignment?
3: Actually, there was questions but I don't remember them actually, so the main aspects of the questions were what were the technical aspects. Accident happened what were the technical aspects and ethical decision making and business so on.
4: And human factors.
I: So, you looked at all aspects from the technology to the management issues and interactions.
2: Actually, it was about why did it happen and what should be done in the past so it wasn't happens, or something like that and after the accident what should they do.
1: To compensation.
I: So, just a quick note, so when I say to you a case study and a problem question these two sound similar?
1-4: Yes
I: So, moving on, what about a proposal, any experience of writing a proposals before?
1: I have already mentioned that during Foundation we have such writing assignments where we have to write a proposal for example, for one page what will be in our assignments.
3: Yeah, last year we write one before our Research project.
I: OK, and now for Engineering, when I say proposal what do you think it is for and what should it include?
4: Actually, we have not such experience in Engineering.
2: It is just coming.
I: So what do you think you have to do?
2: Actually, the brief description of the experiment.
1: The case and after analysis, evaluation.
3: Explain what we will do.
I: OK, so you are going to propose, propose an experiment you will do in the future?
1: Put in order, to be easy.

I: OK, makes sense. Moving onto the last type of genre. For a research report, OK so in Engineering terms what do you think should be included in a research report? Thinking what you have done this year, more so?

1: This year, In first term we have Engineering Systems Design where we have to conduct one experiment and write about the consequences or what were our, how you say results for this, for example, our group conducted experiment in for coca cola yes, coca cola how melts or dissolving the coca cola, the consequences.

I: The results of drinking coca cola on the stomach, OK.

2: For example, my team conducted an experiment about getting the electricity from the lemons, so how the conditions, so the main question was how the condition of the lemon effects on the amount of the electricity. So for example, how fresh it is, so the mass for example, the volume, and so on and we should make a table of how this conditions effect on another.

I: So, in your research report what sections did you include, what kind of, can you remember?

1: First, for experiment, how was conduct, what we have buy, how it was made something like that. Second part we had to write about the results for example, we had results that cola have had no effect to your body for example.

I: No effect?

1: Yes, in your stomach no worse.

3: We wrote about some theory and then what we did and our result.

I: So you had your results OK nice. All right moving onto the last section thinking more about instruction, so we have talked about case study, design specification, problem question, but when you are asked to do these how do you know what to do? So, are you taught how to write them, what help do you get to understand?

4: Actually, they give for example, a document, they send a document to us and a few questions, this questions help us to understand what should we write.

I: Good. So, they give you guided questions to answer throughout. What about for structure of the of the assignments?

2: Actually the structure isn't so much important in writing.

1: Actually we had constraints for the word, word limits.

I: So you get word limits, so they are quite structured in what you had to do. You are told to do this this and this.

2: For example, in the first semester the professor [Name] sent a document about ten pages about how you should make the project, so everything was included for. I think that was the only course was the detailed description of writing.

I: So for other ones you've had to, you've either been given questions or you have had to find information yourself. OK so who do you think should be responsible for the teaching of writing? Your ideas what do you think?

2: Maybe the professors, they may help to us to write a project or any assignment during the office hours so we can ask questions about the writing.

1: And also we, for example we had we wrote three assignments and we did not, have not received feedback for this. For example, we know, we do not know how to write the next assignment, no I mean we have, we do not have feedback from the last assignment and we.

3: Actually they just send the marks.

4: Yeah we never see our assignments.
I: So you just get the marks?
1: Yes, no feedback, good or bad.
I: Ahh interesting ahh, So you don't know.
2: About how to write, so how we wrote it previously so we can.
1: What was your mistakes in our last assignment for example.
I: So if you receive a low score you don't know the reasons behind why you got the low score?
3: What will be our next directions for example.
I: Alright, I think that is everything, is there anything you would like to add? Ah OK, thank you very much.

