The effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE

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ABSTRACT

This research seeks to discover what happens to students' English language skills while studying in English-medium classes in UAE universities, and to look at how this compares with what instructors and students think happens to students' English proficiency during the four years of study. This is explored through a retrospective panel study using a test/retest method to investigate score gains on the IELTS exam after four years of undergraduate study. Student and teacher beliefs about how English-medium instruction (EMI) affects language proficiency, the need for language support after admission, and the selection and delivery of course materials are discussed in conjunction with the research findings, leading to recommendations for institutions whose primary goal in using EMI is to increase proficiency. This research continues the exploratory research of Elder and O'Loughlin (2003) and O'Loughlin and Arkoudis (2009) regarding score gains in IELTS after a course of study, but this study is situated in a society where the language of instruction is not the language of communication for the students outside the university and at home.

The research findings indicate that there is a statistically significant score gain in all four of the English-language skill areas that are tested by the IELTS exam after four years of EMI for the participants in this study. The most gain occurred in the area of speaking, followed by reading, writing and then listening. Results from questionnaires and interviews indicate that students and teachers have different perceptions regarding language ability and the problems associated with the use of English for instruction. Students generally do not feel that studying in English causes problems for them, and they rate their ability in listening, reading, writing and speaking as good to excellent. On the other hand, teachers do not feel their students' language ability meets expectations for students studying in an English-medium environment and think that their students are especially weak in the areas of writing and listening. Teachers feel that they must make adaptations to course content and assessment criteria due to students' language ability. The research indicates that institutions whose goal it is to increase language proficiency through EMI need to have clear instructional goals in place for language development along with support systems for teachers and learners throughout the entire educational experience and not just in pre-academic support programs.

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LIST OF ACRONYMS / ABBREVIATIONS

ADEC	Abu Dhabi Education Council
ANOVA	One-way between-groups analysis of variance
CBI	Content Based Instruction
CLIL	Content and Language Integrated Learning
CEPA	Common Educational Proficiency Assessment
EAI	English-aided instruction
EME	English-medium education
EMI	English-medium instruction
EFL	English as a Foreign Language
ESL	English as a Second Language
FNC	Federal National Council
GPA	Grade Point Average
GSC	General Secondary Certificate
GSS	Graduating Senior Survey
ICLHE	Integrating Content and Language in Higher Education
IELTS	International English Language Testing System
KHDA	Knowledge and Human Development Authority
MOE	Ministry of Education
MOHESR	Ministry of Higher Education and Scientific Research
PCA	Principal Components Analysis
SLA	Second Language Acquisition
TESOL	Teaching of English to Speakers of Other Languages
TMI	Turkish-medium Instruction
TOEFL iBT	Test of English as a Foreign Language administered via the Internet
TOEFL	Test of English as a Foreign Language
UAE	United Arab Emirates

CHAPTER 1 - Introduction

1.1 Nature of the Problem

While using English as a language of instruction may have both cultural and political implications in countries where the first language is not English, internationalization of education and the desire to compete globally has led to the growth of English-medium instruction (EMI) in higher education around the world. Along with the implementation of educational policies that call for EMI, there is a belief that language learning will take place during content delivery in a second language.

Research in the field of language learning and teaching supports the idea that a second language is learned most effectively when used to convey content that is interesting and relevant to the learner. While immersion and content and language integrated learning (CLIL) programs have proven successful in countries such as Canada, the USA, and the UK for young learners acquiring a second language, English-medium instruction in higher education programs in English as a foreign language (EFL) contexts has not been widely investigated. While using the target language to deliver subject matter content, English-medium instruction does not explicitly focus on language teaching even though often the underlying rationale for using EMI is to improve students' language skills while content is being delivered.

Theories underpinning the rationale for EMI instruction as a means of learning a second language while delivering content are largely based on assumptions that second language acquisition is similar to first language acquisition. The rationale for EMI in higher education is often instrumental and based on theories of acquisition which support a naturalistic process of language learning similar to first language acquisition in which learning takes place effortlessly and automatically, provided there is sufficient exposure to the target language and the learner is sufficiently motivated. Assumptions that EMI will increase language ability are often used to justify the large investment in human capital and material resources required for English-medium instruction in countries where the first language is not English, even though little empirical evidence exists regarding the effects of English-medium instruction on language development in these contexts.

1.1.1 Rationale for EMI

Seen as a means to modernization and development within a country (Hu, 2008; Madileng, 2007), an international language of business, tourism, and education (Vinke, 1995), and as the lingua franca in government, business, and society for many countries with a multitude of indigenous languages (Madileng, 2007), English-medium instruction in higher education is a significant educational trend (Graddol, 2000, 2006). Historical decisions along with considerations of future needs of a country often influence language policy decisions when it comes to the medium of instruction (Airey, 2004; So, 1992), and these decisions are often closely linked to the economic concept of globalization (Coleman, 2006; Collins, 2010), with EMI believed to offer graduates the best opportunities for academic advancement and training as future workers (Byun, Chu, Kim, Park, Kim & Jung, 2011; Fox, 2007; Vogt & Oliver, 1998). Tertiary education in many of the Middle East Gulf States (Bahrain, Kuwait, Oman, Qatar, the Kingdom of Saudi Arabia, and the United Arab Emirates) often takes place using English as the medium of instruction with the rationale behind this being that while learning the content students will also improve their language skills thus making them better able to compete in today's global economy.

The internationalization, marketization, and globalization of higher education are also key factors influencing the growth of EMI in non-English speaking cultural contexts (Byun, et al., 2011; Vinke, 1995). Because English is one of the most widely used languages today, with some estimates as high as a billion speakers, EMI has often been seen as a means to gain access to an international academic community whose lingua franca is English (Douglas, 1977; Vinke, 1995). By teaching courses in English, an institution has the ability to attract international students and faculty members while offering its own students and teachers the opportunity to participate in an international research community where a large amount of scientific research is published in English (Graddol, 2000). According to Graddol, "the need to teach some subjects in English, rather than the national language, is well understood: in the sciences, for example, up-to-date textbooks and research articles are obtainable much more easily in one of the world languages and most readily of all in English" (p. 45).

1.1.2 EMI in the UAE

Because of its strategic location for trade, the UAE has historically been a place where multiple languages are used. One of the core concepts in the federally funded tertiary institutions is English-medium instruction. Original policy decisions made in the 1970s concerning higher education stated that "qualified faculty that meet international standards would be employed" and that "instruction would be in English" (Ministry of Higher Education & Scientific Research [MOHESR], 2007). Because these universities were created for Emirati citizens, and until just recently were not actively recruiting students of other nationalities, it can be inferred that the core reason for having the teaching and learning take place in English was because the Emirati government wanted its citizens to learn English. This could be rationalized by the need to compete globally in a world in which English has become the language of economics, politics, and tourism. In rebuffing opponents of EMI in higher education, the UAE Minister of Higher Education and Scientific Research stated, "We will not deny our young generation the opportunity to interact with the outside world in English, today's language of science and technology" ("Intensive English," 2009).

Thus, in order to enter university, Emirati students must exhibit a minimum level of English-language proficiency based on the results of an internationally recognized exam. Students may study up to two years in an intensive English foundation program to meet the English-language requirement before being admitted to the undergraduate program. This intense focus on meeting a benchmark level of English for admission to higher education may lead to the assumption by students that once they meet the benchmark their English is sufficient and there is no need for further improvement while they pursue their undergraduate studies. This, along with university professors who have not been hired for their ability to deal with second language learners, but for their achievements related to teaching and research in their content area, means that there may be little focus and support for students who may struggle with the language skills needed to study effectively in a second language once they have been admitted. While the majority of the students' coursework will be taught in English, second language research shows that this may not be enough to maintain or increase students' language proficiency in English which is often one of the goals of using the language as a medium of instruction.

In the context of education in the United Arab Emirates and other Gulf States, it is often the case that tertiary level instruction taking place in English is in a

homogeneous classroom of non-native English speaking students whose first language is Arabic. The teacher delivering the content is often a native English speaker, but not necessarily one trained in teaching second language learners. The assumption is that because students are taught subject matter using English their language proficiency will increase over the four years of undergraduate study even without a concentrated focus on English language learning. This study investigates this assumption by examining the institution's expectations for language development during undergraduate study, student and faculty perceptions of language development over the four year period, and the score gain results from a standardized English-language test given at entry and exit from the program. Part of this research will be to determine what the expectation for English language development is from an institutional perspective (or in other words what would be considered to be *adequate* improvement in terms of language ability over the course of four years of English-medium instruction).

1.2 Rationale for the Study

Being a faculty member at the institution where the research takes place makes me part of the research process, and thus it is important to begin with a brief introduction of my interest and background in the subject of the research. As a teacher and as an advocate for alumni of the institution, I am concerned with whether language learning outcomes are being met and whether programs can be improved. I came to the United Arab Emirates (UAE) in August 2004 to teach in a foundation English program. The purpose of the program was to prepare Emirati women for further studies that would take place in English once they entered the undergraduate program. Students in the foundation program were admitted to the university with the condition that within the next two years they would be able to meet the benchmark established by the university on an internationally recognized language exam, and they would pass the coursework of the final English level within the program, thus allowing them entry into baccalaureate studies at the university. During the time I worked in this program, the university made adjustments to policies related to the English benchmark score needed for entry to baccalaureate study (i.e., lowering the required International English Language Testing System, IELTS, exam band scores needed for entry into the general education program).

There was a lot of public discussion about the financial burden of the English foundation programs on higher education, and funding for universities was avidly discussed, resulting in a formula funding model that would be implemented allocating money based on the number of students (with more money allocated for those enrolled in actual undergraduate study than for those who would enroll in the foundation level English courses before being accepted into the general education programs). Based on the assumption that English language development could continue as students work toward an undergraduate degree, IELTS entry scores were lowered in order to permit more students to begin undergraduate studies. This would allow the university to be able to claim more funding for the students as they would be enrolled in the undergraduate study program as opposed to the less funded pre-entry foundation English program.

This was my first experience teaching in a program with a homogenous group of students who would go on to study together in a university setting in a second language within their own country. Taught largely by western foreign expatriates, the students have classmates who are similar culturally and who speak the same first language, but their teachers are from different countries, all teaching in a second language of the students, English. This is largely the context of higher education within all the Gulf States.

The students work very hard on their English skills to move on to what they call the "general education" program or the freshman year of the university, and many of them are initially frustrated that they are placed in the English support program before being able to start their university studies. Prior to enrollment in higher education, they study English as part of the general curriculum in the primary and secondary schools, but this does not afford 90% of them the English proficiency required as laid out by the university entrance requirements to begin their course of study which will be delivered in English. Thus the extensive one to two year period of additional language study is intended to raise their understanding and proficiency in academic English to a level that would allow them to begin studying academic courses in English.

Those first one to two years in a foundation program are spent with instructors trained in teaching English to speakers of other languages (TESOL). They generally have several years of experience teaching students English and consequently understand what it takes to learn a second language. Once the students enter into the

general university program this is not necessarily the case. The sympathetic language teacher who has been scaffolding lessons to aid achievement and learning is now replaced by a frustrated university professor (a content specialist) who does not know how to deal with the student's spelling and grammar mistakes and has difficulties making the content accessible when it appears the students do not read assigned course materials because they cannot understand them.

Disgruntled faculty members complaining about the level of their students' English, along with the university's objective to graduate students bilingual in Arabic and English, led me to wonder what happens to the students' language skills once they leave the supportive language learning environment of the English foundation program and are immersed in learning content through the medium of English for their undergraduate degrees. Does four years of study with English as the primary medium of communication improve the students' English ability and what are the perceptions of the institution, teachers, and students regarding language development during undergraduate study? The assumption from anecdotal evidence (and the fact that universities admit students with "minimal" language skills into their programs) is that English language learning will continue to take place even without any support or focus on language development

The university has begun looking at how to assess the learning outcomes they have set for their students, one of these being fluency in English. This assumption that English language proficiency increases during the four years of baccalaureate study is inherent in the decision to test students' English using the IELTS exam at various points throughout the program as one way of assessing the language objective. It is believed that if students entered with an IELTS band 5.0 overall (after two years of study in the English foundation program), then at the end of two years of undergraduate study they should have an IELTS band 5.5 overall, and at the end of four years of study and before earning a degree, they would have an IELTS band 6.0. This assumption became the university administrators' focus with pilot testing of graduating senior students' English beginning in the 2010-2011 academic year.

These are the factors that prompted me to explore what exactly is happening to the students' language proficiency while they sit in the undergraduate classroom and are taught subject matter using English. What do the teachers and students think is happening to the students' language skills during the four year period? Who is responsible for making sure that the students' English level reaches that which the

university has set as its objective? And, perhaps most compelling of all, how do perceptions of the institution, faculty, and students regarding the students' English proficiency compare with the test results of students at entry and exit? Using the university I work at as a case study to investigate these questions, I hoped to discover what happens to the student's language proficiency while studying in EMI where the focus has not been on language development, but on content delivery.

1.3 Significance of the Study

This study is significant in several ways. It is the first to examine score gains on IELTS after completion of four years of undergraduate study in a country where English is not the native language. It examines the difference between institutional, teacher, and student perspectives of language ability. It investigates further the view that input in a second language is adequate as a means of acquisition. The context of this study also adds to its significance because many Arab-speaking Gulf countries now provide almost all higher education opportunities to their citizens using English-medium instruction at considerable expense, and yet there has been very little research specifically focused on the impact of EMI on language proficiency in this context.

It is hoped that this research will increase the knowledge of the effects of English-medium instruction in higher education on language proficiency as measured by the IELTS test, especially in contexts where EMI is initiated in countries where the native language is not English. It is anticipated that the research findings will lead to awareness and improved practices among university professors in EMI environments that will be beneficial to the students in terms of English language learning in contexts where the goal of EMI is to increase language proficiency.

1.4 Contribution to Knowledge

This research continues the work of others who have investigated second language learning and increases in proficiency in terms of hours of study and typical score gains on IELTS. It will add to the previous research investigating teachers' perceptions of students' ability (Craig, 2007), studies related to coping strategies for English language learners in higher education (Bifuh-Ambe, 2009), and research into English language improvement made during university study (Green, 2004; Humphreys & Mousavi, 2010; O'Loughlin & Arkoudis, 2009; Storch, 2009; Storch & Hill, 2008). Previous research looking specifically at IELTS score gains (Elder &

O'Loughlin, 2003; Green, 2004; O'Loughlin & Arkoudis, 2009) has been conducted with international students at overseas universities where the surrounding environment is that of the second language, English. Through a retrospective panel study using a test/retest method to investigate score gains on the IELTS exam after four years of undergraduate study, this research continues the exploratory research of Elder and O'Loughlin (2003) and O'Loughlin and Arkoudis (2009) regarding score gains in IELTS after a course of study, but the context is a society where the language of instruction is not the language of communication for the students outside the university and at home. It is an exploratory study with the goal being to describe what happens in terms of score gains in this particular context in order to identify issues for future research. This study investigates what happens to students' English language skills during the four years they study for their bachelor's degree at one university in the UAE. The research takes place within the learner's home country and culture and has participants who have the same first language (Arabic) and come from a similar educational background.

1.5 Aims and Research Questions

   The purpose of this research is to investigate the effects of English-medium instruction (EMI) from an institutional, faculty, and student perspective in the context of higher education in the UAE. It investigates language proficiency (as measured by an internationally recognized assessment) comparing actual score gains to what instructors and students think happens to students' English proficiency after four years of academic study.

This research attempts to answer the following questions:

1. From the perspective of the institution does the language ability of students *adequately* improve during their undergraduate study?

2. What are the university professors' perceptions of their students' English language ability?

3. What are the students' perceptions of their English language ability as a result of attending an English-medium university?

4. What is the difference between English proficiency at entrance and exit of students studying in universities in the UAE as measured by the internationally recognized IELTS exam?

a. Is there a significant change in the overall IELTS score used for admission to baccalaureate study as compared with the overall IELTS score prior to graduation?

b. Are there differences in IELTS band scores for the four skill areas (listening, reading, writing, and speaking) from entry to exit testing?

5. How do these scores correspond with the institution, faculty, and student perceptions of student English proficiency?

1.6 Key Concepts and Terms Defined

The following sections will explain some of the terminology commonly seen in the literature surrounding teaching and learning English and how it is used in this study. It will examine the various terms used when teaching in a second language, define the meaning of language proficiency, and look at how language ability is measured. To begin with I will explain the usage of the terms ESL and EFL within this study.

1.6.1 Contexts for Research Related to English Language Learning (ESL / EFL)

Two terms commonly seen in literature related to English language learning are English as a Second Language (ESL) and English as a Foreign Language (EFL). With increasing use of English as a global language and a means to communicate between speakers of various languages, defining exactly what is an ESL or EFL context is continually shifting (Graddol, 2006). While discussing research relating to the study of English-medium instruction, I will use the term ESL context to refer to research which takes place in countries where English is commonly thought of to be the native language of the citizens (such as the United States, the United Kingdom, and Australia), and the term EFL setting or context to refer to countries where English is not considered to be the first language of citizens of the country, for example, Korea, Denmark, Taiwan, the United Arab Emirates. It should be noted that in the UAE, though English is widely used as a means of communication between the varying groups of foreign labor making up a large majority of those living in the country, the country's first language is still considered to be Arabic which is the dominant language for UAE citizens.