Student Focus Group 2

I: First of all, why are you all studying Engineering and what do you want to learn from the course?
1: Like we are learning, we are studying Engineering to become Engineers obviously. And what do we expect, what do we learn in this course. We learn different courses like in the Engineering field. Firstly we learn four fields of Engineering and at the end we have to choose one field.
I: Good and you are all doing different streams? Different Engineering streams?
2: In the first year we got the same course for all Engineers.
I: So, you could say your overall aim is to gain employment within Engineering?
3: For example, I want to go to the civil Engineering and I expect courses about how building structures, how to make designs of the buildings and so on.
2: There are kinda like mechanical Engineers, civil engineers, electrical, all of us after three terms we will choose a specific field.
5: For me I don't. I haven't done any decisions yet about which discipline I should go, so this courses are helpful because I study some chemical some electrical and see which one suits me best most interesting.
I: See which is most interesting for you. Good. So how many years do you think you have been studying English?
4: From School seventh grade.
I: How old?
4: Six or seven years.
I: Everyone the same?
2: No no, depends on the person for example, me I kind of started in second year of my school, elementary school. Already 12.
4: Professionally, maybe some conscious that I am studying English.
I: But you were exposed to it at a young age. So, approximately?
5: 9 years.
1: 12 years.
5: Or 9 years.
I: OK. So, far you have been in Engineering since September, but how do you feel how important is English writing in the course? How important has it been?

1: It is important because as Engineers you have to be able to communicate our ideas and without having good enough English we will not be able to communicate and sometimes you cannot do all the stuff alone and you have to divide the tasks among the teams and some people may do one task better than you but first you have to explain to that person what the goal and that is why it is important.
2: And the course is like if you write unclearly then the professors might lower your mark and so on or even just give zero, like I don't get it.
I: If they can't understand?
3: Yes**,** it is kind of crucial to write properly.
5: And as we discussed we have 2/5 classes are about writing or maybe 1 is, so it is important because it is affecting our grades.
I: So, it has a direct correlation with grades?
5: Especially this semester we started to write a lot compared to first semester.
I: So the first semester it was a lot more calculations?
2: Kind of, it is not we didn't write case and so on.
4: Lab reports.
2: 1 or 2 lab reports, ah not lab reports just tasks.
1: Smaller tasks.
I: OK, so we will move onto each different type of coursework assignment you get. First of all we will start with case study. Do you have any previous experience of writing a case study?
3: No, in the Foundation course we didn't have case studies.
I: So, what is your understanding of a case study, what do you think you should include and what is it for, what is its purpose?
5: First you describe the case you have found and then you analyse it and suggest your solutions.
2: It is kind of first of all to find the background with newspapers and so on and to research it and in the Foundation we researched some problems, so we find a problem and research it, why it happened and so on and then will move onto the analysing part. I mean we will write background and the using this background we write analyses of this case.
3: Analysis part the main thing is to find proper problem questions. Sometimes we are already given the questions, but sometimes we have to do them.
4: In Foundation programme I think that we learnt how to research things on the internet it was really helpful when we found some information for the case study for describing the study.
2: Reliable and so on.
5: We tried to find interesting case, so teacher would be interested or he will have to read it anyways just for your mark, also we are 6 people in a group writing one case, so you have to make sure that all of them are, all of them agree that this case, like I want to write about this case.
I: Does the teacher give you the case or do you find individual case?
1: No, we had to, we had to find some ethical dilemma or some problem a company faced and then we had to analyse it and then we had to like writing the analysis part with the, with the final decision that was made by the company and then just analyse, and this

is for us as Engineers like in the future we are going to face different problems and dilemmas and for us to be able to find a decision.
4: To find a way to solve a problem.
2: It is like a, most of the times it is ethical questions, from the course practice management and even engineering system design we are learning some ethical issues and so on, about bribery and so on ,and we will mostly discuss this part of the problem. Yes it is kind of, I think that they want us to learn particularly about the ethical part of the problem not the technical.
5: Because by reading these cases like I understood that all this disasters, like blow outs happening just from simple human errors of not following simple rules, not being ethical, this was helpful really like if we will, this was good example of writing cases was good.
3: When I write the case studies, the structure of the case study is very similar to the research project in the Foundation year. Like the table of contents, introduction, background, analysis part, and then conclusion reference list.
I: Some aspects are similar.
3: And the introduction and how we write the introduction and thesis statement and all of this are.
4: Helpful.
5: Foundation helpful.
I: Hopefully, OK, we will move on to, OK, so Design Specification. So, I think these are from Engineering Graphics and Models and Modelling and Software Development, so have you before Engineering have any experience of doing a design specification?
5: Is it like explaining our design?
I: Yes, design explanation, coding as well.
2: In Foundation course we got something similar in physics course.
4: The Van Der Graff generator.
2: We build a Van Der Graaf generator and wrote a report describing how it is happening.
I: I think the other group talked about programming a BMI calculator computer programme. Typing in code.
2: Actually it is not a design specification, in this course we had to write code which will calculate something, but still we did not describe anything we just wrote the code.
5: We had to know how to code.
2: It is not related to writing.
I: It was all computer code?
2: It is technical.
3: And design specification was only about Engineering Graphics and Models this was the only task that was kindly related to design specifications and we had to explain our project. For instance, I modeled a car and why professor wanted to buy it and I should sell him this car like say it is good, it has good aerodynamics, it's beautiful.
2: Persuading him.
3: Yeah persuading him it's a good idea to buy it.
5: And he told us that we can address him not as a professor like if someone build a building we can say 'Dear Mayor' I build this for your city, so creativity was also important.