1.6.2 Teaching in a Second Language Terms

Various terms are used when discussing teaching in a second language, including CBI, CLIL, ICLHE, EME and EMI. These are sometimes used interchangeably and at other times they are used to indicate a clear distinction with methodological or pedagogical implications. CBI (Content Based Instruction) usually refers to the "concurrent teaching of an academic subject matter and second language skills" (Brinton, Snow & Wesche, 2003, p. 2) where content is a means of presenting language to be learned to students. CBI courses may be offered as support courses for those studying a subject or instead of the traditional language learning classroom that focuses solely on the study of the language without a specific subject matter focus. CLIL (Content and Language Integrated Learning) is often used to refer to a "methodological approach that involves the teaching of a specific content through a foreign language" (Costa, 2009, p. 85) with the aim that "the learner is gaining new knowledge about the 'non-language' subject while encountering, using and learning the foreign language" (European Commission, 2010). It is thought that the use of the target language while teaching content will lead to natural acquisition of the language used while teaching. (Snow & Brinton, 1997; Swain, 1996).   ICLHE (Integrating Content and Language in Higher Education) is largely used in the European higher education context (Wilkinson & Zegers, 2008) when referring to CLIL-type methodology.

In contrast to the above terms that reflect clear goals and instructional practices to support both content and language learning, EME (English-medium education) and EMI (English-medium instruction) frequently refer to instruction using English in which the content is a substantive academic course, rather than a support to a substantive course or a means to introduce language learning (Dickey, 2001). These terms are often used when teaching content through the foreign language without taking into account goals related to both subject matter learning and language development.

In the context of this study, the most appropriate term to use is EMI, or English-medium instruction. Undergraduate courses are taught in English with the teacher's goal being the delivery of content. Teachers are not specifically using instructional techniques to improve the language proficiency of students (though this may be one of the national policy reasons for delivering higher education courses in English in EFL contexts). For teachers, it is simply the language that they speak and

the language of the textbook and materials that they use in class to deliver the content. The larger educational policy decisions by the government regarding the use of English to teach at the tertiary level are not an everyday concern for the teachers. They are simply doing their job, whether it is teaching accounting, international studies, or interior design through the use of English. Thus, throughout this paper I will use the term English-medium instruction (EMI) to refer to the teaching and delivery of course content that takes place in English with the primary goal of the teacher being to deliver course content.

1.6.3 What is Language Proficiency?

When discussing learners' proficiency in a language, various terms have been used including, "ability," "proficiency," and "competence." The traditional use of the term "language proficiency" refers to "general knowledge, competence, or ability in the use of a language" (Bachman, 1990, p. 16). Knowledge of syntactic structures, vocabulary, and underlying rules governing language usage help to make up an individual's proficiency in a language, but are not easily measured as these are not explicitly observable. The way that language is used and the ability to do so are more observable and language testing has often looked at proficiency in terms of communicative ability or language use. One definition for language is "any conventionalized system of communication" (Williams, 1979, p. 506). Communication refers to the ability to both give and receive messages from others. Interaction is a key component of language for without interaction there would be no need for language, and the ability to use the language becomes important when discussing a learner's proficiency.

Thus, being proficient may be defined as "having sufficient command of the language for a particular purpose" (Hughes, 2003, p. 11). This fits with what Bachman refers to as communicative language ability whereby the user must have both knowledge of the language and the capacity to use it competently within a given context (1990). Ellis states that "L2 [second language] proficiency refers to a learner's skill in using L2. It can be contrasted with the term 'competence.' Whereas, competence refers to the knowledge of the second language a learner has internalized, proficiency refers to the learner's ability to use this knowledge in different tasks" (1994, p. 720).

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Throughout this paper the terms "language proficiency" and "language ability" will be used synonymously to refer to the general knowledge and competency in the use of the language as defined in terms of communicative language ability (Bachman, 1990; Canale & Swain, 1980) or the idea that competence within a language allows for communication to take place in the context where the language will be used. This competence can be looked at in terms of proficiency within different skill areas of listening, reading, writing and speaking (Hughes, 2003).

1.6.4 Language Testing

The measurement of language proficiency often takes place through testing. Language proficiency is measured for a variety of reasons, but in today's world, where English is thought to be essential for advancement, the primary reason for measuring English language proficiency is to act as a gatekeeper. Common uses for language proficiency tests are immigration, job certifications, and admittance to universities. *A Dictionary of Language Testing* (Davies, 1999) notes that proficiency can be defined based on performance as measured by a testing procedure, and it is within this context that a worldwide English language testing industry has developed.

With the growth of the English language teaching industry, several globally recognized standardized testing instruments for language proficiency have been developed. The IELTS (International English Language Testing System) exam is one of the exams that has been widely used for admission to universities as a means of measuring whether one has the required language ability to study in an English-medium context. Test developers, Cambridge ESOL, say that the IELTS test is designed to assess overall English language proficiency by requiring test takers to provide evidence of listening, reading, writing, and speaking skills (IELTS, n.d.). Performance in these four skill areas provides a reliable overall assessment of language ability and the tasks on the test reflect features of everyday communicative use in non-test situations (IELTS, n.d.).

The IELTS test is used as one measure of language proficiency in this study as reflected in the test design is the communicative language teaching philosophy (Geranpayeh, 1994). As noted above, the rationale for EMI in tertiary education in the UAE is the ability to communicate in English. In this study the IELTS, an exam which reflects communicative ability, will serve as one means of investigating whether language proficiency increases with EMI.

1.7 Structure and Organization of the Thesis

        Following this introductory chapter are five chapters which detail the research. The second chapter lays out the context in which the study takes place, including information on the cultural, socioeconomic, and political issues in their relation to education within the region. The third chapter reviews the literature related to research in the field of language acquisition, score gain, and studies conducted in relation to EMI in both ESL and EFL contexts. The fourth chapter examines the methodology of this study including a discussion of the research design, participants, instruments, data analysis, and ethical considerations. The fifth chapter is a presentation of the results and a discussion of the findings, while the final chapter concludes and summarizes the research, along with making recommendations for further study and briefly reflecting on my thesis journey.

CHAPTER 2 - Context of the Study

This study focuses on the effects of English-medium instruction on language proficiency in the context of higher education within the UAE by investigating changes to language proficiency of undergraduate students at one of the universities within the country. This chapter will describe the environment in which the study takes place. It will look at education in the UAE and the language policies in education in relation to the social, cultural, economic, and political issues which influence them. It will examine the general use of English in the UAE, and its usage within the country's higher education system, along with discussing the institutional context in which this study takes place.

2.1 The United Arab Emirates

The UAE is an Islamic state located in the Middle East in the Gulf area. Comprised of seven emirates (Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaimah, and Fujairah), its territory covers 82,880 square kilometers with the emirate of Abu Dhabi making up 87% of the total size. The emirates were former British protectorates until the federal state was established on December 2, 1971. Decisions are made by the Supreme Council of Rulers which includes the ruler of each of the seven emirates, whose members elect the president and vice-president of the country every five years. Since its formation, the country's president and vice-president have been the rulers of the two wealthiest emirates, Abu Dhabi and Dubai respectively. The federal government also includes the Council of Ministers, the Federal National Council (FNC), and an independent judiciary. Each of the seven emirates also has its own local government. The power of the various federal institutions and their relationship with the local governments of each emirate is established in the constitution and changes as emirates decide to cede power in certain areas to the federal government.

The discovery of oil and the financial resources it provided has led to the rapid development and modernization of the UAE (Gaad, Arif, & Scott, 2006). Within the space of 50 years, the UAE has been transformed from a country that was materially poor and sparsely populated without formal education systems in place to its current state (Findlow, 2006), a country that boasts the world's tallest building, has a large expatriate workforce that makes up over 88% of its population ("Expats Make Up,"

2011), and, in Dubai alone, receives approximately 10 million visitors per year (Bowman, 2008). Karmani (2005) describes the UAE as a rentier society (meaning that national revenue is largely due to the rent of indigenous resources to outsiders) and believes that English language teaching in the Gulf region is a result of the oil society and western cultural influence associated with it. Oil revenues are distributed among citizens via subsidized housing, health care, and education. There is a reliance on outside expert knowledge leading to a devaluation of local expertise (Karmani, 2005). This government paternalism has resulted in a society that takes for granted the provision of free education leading to a lack of questioning of what is provided and the quality of its outcomes. People have limited feelings of responsibility in terms of helping to provide for their own needs along with limited opportunities for public participation in policymaking (Karmani, 2005).

The country's population, estimated to be over 5.1 million in 2011, is largely made up of expatriate workers (Central Intelligence Agency, 2011). In 2010, the Emirati population was reported to be only 11.4% of the total ("Abu Dhabi Has," 2010). The language is officially Arabic and the religion is Islam. The literacy rate is now at 90% and life expectancy as of 2008 was 77.7 years (World Bank Development Indicators, 2011). Approximately 9% of the workforce is Emirati.

2.2 Importance of English in the UAE

As the prominent language in commerce and technology, English is the chosen language for those wishing to compete in a global economy (Phillipson, 2003). Islam and Arabic have been unifying forces since the seventh century in the Gulf region (AbuKhalil, 2004 as cited in Charise, 2007), but the location of the Gulf area for trade has fostered the use of multiple languages (Charise, 2007). The relationship with the British in the 19th and 20th century helped to cement English as the lingua franca of the area. Due to the nature of the colonial presence that offered emirate rulers a high degree of autonomy, attitudes toward English were generally positive with the language seen as a facilitator to nation building rather than an impediment (Charise, 2007). Another factor influencing the use of English is the multinational nature of the country. While the Emirati population is currently estimated at around 11.4% ("Abu Dhabi Has," 2010), the rest of the population is made up of guest workers. With such a large foreign population, a common language of communication is English. Restaurant menus and signage appear in both English and Arabic, and in order to

communicate with the Filipina maid, the Pakistani taxi driver, and the Indian shopkeeper it is not uncommon to hear Emiratis in the capital city speaking English.

The view that English is important is expressed daily in the newspapers in the UAE. In 2009, the Federal National Council (FNC) asked universities to ease English requirements (in order to protect national identity), accept more students who do not speak English, and consider teaching some of the subjects in Arabic (Shaheen, 2009a). The Minster of Higher Education and Scientific Research responded by stating that "English proficiency was vital to development. We have come to understand the importance of language learning to our national progress. We are committed to providing our students with the knowledge and skills necessary for living and working in a global environment" (Shaheen, 2009b, p. 2). This sentiment is echoed by young people and their parents in the UAE. As Mohsen al Awadhi, a 22-year-old student states, "Without English, I don't think anything in Dubai would have happened, honestly. We couldn't understand anything that was going on. We rely on foreigners and expatriates, not just the locals or Arab communities…. If they teach me aviation engineering in Arabic, I would not find any jobs" (Shaheen, 2009b, p. 2).   Likewise, the mother of a female Emirati high school student reported, "You need English to communicate with everyone, even in an Arabic country like the UAE. I have some English but not that much, and I wish I could study it more, because it is everywhere – in shops, in hospitals. I think if you don't know English, you can't get the most out of life" (Lewis & Khalaf, 2009).

2.3 Education in the UAE

One area falling under the domain of national interest is education. There is a Ministry of Education and a Ministry of Higher Education and Scientific Research which oversee the operation of schools and universities within the country. In recent years some of the emirates have also established their own education councils to cater to the particular needs of the citizens of their emirate. In both Abu Dhabi and Dubai, these independent bodies work closely with the UAE Ministry of Education to establish educational initiatives at the local emirate level. The Abu Dhabi Education Council (ADEC) and Knowledge and Human Development Authority (KHDA) in Dubai work to establish programs within their respective emirates in line with the UAE's general education policy.

The UAE government allocates about one third of its federal budget to education and emphasizes that "educational development is vital to economic success, in the long term in a post-oil future" (Abu Dhabi Week, 2011, p. 5). Due to the cultural and religious nature of the country, classes in government institutions are usually held separately for men and women from primary school through undergraduate studies. As there tend to be more available women teachers than male teachers some boys' primary schools have female instructors, while at the tertiary level the instructors may be male or female, regardless of the student population.

While the Ministry of Education (MOE) deals with primary and secondary schools in the country, the Ministry of Higher Education and Scientific Research (MOHESR) sets policy for tertiary institutes. Comprehensive education for all UAE nationals is provided free from kindergarten through university. Primary and secondary education is compulsory up to 9th grade or about 15 years of age. During this period in government schools, the medium of instruction is Arabic, with English introduced in grade one for one period a day (Abu Dhabi Week, 2011). The UAE public education systems consist of kindergarten (two years), primary (six years), intermediate (three years), and secondary education (three years). The intermediate education which follows primary school qualifies students for general or technical secondary education, consisting of a common first year and then a specialization in science or the arts. At the end of year 12, students take the examination for the General Secondary Certificate (GSC). Scores on this examination, along with a national placement exam called CEPA (Common Educational Proficiency Assessment), determine placement in tertiary institutions.

2.3.1 Higher Education within the UAE

The UAE has one of the highest application rates in the world to higher education with 95% of female students and 80% of males in their final year of secondary school applying either at home or abroad (Abu Dhabi Week, 2011). This may in part be due to the fact that higher education is government funded and has come to be seen as a right for most UAE citizens. Along with more than 100 private and state post-secondary institutions, the country currently has three federally funded universities which enroll 34,000 students and a 20,000 increase is expected by the year 2020 (Fox, 2007). These institutions are licensed and accredited by the Ministry's Commission for Academic Accreditation. The majority of teaching staff at

all three national tertiary institutes are expatriates and the language of instruction is English. Until recent years, admission to one of the federal institutions was largely reserved for Emirati nationals, but recently there has been a drive to recruit fee-paying children of expatriates living in the country and international students to the federal universities.

The goal of higher education in the UAE is "a world-class higher education system that will prepare [the] citizens for social and economic leadership and for informed and intelligent personal lives" while contributing to the UAE economic development by preparing Emiratis to participate in the workforce (MOHESR, 2007, p. 5). Higher education in the UAE has largely been developed based on four policy decisions that were formulated in the 1970s.

- The UAE would build and operate its own universities.
- Qualified faculty that meet international standards would be employed.
- Instruction would be predominately in English.
- Education was to be for all qualified Emiratis, and would include women. (MOHESR, 2007, p. 11).

Today male enrollment in the three federal institution is lower than female enrollment and only one in five baccalaureate graduates of the higher education system is male (MOHESR, 2007). The gender gap between males and females in higher education in the UAE is often discussed in relation to societal expectations and the need for males to support their families (Ridge, 2009). Careers in the police and military provide males a guaranteed salary and opportunities that do not require further education (Ahmed, 2010b). In general low expectations for males and the lack of perceived benefits of education have lead to high dropout rates for males from secondary schools, and it is reported that up to 50% of males who enroll in the university foundations programs drop out within the first semester to join the police or army (Ahmed, 2010b).

2.3.2 English as the Primary Language of Instruction in Higher Education

The UAE Ministry of Education has set specific language goals for schooling within the country. Every student who wishes to attend a federal university must take an exam to measure their English-language proficiency before acceptance to university. Those with scores below a minimal level will not be granted entry even to the pre-baccalaureate English-language programs, and this means they will not be able to attend one of the three federal higher education institutions. Of those accepted

to one of the federal universities more than 90% require remedial English before going on to their degree program (Ahmed, 2010a) and up to one third of the federal universities' budget is spent on foundation level English courses ("Intensive English Classes," 2009) because English is the primary language of instruction in higher education.

Based on the results of the CEPA English exam, MOHESR in 2007 reported, "It is clear a large number of new students are not ready for work at the university level. Scores on the CEPA test show that far too many students do not have the necessary competencies in English to do college-level work" (p. 26). This raises two questions. Why do students need to do their college-level work in English, and would they be considered ready if the courses were taught in Arabic instead? This must be considered when examining educational preparedness in the UAE, and has been investigated by other researchers reporting on whether it is language or academic skills that are necessary to be successful at the university level (Elder, 1992; Feast, 2002; Graham, 1987; Gunn-Lewis, 2000; Maleki & Zangani, 2007; Seelen, 2002; Sert, 2006). This is not, however, the focus of the current study, which investigates whether EMI has an impact on students' English language proficiency.

Continual efforts are made in order to prepare students for EMI at the post-secondary level. The Ministry of Education has launched the "Education Strategy 2010 – 2020" with more than 50 objectives, one of which is aimed at reducing the number of students who need to take English courses before entering their area of study at the university (Ahmed, 2010a). In Abu Dhabi it was reported that thousands of native English speaking teachers had been recruited to begin teaching in the public schools, not for the purpose of making English the language of instruction in primary and secondary classrooms, but so that concepts introduced in Arabic could then be reinforced in English (Ahmed, 2010a).

After criticism by the Federal National Council of EMI, the Minister of Higher Education and Scientific Research emphasized the need for English-medium instruction in the tertiary institutions by stating that "students in the UAE state universities will continue to be instructed in both Arabic and English languages… [and] …we will not deny our young generation the opportunity to interact with the outside world in English, today's language of science and technology" ("Nahyan: English," 2009).

2.3.3 Costs of English-medium Instruction

English language pre-entry foundation programs at each of the three federal universities are often blamed for using up vast resources needed for higher education. The large number of students who need foundational support in English means that undergraduate degrees generally take between five and six years to complete with the first one or two years devoted to English study. It has been estimated that systemwide, "30% of the higher education resources are devoted to foundation courses and preparing students to work effectively at the college or university level" (MOHESR, 2007, p. 26).

A 2007 report, *Educating the Next Generation of Emiratis: A Master Plan for UAE Higher Education*, discusses the implications of an increasing population ready to enroll in post secondary education and the lack of funds available for providing the support necessary (MOHESR). At that time it was felt that the UAE had not succeeded in maintaining the per student support needed to meet international levels of quality with the increase in enrollment. With an enrollment of over 35,000 students in 2007, the higher education system awarded more than 6,500 degrees and sent hundreds of students overseas to study. This was done on a budget that had seen little growth since 1996 and failed to keep pace with inflation and the increased enrollment and cost. In 2007, MOHESR reported that "in real terms, per student financial support at the nation's campuses [had] declined by at least 20% since 1999" (p. 15).

2.4 Institutional Context for the Study

The medium of instruction at all three of the federal universities in the UAE is English. This study will look at the language proficiency of students at one of these universities and the change that takes place in their English language ability over the course of four years of EMI undergraduate study. It is the goal of the country to develop and compete globally which fuels the demand for English language learning as it reflects the contemporary power balance and offers the hope that mastery of the language will lead to employment and prosperity for the country's citizens (Phillipson, 1998).With this in mind, one can see why courses are taught in English at the university level, and why the Minister of Higher Education and Scientific Research states in his opening message in the university catalog, "At the undergraduate level, these programs are designed to help students attain the goals of

being able to learn and work in Arabic and English…" (Zayed University, 2009a, p. iii).

This research takes place at a one of the UAE universities established by the federal government to educate Emirati women. The university is organized into five colleges: Arts and Sciences, Business Sciences, Communication and Media Sciences, Education, and Information Systems. It offers internationally recognized bachelor's and master's degrees based on an American program model with undergraduate degrees designed to be completed in four years of full time study. The language of instruction is primarily in English, but the university expects its graduates to be able to communicate effectively in both English and Arabic. The basis of the academic experience is focused on six learning outcomes: language, information technology, critical thinking and quantitative reasoning, information literacy, global awareness, and leadership, each having a general statement of purpose. The language learning outcome states, "Graduates will be able to communicate effectively in English and Modern Standard Arabic, using the academic and professional conventions of these languages appropriately" (Zayed University, 2009a, p. 10).

The mission of the university as stated in the student handbook is "to produce graduates who, in addition to excelling in Arabic and English, are masters of the computer, well grounded in the academic disciplines, fully prepared in a professional field, and capable of providing leadership in the home, community and nation" (Zayed University, 2009b, p. 6).

Considering the term "produce graduates," and bearing in mind the aforementioned ideals of the country and the university, it should come as no surprise that the main goal of education seems to be to make students workforce-ready (in a workforce dominated by the western ideals of punctuality, efficiency, and the ability to speak English). The curriculum, in true technical-behavioral fashion, helps to inculcate students with a set of values that encourages them to be consumers in the capitalistic system and readies them to participate in globalization (McKernan, 2008). This is one of the key rationales for countries using English-medium instruction.

Because English is the medium of instruction for the university courses, it is necessary to make sure that students enrolled have a minimum level of English before starting the undergraduate program. As with the other two federal universities, the case study university offers intensive English classes prior to enrolment in regular undergraduate studies so that conditionally admitted students can meet minimum

English-level entry requirements. These English language courses are offered as a separate foundation program prior to entry into the regular program for baccalaureate studies at the university.

2.4.1 Admittance to Higher Education

Students apply to university with the National Admissions Placement Office of the Ministry of Higher Education and Scientific Research. All students are required to take a CEPA exam before admission. This includes both a math and English component. In the future it will include Arabic and IT assessments as well. For admission purposes, the English exam plays the most significant role. Students must have a minimum score on the English component to be admitted to any of the federal institutions or to receive funding to study abroad. Students are conditionally admitted to the university based on their CEPA scores and high school GPA. Those who do exceptionally well on the CEPA English test are recommended to take the IELTS (International English Language Testing System) exam or TOEFL (Test of English as a Foreign Language) exam before the start of the academic year. If they can present a 5.0 overall band in IELTS or a 61 TOEFL iBT score, they are invited to sit an in-house assessment which if passed would allow them to be placed directly into the general education program and exempt them from the requirements to take any English language courses prior to entry into the four year baccalaureate program.

2.4.2 The University's English Foundation Program

Only 10% of students admitted to the university are able to directly enroll in courses without the need of further English language study. Thus, 90% of all students take at least one term of English in the foundation program before entry into the university. These students are placed into one of six levels of the English foundation program based on their English CEPA score.

Students may study in the English foundation program for up to two years before admission into the general education program. Each of the program's six levels of English study involve 20 hours of instruction per week for 8 and 10 weeks with a focus on English for academic purposes. Attendance is compulsory and students must pass the course they are in before moving on to the next. In the final level of the foundation program, courses include five hours per week of exam preparation for the IELTS exam. The participants of the current study are all students who began study in the university English foundation program and entered

baccalaureate study by passing the final level of the program and meeting a benchmark score on the IELTS exam. All three federal institutions accept either the IELTS or TOEFL to meet these requirements. As of 2007, the university in this study became a closed IELTS testing center and administers the IELTS at the end of each term for students at the final level of their intensive English program.

2.4.3 University Learning Outcomes

One of the institution's core learning outcomes relates to language development with the goal being that "graduates will be able to communicate effectively in English and Modern Standard Arabic, using the academic and professional conventions of these languages appropriately" (Zayed University, 2010). In assessing this competency the institution has developed a matrix with indicators and criteria for looking at language ability. It includes four levels of accomplishment: Beginning, Developing, Accomplished, and Exemplary, and it is anticipated that by the time of graduation students will have reached the Accomplished level. Set points for assessing the learning outcomes are being established and one of the key assessment means for English language is the IELTS exam. It is expected that at entry students will be at a 5.0, after two years of study they will have reached a 5.5, and by graduation a score of 6.0 should be achieved.

2.4.4 Role of IELTS in University Admission

English language proficiency exams are used in many universities with cut-off points for entry into programs. One of the tests commonly used is the IELTS, an internationally recognized assessment of English language ability across the four skill areas of listening, reading, writing, and speaking. First administered in an official capacity in 1989, according to IELTS, the test was "developed by some of the world's leading experts in language assessment, and is supported by an extensive program of research, validation and test development" (IELTS, 2010a, p. 1). It is currently administered to over 1.4 million people each year in over 130 countries in more than 700 recognized testing centers. The results are used for a variety of purposes by more than 6,000 institutions worldwide where a predetermined level of English ability is desired for university admission for non-native English speakers to English-medium universities, for immigration to English-speaking countries, and for employment purposes. The IELTS exam has both academic and general training modules which IELTS claims makes it fit for purpose. Worldwide more than 70% of those taking the

exam take the Academic Module which "assesses whether a candidate is ready to study or train in the medium of English at an undergraduate or postgraduate level" (IELTS, 2009b, p. 1).

The exam has four sections, each measuring one of the four skill areas. Test takers receive a test report form that gives individual scores for each of the skill areas (listening, reading, writing, and speaking) which are then used to calculate an overall band score. The scores, which range from 1 (lowest) to 9 (highest), are reported in whole and half bands for each of the tests and the overall score. If an individual does not attempt a section of the assessment, they receive a zero for it. Table 1 shows the IELTS interpretation of each of the band scores.

Table 1: IELTS Profile of Candidates Abilities Based on Band Score

IELTS Band Scores	
9	Expert User
8	Very good user
7	Good user
6	Competent user
5	Modest user
4	Limited user
3	Extremely limited user
2	Intermittent user
1	Non user
0	Did not attempt the test

(IELTS, 2009a, p. 8)

IELTS provides information for institutions on the appropriateness of scores for different areas of study (Table 2), but acknowledges that "many diverse variables can affect performance on courses, of which language ability is but one" (IELTS, 2009a, p. 8) and that each institution must decide what level of English is appropriate for its students.

Table 2: Guidance to IELTS Stakeholders on Acceptable Scores for Different Courses

Band	Linguistically demanding academic courses e.g. Medicine, Law, Linguistics, Journalism	Linguistically less demanding academic courses e.g. Agriculture, Pure mathematics, Technology, IT and Telecommunications	Linguistically demanding training courses e.g. Air Traffic Control, Engineering, Pure/Applied Sciences, Industrial Safety	Linguistically less demanding training courses e.g. Catering, Fire Services
7.5-9.0	Acceptable	Acceptable	Acceptable	Acceptable
7.0	Probably Acceptable	Acceptable	Acceptable	Acceptable
6.5	English study needed	Probably Acceptable	Acceptable	Acceptable
6.0	English study needed	English study needed	Probably Acceptable	Acceptable
5.5	English study needed	English study needed	English study needed	Probably Acceptable

(IELTS, 2009a, p. 9)

IELTS seems to have become the standardized language proficiency test of choice in the UAE. Since 2007, all three of the federal institutions have their own IELTS testing centers which are able to offer exams to their own students. Each institution has set a minimum requirement for entry into the first year of their program which may allow students to enter directly without taking any additional language courses. As a prerequisite for entry, all three of the federal tertiary institutions in the UAE have set the required minimum score as an overall band 5.0 (or an equivalent TOEFL score). This research uses the IELTS Academic Module to measure participants English language proficiency at both entrance and exit from the four-year undergraduate program.

2.4.5 The Undergraduate Program

The undergraduate program, based on an American academic model, is a four-year, full-time program leading to a bachelor's degree. The medium of instruction is English, except for the Arabic studies courses. The program includes "a general education core curriculum that provides a broad interdisciplinary foundation for major study; in-depth studies in one of five colleges; and internships that provide practical experience for all students" (Zayed University, 2009a, p. 1). All undergraduate students share the same core curriculum during the first three semesters of study

before choosing their major. Within the majors, the students "develop academic and professional competencies necessary for graduates to function effectively and independently as scholars or practitioners in a chosen field" (Zayed University, 2009a, p. 10). Courses to learn English are taken prior to admittance to the undergraduate program and are not offered during the four-year undergraduate degree program. All students are required to take three English composition courses during the first three semesters of their undergraduate study. "Each of these courses is designed to develop the students' skills in using the language as a tool for critical analysis and self-expression" (Zayed University, 2009a, p. 35). These are not specifically designed as English language learning courses, but as general composition courses for developing academic writing skills. Other than these three courses, the development of language skills is expected to occur based on an English-only policy. "Courses in the Colloquy maintain an English-only policy. The ability to work in English is promoted through a classroom environment whereby the student is immersed in the language. Students use only English in all of their communication with faculty and other students while they are in the classroom" (Zayed University, 2009a, p. 35).

2.5 Conclusion

It is within this context that the current research takes place. A monolingual core group of participants who have a fairly similar background in terms of culture, first language, and education will be the primary participants in this investigation of how the institution, faculty, and students view the students' language ability after four years of undergraduate study with EMI, and how these perceptions correspond with IELTS test results at entry and exit. In the next section, I will look at some of the theoretical constructs and past research relevant to the current study.

CHAPTER 3 – Review of Literature

3.1 Introduction

In the previous chapter the context of this research study was discussed. In this chapter, I will review the literature that is relevant to my research on the effects of English-medium instruction on language proficiency of students studying in higher education in the UAE. The chapter begins with some discussion of language acquisition and learning theories as they related to EMI. It continues with a discussion of previous research focused on language ability and the topics of investigation in the realm of EMI contexts before moving on to discuss more specifically studies which relate directly to my research: score gain research and perception-based research that focus on improvement of language ability in EMI contexts. As will be seen, much of the previous research has not actually examined EMI's effect on language proficiency, and there is a clear distinction in the types of research conducted surrounding EMI depending on whether the research is conducted in an ESL or EFL context and the overall purpose of the courses being taught.

3.2 Language Acquisition and Learning Theories

Learning a second language may be influenced by a number of factors including the environment, the motivation of learners, and the instructional techniques used. Many theories of second language acquisition (SLA) have been proposed, and, in fact, more than 20 years ago, Larsen-Freeman and Long stated that there were at least 40 proposed theories of how second languages were acquired (Menezes, 2009). Theories underpinning the rationale for English-medium instruction as a means for learning a second language are influenced by assumptions that second language acquisition is similar to first language acquisition. These beliefs support a naturalistic process for language learning in which learning takes place effortlessly and automatically, provided there is sufficient exposure to the target language and the learner is sufficiently motivated. These views contrast with the belief that learning is a conscious activity and that knowledge about the language is necessary in order to acquire it.

Beliefs concerning the learning and teaching of a second language as a conscious or unconscious activity influence pedagogy and practice (Schmidt, 1995).

The view that knowledge of rules and structures is learned through explicit instruction and practice is influenced by a behaviorist philosophy (Skinner, 1957 as cited in Ellis, 1990). The philosophy that learning is a matter of conditioning, habit formation and environmental influence led to the decontextualized teaching of grammar and structural practice through drills with methods such as Grammar-Translation and Audiolingualism.

A contrasting viewpoint is that learning may not be due to explicit teaching of the language, but may instead be an unconscious activity. By providing meaningful second language input, acquisition will occur naturally as it does in first language acquisition (Krashen & Terrell, 1995). Language learning will occur in natural settings with interaction and language input. There is no need for explicit focus on the language itself and its rules and structures. Pedagogy should be meaning oriented rather than form focused and there should be little direct explanation of grammar, focused practice or error correction. This thinking was also a reaction to behaviorist methods that were unable to produce second language learners who could actually use, and function in society with, the second language. This led to a search for new methods of teaching and learning second languages that would promote fluency and the ability to communicate in the second language.

The intermediate stance between learning as a conscious or unconscious activity holds that meaningful input is necessary, in addition to a focus on the form, in order to increase proficiency (Schmidt, 1995). As English-medium instruction seems to be based on the idea that learning will take place in a context in which the target language is used as the means to deliver content, theories and methods related to meaningful input and exposure to language will be discussed further below.

3.2.1 Meaningful and Comprehensible Input

Krashen's Monitor Model of language acquisition puts forth five hypotheses about how language is acquired with the central idea being that comprehensible input is the most important and essential variable in language acquisition (1995). The comprehensible input hypothesis, an early rationale for content-based instruction for second language learning, states that language is best acquired incidentally through extensive exposure to comprehensible second language input (Krashen, 1982, 1995). His ideas regarding language acquisition were largely based on principles of first language acquisition and had a large impact on language teaching that helped to

support the communicative language teaching movement in which fluency was advocated over explicit instruction in the rules of language usage (Ellis, 1990). Krashen advocates for language learning opportunities for students similar to those seen in EMI classrooms in EFL contexts.

> Another class of alternatives to classroom teaching involves the use of subject matter in the second language classroom, using second language as a vehicle, as a language of presentation and explanation. I do not mean by subject matter teaching what is known as submersion, mixing second language students with native speakers. I do mean special classes for second language students, classes in which no native speakers participate as students, in which teachers make some linguistic and cultural adjustments in order to help their students understand (Krashen, 1995, p. 167).

He also discusses how immersion contexts provide optimal input which is interesting, relevant, and not grammatically sequenced. This he claims will provide the necessary requirements for "learning and acquisition of academic communicative competence" (Krashen, 1995, p. 169).

3.2.2 Limits of Input in Language Learning Immersion Environments

The idea that one can acquire communicative competence in a foreign language while studying subject matter is one cornerstone used in justifying EMI as an increasingly common practice in higher education internationally, and yet research in immersion contexts has revealed the limitations of language learning with only comprehensible input. After studying French immersion students in Canada, Swain (1988) found that there was a need to emphasize formal language aspects of the content resources being used in teaching, as despite many years of second language French input, the students developed only limited proficiency in writing and speaking and continued to make numerous errors in their productive use of the language. The immersion was successful in teaching subject content and L2 [second language] comprehension skills, but productive skills of the language seem to "require explicit attention to formal aspects of language output for students to acquire native like proficiency" (Swain 1988, 1991 as cited in Snow & Brinton, 1997, p. 6). Language output provides a mechanism whereby explicit knowledge becomes implicit knowledge through correction and feedback based on reaction to the output (Swain 1985, 1993). The development of linguistic accuracy and complexity depends on

feedback and a requirement to produce accurate language (Swain, 1991 as cited in Storch and Hill, 2008) as well as having target language input. Action-based learning and teaching advocate Leo van Lier believes human agency is also central to language learning (2008), suggesting three core features: "agency involves initiative or self-regulation by the learner," "agency is interdependent, that is it mediates and is mediated by the sociocultural contexts," and "agency includes an awareness of the responsibility for one's own action vis-à-vis the environment, including affected others" (van Lier, 2008). The idea that "learning depends on the activity and initiative of the learner" represents a shift from previous thinking that linguistic inputs and mental information processing are solely responsible for language acquisition to making "the things that learners do and say while engaged in meaningful activity" more important (van Lier, 2008). Agency places emphasis on action, interaction, and affordances within the classroom. The need for meaningful input, interaction, and a focus on productive skills underlies the basis of a shift toward communicative language teaching with content-based instruction representing an ideal environment for exposure and use of the target language possibly affording learners the opportunity to engage with the second language as they learn content.