I: The other group mentioned this. A cover letter?
4: Yes.
2: Yes, we had to hand in a one page cover letter.
I: Have any of you ever had experience writing cover letters?
1: No.
2: No.
I: Ah yes in the foundation we don't target different audiences. OK, we will move onto methodology recount which is basically a lab report. So, what previous experience do you have of writing a lab report?
1: In the physics course in Foundation.
2: Actually, not only Foundation in our schools we had to write lab reports.
4: But in our own language.
I: Ah, in Kazakh or Russian.
2: But, is close to the Foundation course.
I: So, if I ask you to do a lab report in Engineering what would you include?
2: It is like what we learnt from this, we did some stuff, we compared theoretical value with practical value.
5: And we have to explain if it wasn't the same, what were the errors.
I: And what kind of structure do they take within engineering, are they the similar to Foundation?
1: Yes, introduction and analysis part.
5: Objectives, instruments, and its good they give us content, template.
1: Template.
2: The professors, the template that was in Foundation is very similar to.
I: So, it is quite structured and you know what to write. OK, so moving onto a proposal, so ah OK, so for the Engineering Practice Management proposal you will be writing a business plan, so do you have any experience of writing a proposal before Engineering?
2: Again, in Foundation I guess, we wrote a proposal to our research project, introduction, outline and so on.
I: Good, and for this assignment what do you think you should have to do?
1: The same thing, design some product that will solve a problem in Kazakhstan and then we will have to convince the audience that they have to buy this product.
5: For System Design our teacher gave us again like a template so everything, it explains what should we write for every section, yes so it is like we don't have to look it up on the internet she has it on Moodle.
I: Ah OK so it is quite guided. Ok, so moving onto the last one. What experience do you have of writing a research reports previously?
1: In the Foundation.
I: So you did, suppose you did one for physics and one for EAP?
1: Ah Science and Society.
I: So you have had experience before. How about now if you are asked to write a research report within Engineering what do you think it should include?
2: Well, first of all it is like research report we should find a problem, to find a need for something and find a solution for this need and then start researching, it manageable to do it, is it possible to write research, to find sources.

4: Maybe the solution needs alternative ones.
I: How do you think a research report differs from a lab report?
5: For a lab report you don't really have to do any research you don't have to read any sources, you don't have to explain why, in a lab report you just, justify by mathematics like according to the formula and so on. In research have to justify from the sources, journals.
3: A lot of reading.
5: In research reports they also look at your writing skills, but in lab report they don't.
2: They don't really look at it.
5: If you are able to justify and explain what are the errors.
4: Did you understand the thing that was connected to the lab report.
3: For the courses we expect that the research will be similar that we did in the Foundation course.
2: So, basically the difference is that RP is much more complicated and it depends on how you write, for example, in my group [in Foundation] I learnt to write argumentative paragraphs, kind of like arguments and proving it with some points and some supporting information, but some people from my group they like have different structures not like argumentative, so kind of conflict.
3: The main difference between the research project in Foundation and now is we write in a group now.
5: Which is harder.
2: It is complicated, actually you can write it by yourself, only one guy can write it, but still we have different classes and only if you write it then it will be kind of unfair because you won't be able to prepare for the midterms.
5: Also, at the end we have peer evaluation, so other, some of the other team mates want to write because they think they will get zero if they don't do anything; whereas, you want to do everything, not like so everyone tries to do something.
I: You evaluate each other at the end to see how you worked in a group?
5: So then we will get different marks.
2: Kind evaluation.
3: It is really difficult to write in a group because everyone has different ideas, different views, different.
2: Responsibility, someone is less responsible.
5: You should do different, you should do another research about working in groups.
I: Group dynamics. Alright, so move on to the final section, so we have talked about the different types of coursework, so generally, or just thinking back how are these taught yes? How do you know how to write these essays or assignments, sorry?
5: For some of them the Foundation course was helpful.
2: Well we can still search from the Google.
5: And like we said for System Design the teacher posts on Moodle, not template, but explains expectations.
3: And sometimes we ask from the higher grade.
I: Students above you?
5: 'How did you write this?'
3: 'How much was your grade?'