3.2.3 Integrating Content and Language Instruction

With a shift toward communicative language teaching methods in the 1980s, various forms of content-based second language instruction became popular. Language education practices of the 1970s including the writing across the curriculum movement, immersion in foreign language education, and language for specific purposes programs all offered practical examples that reinforced integrating language and content teaching based on the belief that some incidental language learning occurs with exposure to the target language while presenting content (Brinton, Snow, & Wesche, 2003). This belief is evinced in the growth of content and language integrated learning (CLIL) programs within the European Union (EU) as the need for the citizens within its borders to be fluent in more than one language increases (Coleman, 2006). In encouraging the adoption of CLIL programs, the European Commission lists the following as benefits of CLIL.

- Improves language competence and oral communication skills
- Allows learners more contact with the target language
- Does not require extra teaching hours
- Complements other subjects rather than competes with them

- Increases learners' motivation and confidence in both the language and the subject being taught (European Commission, 2010)

The major assumption about content teaching is that "because content teaching is considered communicative language teaching *par excellence* – that through content teaching, second language learning will be enhanced" (Swain, 1988, p. 68). A number of theories regarding learning and acquisition are based on the idea that exposure to language is enough for acquisition to take place (Krashen, 1995), while others argue that practice and feedback are also necessary for improvement (Ferris, 2003; Long, 1991; Swain, 1988, 1993). Theories of language acquisition and learning (Krashen, 1995; Long, 1985, 1996; Swain, 1985, 1988, 1993) and research identified by Bardovi-Harlig and Stringer (2010) indicate that the duration and the nature of instruction may affect the retention and acquisition of a second language.

SLA research seems to infer that for learners to improve their language skills, they need rich input and also a focus on producing accurate output (Leki, 2007; Swain, 1991 as cited in Storch, 2009; Storch and Hill, 2008). Feedback may be the most important aspect in the development of writing skills (Ferris, 2003) and for adult learners explicit knowledge may play an even more important role as, according to Piaget's stages of cognitive development, older learners tend to be more conscious and reflective (Wilson, 2010). The above research suggests that it may be impossible for adults to acquire language without consciously noticing.

Once language is learned the proficiency level may actually decrease if there are not maintenance strategies in place. This has been shown to be the case for some learners who work particularly hard to pass a test and then the actual amount of language use decreases once in the position where the language is not used as much or as intensely. Studies of attrition of second language show that productive skills (speaking and writing) are more vulnerable to loss than receptive skills, that motivation is implicit in both language learning and attrition, and that the type of instruction may affect retention and acquisition (Bardovi-Harlig & Stringer, 2010). From a review of literature on language attrition, Bardovi-Harlig and Stringer report that "even in periods of continuous use of the L2 [second language], not all aspects of language knowledge are regularly exercised, so that whereas gains are made in some areas, loss may be simultaneously incurred in others" (p. 39). This indicates that even in a second language environment loss can occur when learners move from an input-

rich language experience (i.e., an English language foundation program or studying for an exam to meet an entrance requirement) to one that doesn't provide as much input or focus on the language. This matches the context of the current study where students have intensive English courses in preparation for admittance to EMI baccalaureate study, but once admitted to the program actual language development is not the explicit focus during the four years.

3.3 English-Medium Instruction (EMI)

While practice and exposure in usage of a second language is required for language acquisition to take place and theories dealing with language learning involve the need for comprehensible input, output and feedback on usage, these learning theories have largely been investigated in contexts in which the explicit classroom goal has been language development and not necessarily content or subject matter. On the other hand, English-medium instruction in the context of this study is primarily seen as a means of delivering course content. Teachers are not specifically using instructional techniques to improve the language proficiency of students (though this may be one of the national policy reasons for delivering higher education courses in English in EFL contexts). This immersive environment in the target language that students experience in UAE higher education would be considered an ideal environment for second language acquisition by some theorists (Krashen, 1995).

While immersion contexts (which are similar to the situations experienced in the classrooms of higher education in the UAE) are generally believed to provide input and exposure to language which will lead to language acquisition (Krashen, 1995), and oftentimes national educational policies related to improving language ability especially in EFL contexts are based on the idea that content instruction in a second language will aid in its development (Hu, 2008), few studies have investigated change in language ability during the course of English-medium instruction at the tertiary level, and those that have generally take place in ESL settings focusing on international students studying alongside native English speakers (Blue, 1990; Humphreys & Mousavi, 2010; Monshi-Tousi, Hosseine-Fatemi & Oller, 1980; O'Loughlin & Arkoudis, 2009; Storch, 2009; Storch & Hill, 2008).

Before moving on to discuss studies which have specifically dealt with the effectiveness of EMI in increasing language proficiency, the following section will explore the topics that have thus far been investigated in regard to EMI. This will

help to highlight the amount of investigation and interest surrounding the topic of EMI both inside and outside the realm of countries whose native language is considered to be English.

3.4 Topics of Investigations surrounding EMI

In the realm of EFL contexts, or those countries where English is not the official language, previous research regarding English-medium instruction has primarily investigated its implementation in relation to sociocultural politics and the rationale for using EMI. Research has explored language policy and reasons behind the increase in English-medium instruction due to the internationalization of education, globalization, and the employability of graduates (Airey, 2004; Coleman, 2006; Collins, 2010; Costa & Coleman, 2010; Douglas, 1977; Fox, 2007; Hu, 2008; Madileng, 2007; Mouhanna, 2010; So, 1992; Vinke, 1995; Vinke, Snippe, & Jochems, 1998; Vogt & Oliver, 1998). Mouhanna (2010) indicates with his research that even though there are social cultural issues to take into consideration along with the fact that teachers believed that "the use of English served as a barrier to students' comprehension of course content, and required much more support or time to translate given information" it is considered important to continue with EMI as it makes students marketable for jobs. Along with the desire to be internationally competitive, research has also indicated that the ease of finding up-to-date materials in English has led to an increase in courses taught through the medium of English (Gill, 2007; Graddol, 2000; "Intensive English," 2009). Airey and Linder (2006) note that some of the positive effects of English-medium instruction for universities in Sweden are that they are able to accommodate overseas students and foreign academics, relevant course texts are available in English, students have a competitive advantage in the job market and are prepared for an academic world dominated by English. They note though that little research has been done on the effects of second-language lectures on students' learning.

Studies have explored issues of implementation of EMI which include teacher involvement in policy decisions (Li, 2010), the difficulties they face (Barron, Gourlay, & Gannon-Leary, 2010; Evans & Morrison, 2011b; Vinke, Snippe, & Jochems, 1998), and the adaptations that students must make when studying in a second language (Andrade, 2006; Bifuh-Ambe, 2009; Evans & Morrison, 2011a). Lecture style and discourse methods have been investigated along with the pragmatic

questioning strategies of teachers during EMI instruction of students whose first language is not English (Björkman, 2011; Suvinitty, 2010). These studies show that lecturers adapt their presentation style depending on the language of delivery. For example, Suvinitty, 2010, found that Finnish lecturers had different questioning patterns and used fewer questions when teaching in Finnish than in English. Questions asked in Finnish presentations were largely rhetorical in nature, while questions asked during English lectures were for comprehension purposes.

Studies critical of the use of EMI discuss the implications of using a second language for higher education in relation to power among and distance between people. Cultural, social, and political implications of teaching in English instead of the native language have been investigated in various EFL contexts by researchers (Charise, 2007; Findlow, 2006; Gill, 2007; Karmani, 2005; Karmani & Pennycook, 2005; Moody, 2009; Parmegiani, 2010; So, 1992; Troudi, 2007; Webb, 2002). Coleman, 2006, concerned with the spread of English in European education and the threat of this linguistic trend notes that countries seem to be heading for a bilingual and bicultural identity with the "Englishization" of European higher education a threat to minority languages, while Moody (2009) questions the appropriacy of materials and assessments used in relation to the needs of students and their motivation for studying English in the Arabian Gulf context. Charise notes that the results of research done in studies in Kuwait, Saudi Arabia, and the UAE indicate that students attitudes towards English are positive, they recognize the importance of English and its utilitarian role for them, and they do not view the use of English as imperialistic in nature (2007). Findlow (2006) found a linguistic-cultural dualism in the UAE with Arabic usage representing "localism, tradition, emotions, [and] religion," while English usage represents "modernity, internationalism, business, [and] material status." Troudi (2007) examines the implementation of EMI within the UAE education system and suggests that teachers need to be aware of socio-political issues which surround the choice of medium of instruction and to make sure that education is suitable to the real needs of the students.

Some academic issues investigated in relation to EMI and language proficiency level include whether EMI instruction is as effective a means of delivering content as doing so in the learners' first language (Airey, 2004; Airey & Linder, 2006; Hau, Marsh, Kong & Poon, 2000; Mouhanna, 2010; Senior, 2009; Troudi, 2007; Vinke, 1995; Webb, 2002), explorations focusing on the necessary

level of English to commence university level studies (Feast, 2002; Hirsh, 2007; Maleki & Zangani, 2007; Seelen, 2002), and the relationship of language proficiency to academic achievement (Elder, 1992; Feast, 2002; Graham, 1987; Gunn-Lewis, 2000; Seelen, 2002; Sert, 2006). Research has also focused on teachers' perceptions of the adequacy of students' language ability for study in a second language (Hirsh, 2007), and the predictive validity of exams such as the IELTS to indicate readiness to enter English-medium universities (Bayliss & Ingram, 2006; Dooey, 1999; Gunn-Lewis, 2000). When evaluating the effectiveness of EMI, researchers have studied stakeholders' perceptions of usefulness of EMI instruction (Kang & Park, 2004; Mouhanna, 2010), student and teacher satisfaction (Byun, et al., 2011; Kim, Son, & Sohn, 2009), and the ease of implementation rather than investigating effectiveness in relation to increases in English language proficiency, which is the focus of this study.

A variety of research, as noted above, has been done in relation to EMI, but little of it has actually explored the effectiveness of EMI in relation to increasing language proficiency. Researchers suggest that it is time to examine more closely the broader educational context in which learning takes place with a focus on how medium of instruction affects content uptake, what adjustments teachers make in content delivery, and how much support will be needed once students are admitted to regular study (Arkoudis & Starfield, 2007; Storch & Hill, 2008). "The assumption is that the more time a student spends learning an L2 [second language] and the more exposure to the language he or she has, the better the language learning outcomes would be," and yet, research relating to EMI and its effectiveness in increasing language proficiency is relatively nonexistent (Hu, 2008, p. 210). Thus, this research aims to investigate the assumption of increasing proficiency because of EMI especially in the context of an EFL environment. While previous research focusing on EMI's effects on language ability has been conducted in the context of international education with the investigation into the effects of variables differing between learners such as the educational background, amount of assimilation to the ESL culture, housing accommodations, and degree of interaction with native speaking classmates, the current research takes place in a monolingual, home country environment with participants having similar educational and cultural background. Previous research in the ESL context of higher education has focused on identifying factors that might influence improvement which are largely based outside of the classroom (acculturation, the social circle, and personal background factors of the

learner). As this research takes place in an EFL context, the focus is on the actual exposure to the language that takes place during course instruction and not factors outside of the educational environment that may play a role in language development.

In this research study, I will investigate what happens to students' language ability after four years of EMI instruction where there has been very little explicit focus or feedback on language development during this time period. In the context of this study, students are not actively studying the language; they are studying content through the use of English. English-language learning courses focusing on language development precede entry into the baccalaureate program, but are not continued after entry. This study investigates whether students' language proficiency increases during their time spent studying in an English-medium institution where the focus is on delivery of content, but not necessarily on language development. Thus, participants are exposed to the language through course materials and in class instruction, but language learning is not the primary focus of the teachers. The assumption is that language learning will take place due to mere exposure. In order to add to the research base in EMI investigations regarding the improvement of language ability, this research uses score gain on standardized tests and perceptions of improvement as a means of investigating improvement in English language ability. The following sections will explore the literature surrounding score gain and perception studies in relation to English language learning.

3.5 Score Gain Research

One criterion often used to measure language acquisition in adult learners is score gain on standardized tests (Ross, 1998). In the current study score gain will be investigated using the IELTS exam scores at entry and exit of the four year program. Previous studies looking at IELTS score gain have added to the understanding of language learning, but have mostly focused on students enrolled in test preparation, or intensive English programs preparing students for admission to higher education (Elder and O'Loughlin, 2003; Green, 2005; Green & Weir, 2003; Read & Hays, 2003).

Elder and O'Loughlin (2003) investigated the amount of score gain on IELTS that could be expected after 10 to 12 weeks of intensive language study (200 to 240 hours of instruction) for those enrolled in language courses in Australia and New Zealand and found that there was a statistically significant average overall

improvement of .5 band score and that the highest amount of average improvement was in the listening skill area (.781). Their study had 112 participants of varying nationalities, educational backgrounds, beginning proficiency levels, and time spent in the host country. They note that those with lower levels of proficiency (as measured by the initial IELTS test) had a greater average improvement than those starting with higher levels. The study indicates that a range of factors (e.g., accommodation, perceived improvement, satisfaction with course, age, library usage) play a role in score gain, but that these factors varied in influence from one skill area to another.

Green (2004) reviews research looking at improvement of writing scores on IELTS tests after periods of language instruction, finding that in general, length of instruction is not necessarily a good indicator of the amount of improvement that will be made in scores, and that those with lower initial writing scores tend to improve more quickly than those with higher initial scores.

Green (2005) looks at two phases of a study to see what improvement in writing scores on the IELTS is made over time. The first phase is retrospective in nature, focusing on those who have taken the exam on more than one occasion (from 3 to 42 months between tests). The second phase looks at those enrolled in language courses of between 3 to 10 weeks. Again, the findings indicate that those who start with a lower initial score will have a higher average score gain than those who start with a higher band score. In general, participants with an initial band of 5.0 or below made improvement, and those with a band 7.0 or higher tended to see a decrease in their score for the second test, while those with an initial band 6.0 did not have a score loss or gain. As for participants in the second phase of the research, those who were enrolled in longer language courses were more likely to have an improvement in scores than those enrolled in shorter courses. In the current study, the participants will be starting at about the same band score on IELTS and will be tested again four years later. There will be less variability in length of study and initial scores than in Greens' investigation for the participants in the current study, and it will investigate score gains for students who are not currently studying English, but are enrolled in regular courses with the language of instruction being English.

3.6 Language Ability in Higher Education Context

This section will look more closely at the few studies that have investigated what happens to the English language ability of second language learners during

university instruction, focusing on the methods of investigation used and their results. As previously mentioned these studies have been conducted almost exclusively in ESL contexts (mostly in Australia) with a focus on improving the learning experience for international students (Humphreys & Mousavi, 2010; O'Loughlin & Arkoudis, 2009; Storch, 2009; Storch & Hill, 2008).

Storch and Hill (2008) investigated the impact of one semester of study on the English language proficiency of 39 international students studying in an Australian university. Using a test/retest design, they compared scores on a diagnostic reading and writing exam given at the beginning and end of one semester, concluding that studying in an English-medium university "generally led to an improvement in English language proficiency" (p. 04.1). Their results indicated that both writing and reading improved over the course of one semester with students attributing this to the "large volume of reading" required for their coursework (p. 04.9). Also, similar to findings of other score gain language research, Storch and Hill found that the higher the score at the time of the first test, the smaller the increase in score for the second one, thus indicating that those with lower initial scores were able to make greater score gains over the course of one semester of study.

One area of concern in the Storch and Hill (2008) study is the use of the same materials for testing at the beginning and end of the semester. In such a short period of time, improvements in scores could be due to a practice effect rather than to the period of study in an English-medium university as the researchers claim. In the current study, the IELTS which has multiple versions that have been statistically equated is used with the length of time between tests as four years. This helps to eliminate some of the validity concerns that are present in the Storch and Hill (2008) study.

Storch (2009) uses the same data from the reported 2008 study (Storch & Hill) to further examine writing samples from 25 of the original participants who, despite recommendations to the contrary, sought only minimal or no English support during their first semester of study. The research analyzes the writing samples looking at content and fluency, the use of paraphrase, and inclusion of sources, along with correct citation format, finding some improvement in structure and content development after just one semester. There was a decrease in informality in the writing on the second test which Storch claims "may be attributable to the greater exposure to the kind of formal academic texts learners are required to read for their

assignments" (Storch, 2009, p. 114). Since the second test was the same as the first, the content improvement might actually be an effect of practice. Storch notes that "a one-semester immersion experience did not lead to improved language use in terms of greater grammatical accuracy and complexity or a greater range of academic vocabulary when measured quantitatively; nor did it lead to improved use of sources" (Storch, 2009, p. 115). She suggests this could be a result of the short length of time between the tests (only 12 weeks), or it could indicate a lack of focus on these elements in course writing assignments during the semester. She goes on to note that more research is needed to "document the nature of L2 [second language] development over time, as well as the kind of opportunities for output that studying in an L2-medium university provides to international students" (Storch, 2009, p. 116).

Other studies looking at language development in higher education using the IELTS exam as a measure of language ability are Humprheys and Mousavi (2010) and O'Loughlin and Arkoudis (2009). Both of these investigations also take place in ESL environments looking at international students. Humphreys and Mousavi tested 155 international undergraduate and graduate students from 27 different countries upon exit from their studies at an Australian university. Participants in the study had entered the university by meeting the language requirements through a variety of means, including presenting IELTS test scores, taking preparation English classes, or providing proof of previous study in an English-medium context. As initial IELTS entry scores were not available for all participants, IELTS exit scores for the participants are compared to entry requirements for the various programs in which the participants were enrolled. The results showed that 85% of undergraduates and 70% of postgraduate students in the study scored more or the same at exit than was required for entry into their chosen degree program. Research results show that the lowest scores were for writing while the highest scores were for listening, that postgraduates did not perform as well as undergraduates, and that in general Chinese students had the lowest overall scores.

The researchers admit that they were unable to control for entry conditions and that it must be assumed that proficiency varied at commencement, yet throughout the study a comparison of IELTS exit scores is made to the IELTS degree entry requirements even though not all participants in the study used an IELTS score for entry. The researchers discuss final IELTS scores in relation to program of study, nationality, and discipline. The problem is that to make a comparison between groups

of people in this way, implying a change in language ability, an initial score for each of the participants is necessary (Ross, 1998). Without the initial score to compare the exit score to, all that can be evinced is where the participants are at exit, which may well be the same place that they started from. Other studies have indicated that at admission many international students exceed the minimum required entry scores for both undergraduate and postgraduate study (O'Loughlin & Arkoudis, 2009). This is one of the key reasons why the current study specifically compares scores at entry and exit using the same group of participants.

Another possible validity issue in the Humphreys and Mousavi (2010) study is that not all participants had previously taken an IELTS exam. Researchers claim "that familiarity (or lack of) with the test did not affect test scores as candidates who had already taken IELTS on at least one occasion obtained diverse results, including the lowest overall scores of the whole cohort" (Humphreys & Mousavi, 2010, p. 18). Without looking at the initial scores of these participants, it is difficult to say how the IELTS scores in this study compared to the previous results. This assumption of no impact is illogical, and unfamiliarity with a test can affect results for participants (Bachman, 1990; Hughes, 2003). If one of the university's objectives is that students graduate with a certain level of English based on test scores, this study provides information on the exit language ability of participants which could be useful in developing future language support programs, but it tells us very little about what language development did or did not take place during the course of study.

The most comprehensive research to date in regard to language score gains made during a period of study in higher education is the research by O'Loughlin and Arkoudis (2009) which looks at how much improvement on the IELTS test can be expected of undergraduates and postgraduates graduating from an English-medium university in Australia, and what educational, personal, and social factors might affect the rate and type of improvement. Using a test/retest design, they compare entry and exit IELTS scores of 63 international student participants, along with examining data gathered from questionnaires and interviews used to elicit information about the learning environment and factors that could affect language development.

Results showed that the greatest average improvement in IELTS band scores was in reading (.532) and listening (.500) with the least improvement in writing (.206). The speaking had an average improvement of .444. The results seem to indicate that productive skills are slower to improve than receptive skills. As in

previous studies of score gain, students with lower initial scores made more improvement than those with higher ones.

O'Loughlin and Arkoudis (2009) found that improvement in speaking did not correlate with improvement in the other three skill areas (listening, reading, and writing). Thus when looking at results, instead of using the overall IELTS score, the average score of the listening, reading, and writing was used. O'Loughlin and Arkoudis suggest that the IELTS speaking assessment may not be as reliable as the other skill assessments of the exam because there is only one rater and the interviewer may actually have an impact on the test taker's performance. I would question this assumption as to why the speaking improvement did not correlate with the other skill areas' improvement (test reliability). In the context of the O'Loughlin and Arkoudis study, an English speaking country, with a variety of participants from different cultures, there are a multitude of variables that could affect speaking improvement outside of the academic environment (which would be different than in an EFL context as in the current study). Some nationalities are known for their shyness and reticence when it comes to speaking in a foreign language (e.g., Asian), while others from more oral-based cultures (e.g., Arab) are less so. This might have an effect on the amount of practice that an international student gets in speaking both inside and outside the classroom. Another factor that could influence speaking in an ESL context is the need to communicate in the second language, for example, whether one's friends or classmates speak the same first language or not. O'Loughlin and Arkoudis do not analyze the effect of first language on improvement in speaking, probably because the small sample size would not provide adequate numbers for this. The difference in improvement rates of the speaking is explained as an issue of the test construct validity and reliability. I believe that the researchers are warranted in looking at improvement in speaking and factors affecting it separately from the other skill areas in this study (as justified by their principle components analysis data results), but the reason they present for the non-correlation between improvement in speaking and the other skill areas is questionable.

The researchers are very forthcoming in listing the possible limitations of and threats to the validity of their study, which include variability in the length of time between test one and commencement of studies (from none up to two years) and the variability in the length of the program of study (the undergraduate degree courses were for three years while the postgraduate courses ranged from 12 to 18 months).

Thus length of time and exposure to the learning environment is different for all participants, along with the length of time between Test 1 and Test 2 which may have ranged from as short as 6 months to as long as 4.5 years. It was noted that the postgraduates had less average score gain than undergraduates which could indicate that exposure to English helps with improvement, or this could be a result of postgraduates starting with higher entry-level IELTS scores which previous studies have shown to be less likely to improve than lower initial scores.

Similar to the research in my study, the above studies have examined language proficiency in relation to score gains. While these studies have focused on international students in an ESL context, my research investigates those studying within their own countries with English as the medium of instruction. My research also combines elements of perception of language ability as well as an objective measure based on a language assessment test. Having looked at research related to language improvement based on score gains, I will now turn to the literature in which other ways of looking at improvement have been utilized to show the effectiveness of English-medium instruction.

3.7 Perception-based Research in EMI

Studies looking at the effectiveness of EMI in EFL contexts have largely been based on students' and teachers' perceptions surrounding language proficiency and improvement (unlike the studies in ESL contexts that have investigated score gain). Often the effectiveness of EMI is based on surveys indicating whether students or teachers say EMI improves language ability, whether teachers think the language ability of their students is adequate for EMI, or whether students indicate general satisfaction with EMI courses. Based on these perceptions, recommendations to language policy, curriculum, and programs are often made. To illustrate the types of research and results that have been carried out, the following section reports on studies of the effectiveness of EMI in higher education in the EFL contexts of the UAE, Turkey, Korea, and Taiwan. The methods used in these studies along with specific questions asked of faculty and students formed the basis for my own investigation into language improvement as seen from the perspective of students, faculty and institution.

Craig (2007) examined teachers' perceptions of their students' English proficiency and attitudes toward course delivery at an English-medium engineering

school in the UAE. Noting that "worldwide, both in L1 [first language] and L2 [second language] learning environments, students' writing and communication skills generally diminish if not developed and practiced over the 3 or 4 years of study" (Craig, 2007, p. 252), he advocates for language development across the curriculum in EMI courses. He states that his findings indicate a deficit between teachers' perceptions of their students' English language ability and the teachers' perceptions of the importance of listening, reading, writing, and speaking skills in the degree level study in which the students are enrolled. He also found that as students moved from foundation level English support courses to regular study the emphasis on language support and the expectations for development diminished, with most teachers saying they were not responsible for the language development of their students (similar to the context of the current study).

In another study in an EFL setting, Collins (2010) looked at university students in one of the private English-medium universities in Turkey. She randomly surveyed 10% of faculty and students from each department of study to get an indication of their perceived level of English language proficiency, their attitudes toward EMI, and their recommendations on improving the system. In regard to language proficiency and feelings of ability to study in the language, it was shown that professors rated their students' proficiency on a 5-point scale, where 1 was very ineffective and 5 was very effective, as between a 3 (59%) and 4 (39%), while "40% of the students … considered their language skills to be proficient" (Collins, 2010, p. 102). Collins also asked about problems that students faced in an English-medium university and concludes as follows.

> When students were asked the most persistent problems they faced in an
> English-medium university, they said that their own English wasn't sufficient
> to learn subjects in detail (24%) and to take part in class discussions (31%).
> Moreover, some students (30%) even do not find themselves fluent enough to
> follow the lessons. (Collins, 2010, p. 103)

In another study from Turkey, Sert (2008) explores the effectiveness of three types of instruction offered in Turkish universities to improve English language and delivery of academic content, and concludes that EMI is an inefficient means for delivering content even though teachers perceive it to be an effective way of improving language ability. Surveying 527 fourth-year students and 87 teachers in

three different higher education contexts (English-medium instruction (EMI), English-aided instruction (EAI) in which students are taught in Turkish but the course materials and assessments are in English, and Turkish-medium instruction (TMI) in which content course are taught in Turkish but supported with additional English language courses), Sert found that those enrolled in EMI perceived the use of English in their classes to be more effective for learning English than the other two groups, but that students did not think EMI overall was very effective in terms of the acquisition of language skills except in the area of speaking. The results, based on mean scores from the survey questions, imply that "students perceived EMI as neither effective nor ineffective" (Sert, 2008, p. 165).

Sert reports that all the teachers interviewed found that "most of the students had limited proficiency in English…. Nevertheless, they believed that active use of English in the academic setting helped students improve the language skills they needed to get better jobs or to study abroad" (2008, p. 166). With a final claim that results indicate that "EMI is considered to be significantly more effective than formal English instruction in terms of teaching English" (p. 166), the researcher also indicates that there are shortcomings of each of the approaches investigated and that there is a need for "more effective language and content education curricula" (p. 167) as there are problems with both language acquisition and academic learning during EMI, and further investigation and more in-depth exploration is needed in the area.

Research by Byun et al. (2011) examined implementation issues of EMI in Korean universities, analyzing the results of an institutional student questionnaire given to all students at the end of each EMI course taken. Based on mean scores from scale items on the questionnaire, the authors claim "positive outcomes" of EMI in terms of satisfaction of participants and improvements in language proficiency due to EMI, but point out that more research is needed regarding the effects of EMI on academic content uptake and effective implementation. They note that students feel they need to improve English skills, especially in listening and speaking, reporting that 9.2% of students said they encounter problems with English, including difficulties with English conversation and with completing English reading assignments because of unfamiliar vocabulary. In line with the Korean strategy to increase internationalization of their higher education, the researchers report that since the university's implementation of an EMI policy six years before, there was an

increase in EMI courses offered, foreign student enrolled, foreign professors employed, and publications in academic journals.

Chang (2010) reports on the effectiveness of EMI in Taiwanese universities, using interviews and a questionnaire to ascertain the level of comprehension for EMI lectures, the degree of satisfaction with EMI courses, the influence of EMI on language proficiency and improvement, the difficulties encountered in EMI courses, and the type of courses students would like for English language development support. Chang investigates the perceptions of 370 Taiwanese university students, looking at their reactions to EMI courses and the influence EMI has on their academic studies and language proficiency. Chang concludes that though there are problems associated with EMI for both students and teachers, EMI is an opportunity for students to improve their English based on the fact that 60% of students completing the questionnaire said that it had helped them improve their English proficiency with 78% feeling that their listening ability in English had improved after EMI. Chang also notes that less than 10% reported that they had made progress in their English speaking and writing and attributes this to the fact that "very few individual English-language speaking or writing activities were assigned by the teachers" (p. 69). In evaluating their own ability in English about half of the students rated it as "okay," and felt more confident with their receptive skills than their productive ones. While 80% of the participants did not have negative feelings about instruction in English, many reported difficulties with comprehending lectures and 64% "believed that their difficulties could be attributed at least in part to difficulties they had with the English language" (p. 70). Chang's conclusion is that EMI is a good way for students to increase their language skills while learning content, based on the students' answers to the questionnaire and communicative language teaching theories which indicate that "receiving and producing authentic language in real communicative contexts (Brandl, 2007; Swales, 1990)" provide learners with more opportunities to learn English (as cited in Chang, 2010, p. 76).

The research studies discussed above have shown mixed results in terms of the effectiveness of EMI with regards to language proficiency and content acquisition based on perception studies in EFL contexts. Though, overall, researchers tend to highlight feelings of satisfaction toward EMI as a positive outcome indicating effectiveness, they also note that most students report difficulties with productive language skills, but that students have a sense that they have made some

improvements in language. Teachers report students' language abilities to be low, but that students' language does improve during EMI (though it may affect content delivery and learning).

The above research related to the perception of students and teachers in regards to the effectiveness of EMI in EFL played an instrumental role in the development of questionnaires and interview schedules for the current study, as perceptions regarding the effectiveness of EMI in relation to language improvement are investigated alongside IELTS score gains.

3.8 Conclusion

This chapter discussed views of second language acquisition and language learning which have been used to justify English-medium instruction for second language learners. It examined the types of research that have been done regarding EMI in both ESL and EFL contexts. It has shown that the effectiveness of improving language acquisition in EMI has been investigated through score gain research and perception studies. Some studies have been critical of EMI as a means of increasing proficiency (Collins, 2010; Craig, 2007), especially where there is little focus on language development.

In general there has been a lack of research that looks specifically at what happens to students' language during periods of English-medium instruction in EFL higher education contexts. In these contexts, research has focused more on perceptions of effectiveness rather than evidence based on the measurement of score gains. This study will combine the two. As suggested by other researchers (Fox, 2007; Humphreys and Mousavi, 2010; Järvinen, 2008; Moody, 2009; Sert, 2008; Storch & Hill, 2008) there is a need for more empirical research in the area of language learning in EMI. As Humphreys and Mousavi (2010) note, research examining the ability of second language learners at exit from programs is critical for the development of language enhancement programs. This study will specifically look at the language ability of participants at exit from higher education.

The following chapter will explain my research methodology for this study examining language development and EMI instruction in higher education in the United Arab Emirates. The research endeavors to increase the knowledge about EMI in higher education contexts where English is not the native language by looking at the evidence of score change on IELTS over time, along with the perceptions of the

institution, students, and teachers related to language ability. It is an exploratory study situated within a specific context and time frame that attempts to describe rather than to explain what happens to students' English after four years of study.

CHAPTER 4 - Methodology

4.1 Introduction

The previous chapter reviewed the literature surrounding research on English-medium instruction, perceptions related to language ability, and score gains on IELTS tests. This chapter will describe my research paradigm and discuss the methodology of the research. It will discuss the participants, instruments, and the general investigation and processing of data. The purpose of this research is to empirically investigate the assumption that language proficiency increases when content delivery takes place in English. It seeks to discover what happens to students' English language skills while studying in English-medium classes in UAE universities and how this compares with the perceptions of instructors and students regarding the students' English proficiency. This chapter will detail the methodology of this investigation.

4.2 Research Framework – Combining Philosophies in a Pragmatic Worldview

"There are multiple research paradigms, each with their own assumptions about knowledge, about the world, about how knowledge is obtained, about education" (Ernest, 1994, p. 19). The philosophical assumptions of the researcher regarding ontology (the nature of reality) and epistemology (the nature of knowledge and how one comes to know something) shape the way research is carried out and the various tests for proving the research is of good quality. Often educational research paradigms are broken into three different types: scientific, interpretive, and critical. The major difference between these three research paradigms is the purpose of the research produced within them. What does the researcher hope to gain from the knowledge that the research provides? For those who subscribe to scientific methodologies, the aim of research is to seek objective knowledge or truth in the form of laws leading to prediction and control (Cohen, Manion, & Morrison, 2007). Interpretivistic methodologies, on the other hand, seek to understand the world by interpreting subjectively constructed meanings (Pring, 2004). Those working with critical methodologies seek change and intervention for social reform, thus focusing on social justice issues (Cohen et al., 2007).

Positivists believe in the scientific assumption that events have causes, and these can be identified with empirical evidence. The methods and techniques used are

predominately quantitative and concerned with identifying and defining elements and the relationships between them. Positivism assumes general patterns of cause and effect that, if discovered, are used as a basis for prediction and control. Positivists are looking for "assurance of unambiguous and accurate knowledge of the world" (Crotty, 2003, p. 18). Interpretivists, on the other hand, believe reality can only be understood from the view of the individuals who are part of the ongoing action being evaluated. The overall goal of interpretivism is to describe or understand and make sense of the world. Time and value-free generalizations are not possible, and one cannot distinguish causes from effects. The interpretive paradigm approaches rely on naturalistic methods such as observation and interviewing. There is interaction between researcher and participants in order to collaboratively construct meaning. Methods are usually qualitative and include participant observation, interviews, document reviews, and visual data analysis.