I: And you mention that sometimes they are structured and you are given questions to answer to help you write, but you don't have, so obviously you had English in the Foundation, but there is no direct English instruction in Engineering would you say?
5: Like a class?
I: Yes, that tells you how to write this type, like a case study or...
3: I think we didn't have any class.
1: For case study we didn't have any instruction the teacher said that is up to us, our creativity.
2: He just, in the kind of guide he wrote that he expects us to learn something, like show your creativity kind of, he just gave us limits.
5: Only for case study, but analysis we didn't have any limit.
2: Only five page is limit, only five page, but how we did it is totally depend on us.
3: Also we don't have any...[Russian]
2: So, in our course, in all Engineering course we have no feedback, I mean we write something we get grades, but we get grades at the end.
1: No preliminary checks.
2: We don't know why we get high mark or low mark, its, we have no response, no feedback from the professors.
I: Do you see your work again?
1: No.
2: Only at the end of the course.
5: There was no feedback.
2: Yes, we still don't know why we get high or low grades, so it's, this is a problem of Engineering course, I think that is a problem because we have no idea how to write, I mean we write some kind asking for higher grades and so on, but still we don't know.
1: Like no chance to improve your work, no preliminary checks.
5: We already wrote five lab reports, but no grades and now we are going to write a sixth report and what if we are writing the same way and what if all of them were bad.
1: We don't know what mistakes we make all the time.
5: Like in Foundation when we get our research project there was like writing on them and they checked the calculations and another table of feedback and he talked to us and explained to us, but here no.
3: In Foundation we got some office hours like he already read our work and mentioned our problems.
4: So next time we will write better.
I: Do you [the professors] have office hours? Or can you drop in?
5: We can conduct.
2: Yeah office hours, but I don't think that they, we can discuss our work.
3: Asking questions about.
5: How do you solve this calculation.
I: Right, good, so moving onto the last one, so who do you think should be responsible for the teaching of writing within Engineering, whose job ideally do you think it is? Not here, in an ideal world, if you could create your own Engineering department?

4: Maybe, it will add, in Foundation programme we had academic writing centre, and maybe such centre in Engineering.
2: But hard to address, it is not professor fault that we write badly, but still we can't create new department and blame it that we can't write. I guess that...
5: Also, what if professor expects one thing, but the English teacher teaches another thing, but he the Engineer expects another because he is not an English teacher, but at the same time he can't teach us English as he already has a lot to do.
2: For instance, in the Foundation course we had.
1: Study for EMP[English for Maths and Physics].
2: It was useless course, let's be clear it was useless.
I: Why do you think that course didn't work?
2: Because in, it was kind of strange the professor from this course tried to teach something which was related to the physics, but still he had no idea what is it, so it was kind of strange experience.
5: We would have just went to physics course, there were two different things being taught, the same, but this one was like obvious one for E4MP.
3: It would be great if one or two professors would work together with other professors from other course, like this one professor responsible for writing, the teaching of writing and other for course content and they communicate with each other and he will tell him what he expects from this and then the other professor will teach us how to write.
5: It is like TA [Teaching Assistant].
2: I guess in the courses professors should be open for the questions like related to the writing, we can't ask professors how to write it, we kind of ask for template or examples, so if there will be such opportunity it would be great because we can't kind of ask professors what to write and so on, right now there is no opportunity.
I: Anything else you would like to add?
2: So, feedback.
I: Excellent, thank you very much.