This research combines positivism and interpretivism. Elements of positivism and the scientific approach exist in this research in the use of test scores to measure students' performance in a quasi-experimental manner with a test/retest design element. This aligns with the institutional perspective whereby test scores are used as an objective means of measuring increases in English language ability. In the vein of interpretivism, this research seeks to describe and understand what is happening in a specific context. It seeks to understand the world by interpreting subjectively constructed meaning (Pring, 2004). The views of students, teachers, and institution (as represented in documents and by senior administrators) are examined using various methods in order to more fully understand and describe whether language proficiency increases during English-medium instruction in this institution. These multiple realities and meanings are part of a constructive process in producing knowledge.

"How you study the world determines what you learn about the world" (Patton, 1990, p. 67). As Creswell notes, the idea for a research project emerges from one's "world view" or philosophy. This tends to shape inquiry, methods, and strategies used when doing research (2009, p. 8). My research philosophy corresponds with what Creswell describes as a "pragmatic worldview" (p. 10). There is no set truth or reality; rather the researcher seeks to find the answer to a question or to describe something using whatever available means fit the circumstances. A pragmatic stance toward research is "pluralist in nature and allows the inclusion of

any paradigm, assumption and method and is eminently suitable to mixed method research" (Roux & Barry, 2009, p. 3/10).

Thus, being a pragmatist, my philosophical position regarding research lies between the positivistic and interpretivistic traditions. It draws upon ontological and epistemological assumptions from scientific and interpretive approaches and seeks foremost to answer the research questions using both quantitative and qualitative methods in a mixed methods investigation into what happens to students' language proficiency during their four years of study. Arising from the debate surrounding "paradigm wars" and the emergence of mixed methods and mixed approach models, the pragmatic paradigm is a rejection of forced choice between positivistic and constuctivist viewpoints, taking a pluralistic stance toward research (Creswell, 2009). It has intuitive appeal and grants researchers permission to study areas that are of interest, embracing methods as appropriate and using the findings in a positive manner in harmony with the value system held by the researcher (Creswell, 2009; Tashakkori & Teddlie, 1998). I believe the investigation of learning within an institution must not be bound by one paradigmatic framework or another as there is the personal subjective experience of the students and teachers regarding language ability, and a more impersonal institutional view that asks for accountability through the measurement of learning outcomes. These need to be blended together in order to answer questions related to learning in an educational context.

4.3 Research Questions

Internationalization of education and the desire to compete globally has led to the growth of EMI in higher education around the world. Along with the implementation of educational policies that call for EMI, there is an assumption that language learning is taking place during content delivery. When a second or foreign language is used in teaching a degree program, "there is often an explicit or implicit aim for the graduates to become competent users of the new language at the professional level required and in this way improve their qualifications and employability for the global labour market" (Räsänen, 2011, p. 155). With this research I wanted to more fully understand if within the context of UAE higher education exposure to English as the medium of instruction was adequate to increase proficiency, and how students' test scores in English compared with the perceptions of faculty and students regarding the students' English language proficiency. The

main focus of this study is to empirically investigate the assumption that language learning takes place during content delivery using EMI.

The research was designed to investigate the following questions.

1. From the perspective of the institution does the language ability of students *adequately* improve during their undergraduate study?

2. What are the university professors' perceptions of their students' English language ability?

3. What are the students' perceptions of their English language ability as a result of attending an English-medium university?

4. What is the difference between English proficiency at entrance and exit of students studying in universities in the UAE as measured by the internationally recognized IELTS exam?

   a. Is there a significant change in the overall IELTS score used for admission to baccalaureate study as compared with the overall IELTS score prior to graduation?

   b. Are there differences in IELTS band scores for the four skill areas (listening, reading, writing, and speaking) from entry to exit testing?

5. How do these scores correspond with the institution, faculty, and student perceptions of student English proficiency?

4.4 Research Design - Mixed Methods: Concurrent Triangulation Design

Following the pragmatic nature of my research philosophy, the methodological approach is also eclectic and pluralistic. It combines a survey approach which can be very quantitative in nature with a case study often seen as purely qualitative. The pragmatic paradigm is a rejection of the dichotomy that seems to be imposed by the positivist and interpretivist paradigms (the idea that things must be strictly controlled and scientific in nature versus the more socially constructed idea of reality). The focus is on the "what" and "how" of the research problem (Creswell, 2009). Pragmatism is seen as the underlying philosophical framework for mixed methods research (Tashakkori & Teddlie, 2003). A mixed methods study provides me the opportunity to combine "multiple methods, different world views, and different assumptions, as well as different forms of data collection and analysis" (Creswell, 2009, p. 11). As noted by Johnson and Onwuegbuzie, methodological pluralism (or eclectism) leads to superior research and "taking a non-purist or compatibilist or

mixed position allows researchers to mix and match design components that offers the best chance of answering their specific research questions" (2004, p. 15). They also claim that a pragmatic approach is actually more in line with how research is actually conducted.

Creswell, Plano Clark, Gutmann, and Hanson state that a mixed methods study "involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research" (2003, p. 212). They note that concurrently gathered data allows the researcher to seek and compare both forms of data to search for congruent findings (Creswell et al., 2003). This study uses a mixed methods concurrent triangulation design to investigate the research questions. Figure 1 shows a visualization of the Concurrent Triangulation Design. Using both quantitative and qualitative methods, data are collected and analyzed during one research phase, and then analyzed and combined to answer the research questions.
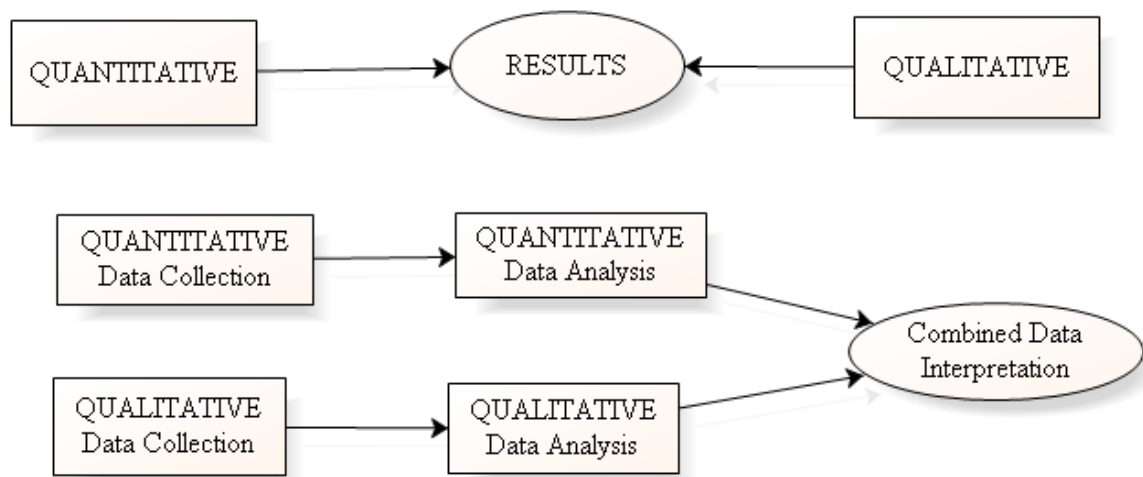
Figure 1: Mixed methods: Concurrent Triangulation Design (Creswell et al., 2003, p. 237)

The research problem in the pragmatic paradigm is central, and data collection and analysis methods are chosen by how well they "will provide insights into the question with no philosophical loyalty to any alternative paradigm" (Mackenzie and Knipe, 2006, para. 7). The structure of my enquiry is designed to ensure that the evidence collected will enable me to answer my research questions. In this study, quantitative data will be heavily relied on to provide answers to the research questions

with the use of qualitative data to back up the results. By identifying the types of evidence required to answer the research questions convincingly, I decided I would need several types of information from different groups to find the answer to what happens to students' language ability during their four years of undergraduate study with English as the medium of instruction. The following became central areas for data collection during the research in order to get the full picture of what was happening within the context of the study.

- Test scores from Time 1 (IELTS exam taken in June/July 2007 for entry into undergraduate study in September 2007)
- Test score from Time 2 (IELTS exam taken during the final semester before graduation between January and June 2011)
- Perspectives of students on their language ability, improvement, and aptitude to perform academic tasks
- Perspectives of teachers on their students' English language ability and necessary adaptation of course delivery or assessment due to language ability
- Institutional data including documents related to language learning objectives and the expectations and satisfaction of graduating seniors regarding their learning experience
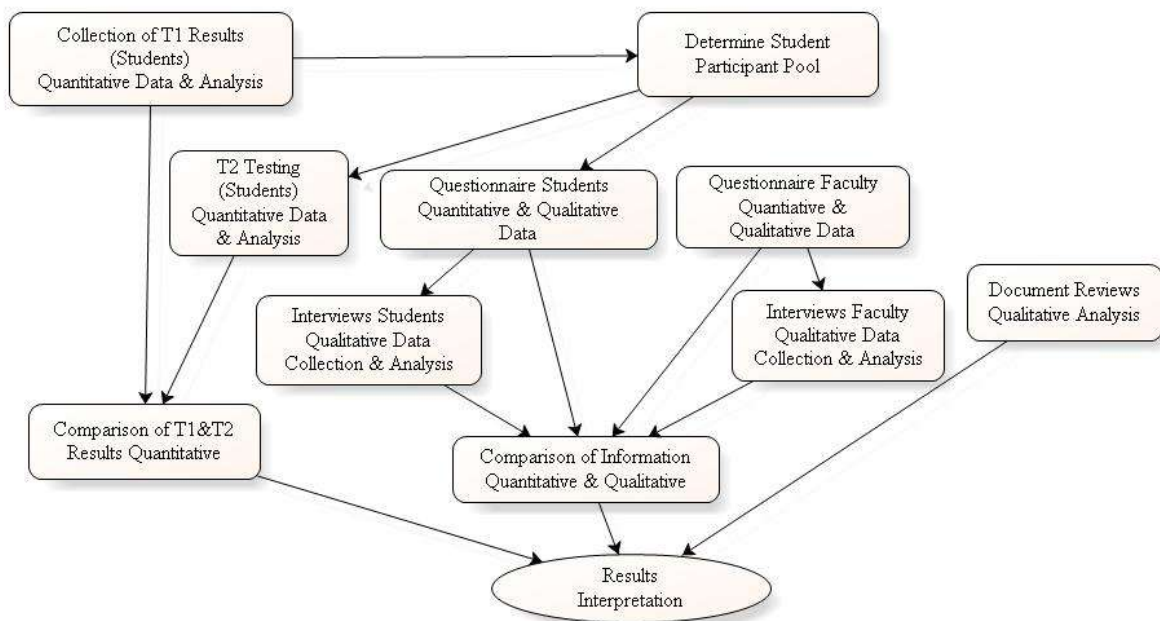
Figure 2: Structure of enquiry indicating quantitative and qualitative elements of research

Figure 2 shows the various qualitative and quantitative aspects of my study and how they fit together and inform one another throughout the data collection process and results interpretation in this mixed methods research design. Throughout this study elements of various approaches are combined in order to get a complete picture. In later sections, these elements are described further, along with the role they play in my research data collection, analysis and interpretation.

4.4.1 Survey Approach

A survey approach is often used in research "with the intention of describing the nature of existing conditions, or identifying standards against which exiting conditions can be compared, or determining the relationships that exist between specific events" (Cohen et al., 2007). In survey research, "the individual instance is sacrificed to the aggregate response (which has the attraction of anonymity, non-traceability and confidentiality for respondents)" (Cohen et al., 2007, p. 207). This research methodology combines quantitative and qualitative data collection and analysis, with more emphasis on the former. It uses survey research data collection methods including interviews, online questionnaires, standardized tests of performance, and scales to measure perception of language ability in search of probabilistic and interactive relationships rather than deterministic ones between groups and individuals. The research attempts to minimize some of the problems associated with survey research by triangulating data from various sources and perspectives, using a variety of data collection methods, and minimizing the researcher effect.

4.4.2 Retrospective Panel Case Study

This research is a case study in the sense that I have chosen one institution to focus on when looking at the effects of EMI on language ability with higher education students. The research examines data from one tertiary institution in the UAE to explore the research questions. The research design for this case study is a retrospective panel study, meaning that it defines the group to be studied based on an end point. In this study the participants are defined as students who entered baccalaureate studies in September 2007 by meeting a specific set of entry requirements and graduated in June 2011. The test scores of participants on a standardized language proficiency assessment (IELTS) are compared at entry and exit to the baccalaureate program. It is longitudinal in nature, but data collection begins

by identifying the group of participants from the end point, making it also retrospective in nature. This research looks at what happened to students' English ability over the course of four years of study from the time they successfully met the requirements of entry into the program (June 2007 when they took an IELTS exam for entry and passed the final level of their English course granting them admission to the undergraduate program) until their final semester of study, January to June 2011.

In this study the variables measuring language ability in listening, speaking, reading, and writing are measured by a standardized test, and a comparison is made from time 1 to time 2 on the same group of people. The participants have shared a common experience within the defined period of four years of higher education study. Cohen et al. (2007) point out that repeated observations in a longitudinal study on the same group of participants means that differences observed (whether cultural, social, or educational) are less likely to be caused by differences among groups of participants as could be the case with cross-sectional studies. Also, in contrast to cross-sectional studies, longitudinal ones can provide data at the individual level (Cohen et al., 2007). Because of this, they are more accurate in finding changes than cross-sectional studies.

A case study approach was incorporated in this study due to its value as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context" (Yin, 2003, p. 13). The case study design is useful to this research as it is multi-dimensional and allows for a mixed methods approach, and allows for a focus on the situation from the eyes of the participants (Cohen et al., 2007) while providing detailed information that can be a step toward actions suggesting solutions or practical implications (Freebody, 2003). Also a case study design can provide understanding of various aspects of the research area and conceptualize them for further research (Punch, 2009). It allows for a variety of data collection tools and methods of analysis.

Stake believes that "case study is not a methodological choice but a choice of what is to be studied. By whatever methods, we choose to study the case. We could study it analytically or holistically, entirely by repeated measures of hermeneutically, organically or culturally, and by mixed methods – but we concentrate, at least for the time being on the case" (Stake, 2000, p. 435). "In doing research using case study, one might ask what can be learned from looking at a single case. This depends on the purpose of using the particular case in the research. Case studies may be intrinsic or instrumental in nature (Stake, 2000). With an intrinsic case study the researcher is

interested in the case itself and wants a better understanding of the particular thing acting as the case (for example, the person or an organization), while the goal of an instrumental case study is to "provide insight into an issue or to redraw a generalization. The case is of a secondary interest, it plays a supportive role, and it facilitates our understanding of something else" (Stake, 2000, p. 437).

In this research, I am especially interested in learning about what is happening within the institution I am studying. I think that the data collected, analysis of it, and discussion could be used to understand institutions that operate within a similar context (i.e., Gulf State tertiary institutions), but my primary interest is practical in nature in the sense of learning how programs within the institution where I work can be improved. By understanding this particular case, I may be able to help to ameliorate practices within the institution being studied. This may in turn lead to improved practices in similar institutions.

While doing case study research, it is necessary "to recognize that certain features are within the system, within the boundaries of the case, and other features outside [it]" (Stake, 2000, p. 436). It is then left to the reader to draw generalizations and comparisons based on their own knowledge of other contexts. I have tried to provide as much information related to the context of this particular study regarding participants and programs as possible without sacrificing too much time, for as pointed out by Stake, the "pursuit of understanding of those atypicalities not only robs time from the study of the generalizable but also diminishes the value, to some extent, that we place on demographic and policy issues (Stake, 2000, p. 439).

4.5 Research Methods

"Paradigms, which overtly recommend mixed methods approaches allow the question to determine the data collection and analysis methods applied, collecting both quantitative and qualitative data and integrating the data at different stages of inquiry" (Creswell, 2003 as cited in Mackenzie & Knipe, 2006, p 7). In pragmatic based research quantitative or qualitative methods may be employed with the methods matched to the specific questions and purpose of the research (Mackenzie & Knipe, 2006). This study includes methods used in both the positivist and interpretivist methodologies (see Figure 2). The research methods include reviewing institutional documents, testing in a quasi-experimental nature, questionnaires with both fixed and open ended questions, and semi-structured interviews. Sometimes this research

incorporates a more rigid approach to the collection of data, analysis, and interpretation while at other times, there is the necessity to be more flexible in the collection of multiple stories from multiple stakeholders.

4.5.1 Participants

Participants in this study include both students and university content professors. The students selected to participate were in their final year of study of a four year undergraduate degree. The faculty selected to participate were those who teach in the third and fourth year of the undergraduate study program. Purposeful sampling was used in this research to ensure that participants "had experienced the central phenomenon" (Creswell, 2009, p. 217) which in this case for students was four years of English-medium instruction in a tertiary institution in the UAE, and for teachers this means having taught students while they were in their final years of study in the institution.

4.5.1.1 Student Participants

The primary participants in this study are female Emirati undergraduate students between the ages of 22 and 35 who were in their fourth year of study in a federal university in the United Arab Emirates at the time of data collection. The average amount of English instruction prior to admission to university for most Emirati students is 7 to 12 years. Within the university, the students' exposure to English is generally limited to the classroom, materials supplied by the teachers, and interaction with expatriate workers. Students tend to revert to Arabic between classes and socially with friends and family, but the cosmopolitan world of the Emirates and availability of satellite TV along with the prevalence of the internet provide an increasing opportunity for exposure to English outside the classroom. Because women are more limited in movement than men and in general must be chaperoned if they are out in public, exposure for the participants in this study is expected to be largely input-based and not interactive when they are outside of the university environment.

This group of students was chosen as participants because they were entering their fourth and final year of undergraduate education at the time of data collection, and they were the first group of students to fall under the university policy to use an IELTS exam as the preferred entry method. Previous to June 2007, the university used the institutional TOEFL exam at the completion of the English foundation program to

test students' readiness to enter undergraduate study. Having the same participants with test scores at entry and exit allows for some consistency in measuring English language development from the start of the academic program until the end. It also allows for the research to use a test/retest design for this retrospective panel study. These students have all entered the university through the same channel and testing procedures, and they have taken the same courses for their first three semesters of study until choosing their major area of study. For more details on the participants, please see Appendix A.

4.5.1.2 University Staff Participants

There are 433 faculty employed to teach at the university on full-time regular contracts (instructors, assistant professors, associate professors, and professors). This includes the over 150 instructors employed to teach English in the foundation program as well. These 433 faculty members are of 42 different nationalities, but the majority (75%) comes from the United States, United Kingdom, Canada, and Australia.

The target pool for participants for the online questionnaire and interviews were the 161 faculty members who teach in the third and fourth years of the undergraduate program once the students have completed their general education and selected their majors in one of seven departments. Over 80% of the faculty teaching in the major programs comes from countries where the first language is considered to be English (see Appendix B, Table B1).

4.5.1.3 Data Collection from Participants

At the beginning of the final semester for the 2010-2011 academic year, I sent a personally addressed email to all potential student participants. The initial request was sent to 75 students in their final semester of study that were admitted to the university in fall 2007 by passing the final course of the intensive English program and presenting a passing IELTS score in June 2007. The 65 students who agreed to participate were asked to sign a consent form. Permission was asked of the participants to look at their academic records (which include IELTS scores), and they were asked to complete an online questionnaire. An email containing the link to the online questionnaire was sent to each of them. Reminder emails were sent several times throughout the months of February to April to those who had agreed to participate initially and had not yet responded to the online questionnaire. Of the 65

students who agreed to participate, only 59 actually sat the IELTS exam again in their second semester. Of the 59 student participants who have Test 1(T1) and Test 2 (T2) scores, 59% (35) participated in the survey phase of the research and seven agreed to be interviewed about their experience studying in English at the tertiary level.

University teaching staff was also requested to participate in a similar online survey asking parallel questions regarding their perceptions of their students' language abilities. The request was emailed to 161 faculty members in the seven departments and colleges offering majors at the university. One week after the initial email request, I sent a reminder email. Fifty-three (33%) of the 161 potential participants took part in the online survey regarding their perceptions of the students' language abilities. Twenty-four of these participants said they were available for follow up interviews of which I selected 12 based on their department and length of time working in the Middle East. In the end, it came down to time available and who was willing to be interviewed when I moved into that stage of the research, though I still tried to get as much participant variety as possible.

Faculty participants who responded to the online survey questions had an average of 11.88 years of teaching experience at the university level and had been at the institution where the research took place for an average of about five years at the time of study. Faculty members participating in the research had been teaching at the institution for between one semester and 13 years.

Of the 53 faculty members who participated in the survey, about 45% had no experience working with English second language learners in an academic environment prior to coming to the UAE. Those reporting teaching in environments with non-native speakers (55.1%) had a wide variety of experience ranging from teaching in western universities with international students, teaching abroad in foreign universities where the medium of instruction was English, teaching in English speaking countries where some of the indigenous population's first language was not English, and previous teaching experience in other Middle East countries. For more information on the faculty participants see Appendix B.

4.5.2 Review of Institutional Documents

Document analysis in educational research "allows the gathering of new facts about a program, to understand why a program is the way it is. It is useful for determining the purpose or rationale of a program" (Hurworth, 2005, p. 118). In

order to understand the expectations for language learning from an institutional standpoint, documents representing the institutional viewpoint were examined for references related to English-language learning and language development during the undergraduate program. As Scott and Morrison note, using documents in conjunction with other sources in educational research helps to "provide a means of comparing similarities and differences among sources" and may "assist in the evaluation, assessment and/or analysis" of data to provide a "wider picture or context" (2007, p. 76). Selection of materials is important and the quality of evidence is based on the criteria of authenticity, credibility, representativeness and meaning (Scott & Morrison, 2007). In this study information presented at meetings throughout the academic year regarding student learning, along with the university's website, course catalog, and student handbook were examined to find instances that referred to students' English language learning, usage or assessment. These documents could be considered representative of the institutional identity because as noted by Bowen, "in an organisational context, the available documents are likely to be aligned with corporate policies and procedures and with the agenda of the organisation's principals" (2009, p. 32).

4.5.3 Test/Retest of Language Ability on a Standardized Instrument

A common approach to measuring language improvement is by looking at score change on standardized tests which offer a common scale for each time an assessment is done (Ross, 1998). Score gain is described as the difference in scores from one measurement to the next. There has been some debate on the reliability regarding measures of gain based on simple differences between time one and time two especially in the social sciences. Williams and Zimmerman (1996) adequately quell much of this argument in the case of educational measurements looking at improvement over time by pointing out factors that would be expected to influence statistical reliability when assessing learning as opposed to measures looking at attitudes or behaviors. As Willet (1989) points out, "The difference score has been demonstrated to be an intuitive, unbiased, and computationally simple measure of individual growth (p. 588)" (as cited in Williams & Zimmerman, 1996, p. 62).

Most universities use a standardized language test as a means of determining language ability upon entrance to a program by non-native speakers of the instructional language. In this research, entrance and exit IELTS scores of student

participants are compared as a means of determining whether language proficiency has increased, stayed the same, or decreased after four years of EMI. Entry level IELTS testing of each of the student participants were collected from institutional records. Participants were asked to register for a second exam during their last semester of study. Various administrations of the exam took place during this time period offering students the ability to choose from a variety of test dates to suit their schedules. The costs for the exam were paid by the university and there were no financial costs incurred by the participants. Results from the second exam were distributed to the participants and then sent directly to me by the IELTS test administrator.

Table 3: Participants' IELTS Scores at Entry to Baccalaureate Study

Band Score	n	Range	Min	Max	M	SD
Listening	59	2.0	4.0	6.0	5.254	.4087
Reading	59	1.5	4.0	5.5	5.025	.3138
Writing	59	2.0	4.0	6.0	5.229	.4579
Speaking	59	2.0	5.0	7.0	5.525	.5903
Overall	59	1.0	5.0	6.0	5.322	.3046

Table 3 shows descriptive statistics of the participants' language scores on the IELTS test at the time of admission to the university for undergraduate study. The 59 student participants' overall IELTS band score upon entry to the university was between a 5.0 and 6.0. These results will be referred to throughout the paper as Test 1 or T1 with skill area scores for this exam referred to as Listening 1 or L1, Reading 1 or R1, Writing 1 or W1, and Speaking 1 or S1. Exam results for the second IELTS exam administered during the 2010-2011 academic year will be referred to with the same designations, but followed by a 2 instead of a 1 (e.g., Test 2, Listening 2, W2, etc.). These results will be discussed further in the results section of this paper. It should be noted that two of the participants' initial IELTS scores did not meet university entry requirements as they had below a 4.5 in one of the skill areas. Records show that they were admitted to the undergraduate program in the autumn of 2007 despite this. The most likely explanation for this is that sometime during the summer they took another IELTS or TOEFL exam and presented the results to the registrar's office, but these were not included in their academic records. This is why the minimum score of 4.0 appears in some skill areas of the chart. In principle, there should be no scores below a 4.5 in any of the skill areas for T1 as the minimum requirement for entry was an

overall band 5.0, and a band 5.0 in every skill area or an overall band 5.5 with only one skill area at 4.5.

Although an IELTS test was used on both occasions (entry and exit), for the participants in June 2007 score reporting was different from 2011 when the second test was taken by the participants. In June 2007, for the writing and speaking scores there were no half band scores; only whole numbers were reported between one and nine. This changed after June 2007 and as of 2011 all four of the skill areas may be reported as a half band score. As noted above, two of the participants took the IELTS in July 2007 and thus have scores for writing and speaking that use the current system, with all four of the skill areas being reported in increments of 0.5 (not just the listening and reading areas).

The IELTS exam was chosen to measure the English ability of participants because it is well known as a university entrance exam and has high face validity. The test structure and question types used in the exam are familiar to the students in this particular context. It is also thought the exam will be useful to them if they decide to enter graduate school or for employment purposes where IELTS scores are required. The Abu Dhabi Education Council and the Ministry of Education, for example, require those working in Abu Dhabi public schools to have recent IELTS scores for employment. Teachers are required to have at least a band 6.0 before being granted employment, and if they will be teaching English, they must have a band 7.0 (J. Kennish, personal communication, March 13, 2011). School principals, on the other hand, must have a minimum of 6.5 (Abu Dhabi Education Council, 2010).

The procedures for delivery of the IELTS test are standardized and secure, the results are reported within two weeks, and the materials are piloted prior to use in live exams. This provides consistent delivery and results in a variety of contexts, offering the potential to compare groups of test takers or score changes in a repeated measures study design. IELTS states that the scores on their exams are an "accurate picture of a candidate's language skills at a given moment" (IELTS, 2009a, p. 9), but the validity of the scores as a precise representation of a candidate's abilities will diminish with time. They recommend that scores more than two years old should only be accepted if there is proof the individual has tried to maintain their English ability during that time period.

The IELTS is a criterion-referenced test, meaning that it explains what someone can do based on a task (Hughes, 2003). Since my primary definition of

language ability, as mentioned in the introduction, is to be able to use the skills of language (reading, writing, listening, and speaking), I chose the IELTS test as the primary means of measuring students' proficiency because it was developed within the context of the communicative language teaching approach and thus measures each of these skill areas. The IELTS exam is comprehensive in nature with a variety of question types. It can test for a range of proficiency levels in four skill areas and is widely respected within the academic community as a reliable means of determining if those applying for admission to universities have a level of English that would permit them to pursue their course of study if taught in English. Scores for each of the four sections of the exam are reported in whole or half bands on a nine-band scale. An overall band score is also given that takes the average of the four individual assessment scores. The IELTS exam is used as a baseline indicator of English level for all students entering higher education in the UAE. More information regarding the IELTS test components is available in Appendix C.

4.5.4 Measuring Perceptions of Ability with Questionnaires

Student and teacher questionnaires were developed to collect both quantitative and qualitative data from participants regarding their perception of English language ability. Questions asked were based on questionnaires used in previous research about students' perceived English language ability and faculty members' perceptions of their students' ability to cope with English-medium instruction (Byun, et al., 2011; Collins, 2010; Craig, 2007; Vinke, 1995; Vogt & Oliver, 1998). Previous research into teachers' perceptions of students' ability (Craig, 2007), students' study habits (Douglas, 1977), and recommendations for increasing language acquisition of adult second language learners (Ferris, 2003; Gass & Selinker, 2001; Krashen, 1995; Krashen & Terrell, 1995) helped me develop and frame the survey questions. Questions center on perceived English language ability and improvement, and the ability to perform tasks related to academic study in English. The teacher questionnaire has parallel items, along with questions related to the delivery and adaptation of materials due to teaching in the learners' second language. The teacher's questionnaire also includes several questions with demographic components to get a better idea of who is answering the survey and how their previous experience may affect their responses. The questionnaires include various types of questions in

order to provide both quantitative and qualitative data in relation to both teachers' and students' perceptions of language ability (see appendices D and E).

By using a variety of item types on the questionnaire, different analysis techniques are possible which offer a range of ways to look at the data collected. The use of closed questions is a useful way to generate frequency of response information that can be statistically analyzed. They facilitate comparison between groups and are quicker to code and analyze than open ended questions (Cohen et al., 2007). The use of rating scales, which are commonly used in research, offer "flexible response with the ability to determine frequencies, correlations and other forms of quantitative analysis (p. 327). Ratings scales are "useful for tapping attitudes, perceptions and opinions" in a way that allows for statistical measurement (p. 328). They allow the researcher "to fuse measurement with opinion, quantity and quality" (p. 327). As with any item on a self-administered questionnaire, rating scales have limitations. There tends to be an avoidance of extremes; the actual meaning of the scale items may be different for different respondents; there is no assumption that the scale intervals are equal; and the scale limits the respondents to the choices presented (Cohen et al., 2007). In this research, triangulation of data sources and collection methods help to reduce these limitations.

The open-ended questions on the surveys offer a chance for students and teachers to more fully explain their choices if needed and are a "window of opportunity for respondent[s] to shed light on an issue" (Cohen et al., 2007, p. 331) even though they are more difficult to handle as data and comparison between groups is difficult. The questionnaire for teachers has more open-ended questions including some asking about the adaptation of materials, the amount of support offered, and the need for support. As student writing and reading tend to be among the weaker skills in this region of the world, open-ended questions are limited in the student questionnaire, but were explored more fully during interviews.

4.5.4.1 Questionnaire Administration

Using the software application SelectSurvey.NETv4.032.002, the questionnaires were put onto a secure site where participants were able to take the survey by clicking on an email link. Advantages to using online questionnaires instead of paper-based ones include a reduction in the amount of time to distribute and collect data, a decrease in the researcher effect, the ability to quickly transfer data

from one application to another for analysis with a decrease in processing and data entry errors, the ability for respondents to complete the questionnaire at a time and place that suits them, and fewer missing responses to items (Cohen et al., 2007).

4.5.4.2 Questionnaire Content

The first page of both the student and faculty questionnaires contains information about the purpose of the research and a consent form. It includes a statement about the research, expected benefits, risks, confidentiality, and then asks participants to indicate agreement to participate by clicking on the "next" button, which takes them to the first page of questions. Using Likert scale items, the questionnaire requests participants to mark on a five-point scale of one (poor) to five (excellent) how they would rate English-language ability in each of the four areas tested by the IELTS exam, how they would rate the ability to perform academic tasks (e.g., reading course materials, taking notes during lectures, asking questions, and writing academic papers), and whether they think they (or their students) have made improvement during the four years of study in any of the skill areas and why. It also asks if the participant would be willing to participate in an interview to further discuss their answers to the questions on the survey.

4.5.4.3 Increasing Response Rate

As Cohen et al. (2007) point out, there are various issues associated with response rate including timing, design and presentation of request, and follow up. Timing is an important factor in response rate. Being a part of the institution where the data was collected helped me to know when the best time was to request participation to get the maximum response. The email requests to participate were sent in February right at the start of the semester, when both students and teachers are not overwhelmed with upcoming exams. A clear cover email was written that I hoped would appeal to participants based on their role as a teacher or student. My identity and work within the institution was highlighted in the emails asking for participation.

A follow-up letter is one of the most productive ways of increasing response rate (Cohen et al., 2007). Aware that some faculty members might be annoyed by repeated request emails, I sent only one reminder to teachers one week after the initial request. Email requests for faculty members were addressed at the college level, for example, "Dear College of Education Faculty Members."

For students, emails were individually addressed with their name and a congratulations message about getting close to graduation. I sent several reminder emails to student participants as it was difficult to tell whether they had received the first request or not. Many were not participating in classes because they were on internships in their final semester, plus the university had switched to a new platform for email delivery at the beginning of the semester. Also, because students are of a different generation than the faculty members, they have different habits and levels of tolerance for electronic communication. For the students I had a clear target for collecting data. I wanted as many of the 75 students who had started the program in September 2007 as possible to respond and could identify who had responded because the online survey requested identifying information enabling me to target reminder emails for participation.

Clear instructions are important in response rate (Cohen et al., 2007). Thus in the email, the link was clearly highlighted in the text. If someone clicked on the link without reading the email, the purpose and instructions for answering the questionnaire were again laid out on the survey welcome page. I also included my name and contact information in both areas.

Using the various techniques set forth by Cohen et al. (2007) to increase participation (e.g., flattering participants, personally addressing emails, indicating benefits and importance of research, and using follow-up emails), I had a response rate of 33% (53) from faculty members solicited and 60% (45) from students. Only 35 of the students' responses are included in this research as the other 10 did not have IELTS results for Test 2 at the end of the semester.

4.5.5 Interviews

In order to more fully answer the questions related to perceptions of language ability, semi-structured interviews of students and faculty were conducted. As Wilkinson and Birmingham state "while other instruments focus on the surface elements of what is happening, interviews give the research more of an insight into the meaning and significance of what is happening" (2003, p. 44). Interviews are a "verbal interchange, often face to face in which an interviewer tries to elicit information, beliefs or opinions from another person" (Burns, 2000, p. 423). Interviews give participants the opportunity to "discuss their interpretations of the world in which they live, and to express how they regard situations from their own

point of view" (Cohen et al., 2007, p. 347). Semi-structured interviews allow the interviewer to have a structural framework for the interview with a list of themes or main questions to be covered, while at the same time providing the interviewer some flexibility to deviate and expand on the questions to more fully explore issues that may arise during the interview as relevant (Freebody, 2003; McDonough and McDonough, 1997). Interviews were used to validate responses from the questionnaires and results from test scores, and to understand more fully student and teacher language perceptions.

My interview schedule was semi-structured with open-ended questions based on extending and explaining responses from the online survey (see Appendix F). The general issues explored during the interviews were:

- perception of proficiency in English language skills (listening, reading, writing, and speaking)
- perception of improvement in language skills throughout four years of study
- ability to cope with material presented in English during the time of study
- problems faced due to language ability and how these are dealt with
- types of perceived support available

Interviews were conducted in April and May with seven of the student participants and twelve of the faculty member participants. These participants volunteered to be interviewed after completing the online survey. While the interview is not an everyday conversation (i.e., it is constructed with a specific purpose in mind), it is still a social, interpersonal encounter and should not be treated merely as a data collection exercise (Cohen et al., 2007). With this in mind, I tried to make participants feel as comfortable as possible during the interview process. Interviews were scheduled at a convenient time and location for the participants. Two of the faculty participants chose to be interviewed in the university cafeteria over lunch, while all other interviews were conducted in the faculty members' office or in a private location convenient for participants. The interviews were recorded using a digital recorder. To ensure that interviewees would be familiar with the research purpose and expectations prior to the interview, I sent a reminder email about the time and place for the interview that included a copy of the information and a consent form. At the beginning of each interview, I presented a paper copy of the consent

form to be signed, and explained the research and terms of consent before beginning the interview process.

The interviews followed a general format with student interviews lasting between 12 and 20 minutes each and teacher interviews between 15 and 45 minutes. The length of the interview was largely dependent on the time required to cover the areas in the interview schedule and on how much the participant wanted to talk about each subject area. The interviews were then transcribed and entered into the data software package NVivo for coding and analysis.

4.6 Data Analysis

The data analysis software packages SPSS and NVivo were used to process both quantitative and qualitative data. Quantitative data was entered into SPSS software to allow for statistical analysis. Information from open-ended response questions and interviews was treated as qualitative data, and content analysis was undertaken to find commonalities and themes to investigate more fully the relationship with quantitative data gathered. Qualitative data was then used to reinforce results found from the quantitative data through the use of quotes from participants to support or explicate findings.

4.6.1 Quantitative Data

Descriptive statistics such as mean, standard deviation, standard error of means, and paired samples t-tests were generated to examine scores from the students' first and second IELTS tests, while independent samples t-tests were used to compare scores between students studying in different subject areas. Cross-tabulation was also used with T1 and T2 test scores in order to get a better idea of individual improvement. Principle component and regression analysis were used to explore patterns of improvement and the relationships between skill area, GPA, area of study, and the responses to the online questionnaire.

When creating a data file to use for analysis in SPSS software, I exported the data from the online survey application and then put all the information for faculty and students in one data file which included the information for the 59 student participants who had both T1 and T2 scores and the 53 faculty members who had answered my survey questions. The survey questions which were the same for both students and faculty were labeled with the same variable name so comparisons between the two could be made later. I also set up a variable for position (faculty or

student) so that analysis could be run from the same data set for groups by splitting the file according to position. For variables that did not match between the two sets of participants I left the data spaces blank. The first step in the data processing was to screen and clean the data to make sure I had not incorrectly entered any of the information. I checked for errors by looking for any values that might fall outside the acceptable ranges for those variables by examining the frequencies for each. I split the file to examine the frequencies by students and faculty, and for the categorical variables, I ran the frequency descriptive statistics several times and checked for missing responses and response range until sure that the data entered was correct.

Similar to procedures followed in Elder and O'Loughlin (2003), in order to look at score gain on the IELTS exam for T1 and T2, a variable for change in IELTS scores at the overall band score and individual sub tests (skill area) was calculated by subtracting the results of IELTS Test 1 from the results of Test 2. Paired samples t-tests were generated to compare scores between these differences. The percentage of those improving from T1 to T2 in each of the skill areas was recorded along with the percentages of those having a band 5.0 or greater and a band 6.0 or greater on the overall score and the individual skill scores for each of the exams. Thus, quantitative data from IELTS Test 1 and Test 2, gain scores, questionnaire response data, along with GPA and time spent in English-language pre-academic courses were all added to the database for analysis.

4.6.2 Qualitative Data

Interviews were transcribed and looked at qualitatively. Themes, issues, and ideas were identified and noted across interviews to add support to the quantitative results. The sound files and transcripts were entered into NVivo software and coded and cross-referenced with the individual survey participants. Written comments from the online survey were also entered into Nvivo and coded and cross referenced with participant's interview transcripts. Figure 3 illustrates coding on one section of an interview.
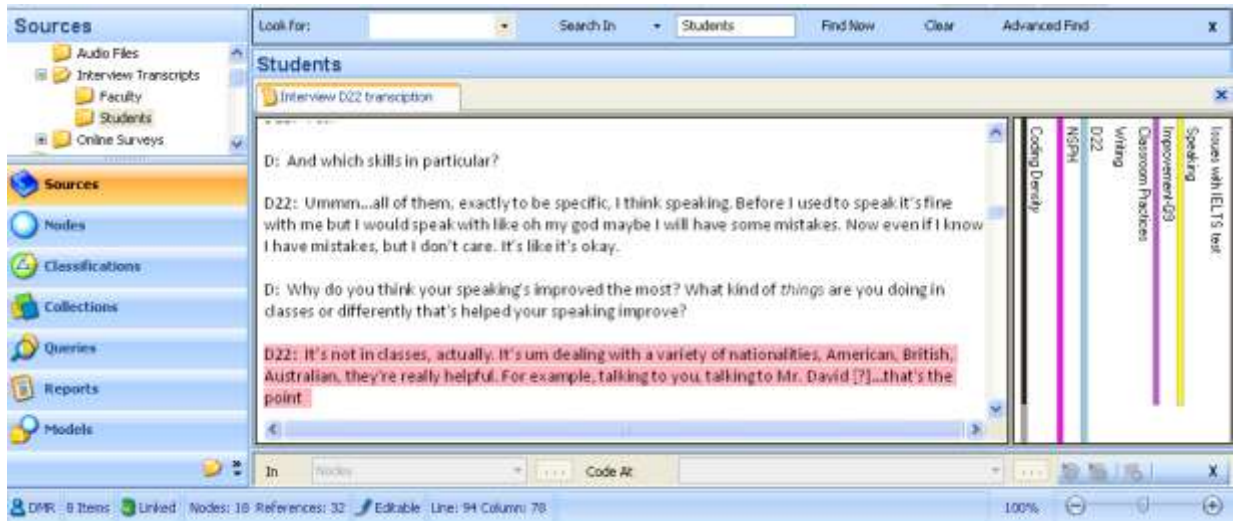
Figure 3: Screenshot from Nvivo illustrating coding of interview transcripts

As seen from the bars along the right side of the screenshot, the section illustrates themes related to classroom practices, improvement, and speaking. This interview has also been tagged as relating to the participant (D22) and the area of her study (NSPH). Areas within the interview were also linked to other documents that were input into the Nvivo database (journal articles, memos, institutional documents) indicated by the highlighted areas in Figure 3. Coding was organized around themes that were prevalent in previous research and that emerged during the research process as they related to perception of language ability and improvement. These themes are called nodes within the Nvivo program.

Figure 4: Screenshot from Nvivo showing a selection of themes (Nodes) and the amount of sources that they were found in and the number of times referenced throughout the sources

Figure 4 illustrates various themes and how Nvivo notes the amount of times these appeared in the source material such as interviews and comments from surveys. Using Nvivo and coding interview transcripts and survey comments allowed various themes and areas of focus to emerge as interviews were reviewed and coded.
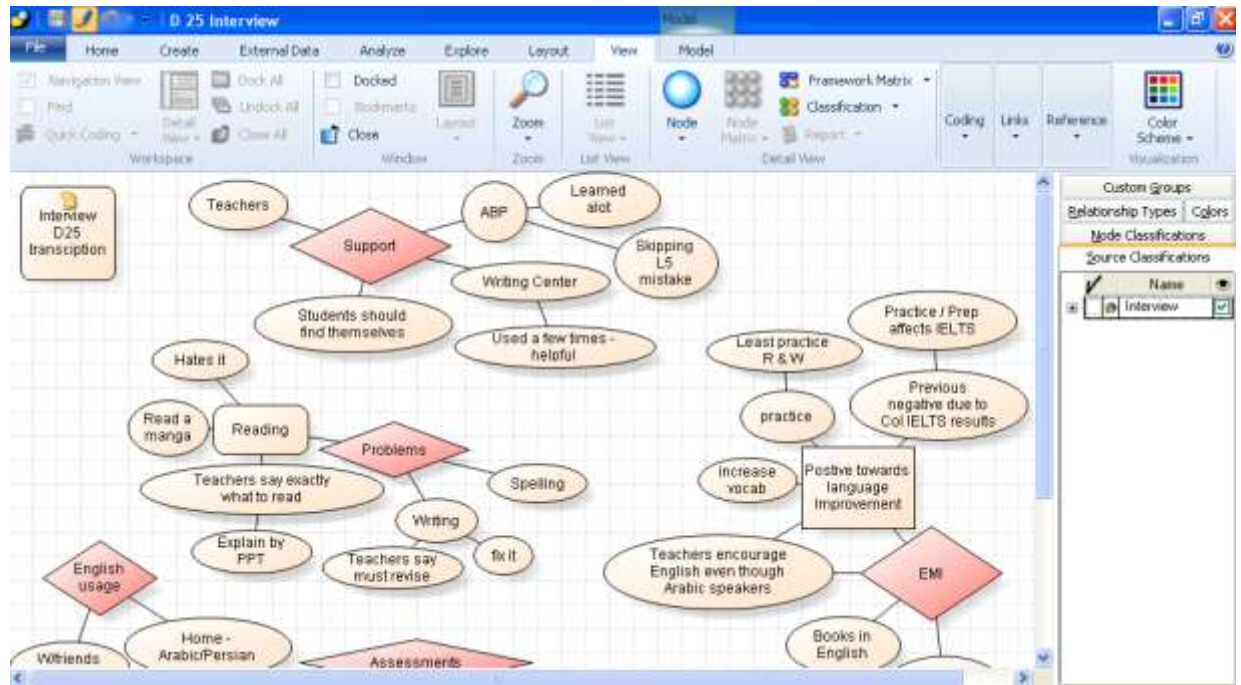
Figure 5: Model of associated concepts from one student interview

As illustrated in Figure 5, the information was used to generate models in the Nvivo software illustrating the linkage been areas coded in the data entered from interviews and open ended questions on the online questionnaire. Qualitative data was then used to reinforce results found from the quantitative data through the use of quotes from participants to support or explicate findings.

4.6.3 Handling of Errors in Participants' Responses

The purpose of interviewing and collecting responses to open-ended questions was to more fully understand the perspectives of students and faculty members, not to collect samples of speech for analysis related to proficiency. Throughout this paper student and faculty participants' spelling and grammatical errors have been corrected if they impede the ability for the reader to understand the intended meaning of the participant. This is done so that the reader can more fully understand the participants'

experiences of studying and teaching in a setting where English is the medium of instruction.

4.7 Ethical Considerations

Cohen et al. (2007) point out that ethical considerations are more than just procedural as they permeate the entire research process and are an important consideration in framing the research design because "one has to consider how the research purposes, contents, methods, reporting and outcomes abide by ethical principles and practices" (p. 51). Therefore, while thinking about my research problem I considered its cost/benefit ratio. There were very few risks involved for the participants, but I was asking them to find the time to answer survey questions and participate in an interview. I weighed the cost (time to participants) against the expected benefits of the research (increased knowledge about the benefits of English-medium instruction and possible improvement to teaching and learning in English-medium contexts) and concluded that the study was of value as a first step in the research process. I then focused on other considerations of ethical research including informed consent, privacy, anonymity, confidentiality, and decreasing risks to participants, along with ensuring that appropriate ethical clearances were granted.

4.7.1 Informed Consent

There are several elements to the definition of informed consent, including competence, voluntarism, full information, and comprehension (Diener & Crandall, 1978, as cited in Cohen et al., 2007). In terms of competence, all participants were adults able to make informed decisions about participation in the project on their own. Participation was voluntary and they were informed of the nature and purpose of the research at each phase of the data collection process (collection of exam scores, participation in answering online questionnaire, and participation in semi-structured interviews). Participants were informed that their involvement was voluntary and that they could withdraw at any time. They were provided with the name and contact information of the researcher at each stage of the research. For the online questionnaire, the information and consent form were presented before the first page of questions and were included in the initial email to solicit participation, and an information sheet and consent form was provided beforehand for interview participants.

Also, concerning informed consent, the required guidelines for the case-study university's Research Ethics Committee were adhered to at all times. These guidelines state that elements of the consent form must be communicated to the subject before consent is given. This was communicated orally to each participant before they signed the form and a copy of the form was emailed to each person who agreed to participate before the meeting to sign the consent form. Regarding the collection of data via an online questionnaire, the following guidelines were adhered to: "In the case of online surveys, the same information must be included in the introduction to the survey, preceding a button enabling the subject to click to begin the survey, if they are agreeing to do so" and "the concluding page of the survey should include a summary of the initial information given to the subjects and contact details for investigators…. which subjects are encouraged to print off and retain should they have queries" (Zayed University Research Ethics Committee, 2010).

4.7.2 Voluntary Nature of Participation

Participation was voluntary and participants were informed of their right to withdraw at any time during the study without any consequences. There was no coercion in the soliciting of participation. Regarding student participation, it was clearly explained that there would be no impact on their academic progress.

4.7.3 Benefits and Risks to Participation in Research

There were no foreseeable risks to the participants in this research. Information provided by the participants was considered confidential and in reporting findings of the study the participants remain anonymous. Benefits to the participants were purely altruistic in the sense that the results of the research could potentially lead to improvements in the program for future students. All participants were given the right to withdraw at any time without repercussions.

4.7.4 Privacy, Anonymity, and Confidentiality

Throughout the research process provisions were put into place to maintain the privacy and confidentiality of all participants. In any reporting of results referring to individuals, the participants have been given pseudonyms. Once data from academic records, institutional resources, online survey results, and interview transcripts were combined into one file for each participant, identifying information, such as name or student identification number, was removed from the record.

4.7.5 Data Collection and Storage

Some of the data used in this research was from institutional information that is publically available within the university (e.g., graduating student surveys). Other data, including exam scores, major area of study, grade point average (GPA), are publically available as part of each student's academic record, but participant consent was requested before collection and analysis of this data took place. Identification of participants in each phase of the research was linked to an identification number, but this number has not been linked with any reporting of the data, thus providing anonymity for participants. All data from test scores, questionnaires, and interviews have been stored on the personal computer of the researcher and backed up on an external hard drive at the home of the researcher. Access to files is limited through a login password known only to the researcher.

4.7.6 Procedural Aspects of Ethics Approval of the Research

Per a requirement of the University of Exeter, I submitted a "Certificate of ethical research approval" to my research supervisor and to the Graduate School of Education containing a brief description of the research project, details of the participants, information on informed consent and anonymity and confidentiality of subjects, along with details regarding data collection, analysis, and storage. Approval was granted to start research on the project by the University of Exeter, Graduate School of Education in December 2010. (See Appendix G for ethical clearance approvals.)

After receiving this approval, permission was sought to conduct research at the case-study institution from the university's Research Ethics Committee. After review by the committee, it was determined that an exemption from a full application for ethical clearance would be granted. Permission was given to begin data collection in February 2011. This application for ethical clearance required the submission of all instruments to be used, a description of participants, and certification of completion of refresher training modules on ethical research (see Appendix G).

4.8 Limitations of Study

It is important to keep in mind the limitations associated with any research project. This study is limited both by its context-bound nature and the limited number of participants in the sample.

4.8.1 Context

Although the goal of this research is to investigate the effects of English-medium instruction in UAE universities, because of its initial exploratory nature and the limited amount of time available to do the research, looking at other institutions and collecting data in them was not feasible. Thus, the study investigates the experience of students and teachers at only one institution in the UAE as a case study. Because there are a multitude of contextual factors that may affect language learning and acquisition (e.g., student motivation, a teaching focus on language skills, institutional support for developing language skills, etc.), the results found in this study may not be applicable in other circumstances, though they will provide insight into this particular context and possibly be useful in understanding similar situations in higher education in the Gulf States where students have backgrounds and educational experiences similar to the participants in this study.

4.8.2 Sample

This study is also limited regarding the population because only female undergraduate Emiratis were used as participants as this was the available student population at the time of the research at the case study institution. It should be noted, however, that in the UAE four out of five baccalaureate degree holders are women (MOHESR, 2007), so it does represent the majority of the Emirati undergraduate population in the country, though there could be other cultural or environmental factors which may increase or decrease female language acquisition that would be different in the male population of the country. For example, in general females are more limited in the range of activities that they are permitted to do outside of a protected environment (such as the university or the home). They are not allowed to leave campus between classes and often are chaperoned between home and the university, whereas male students have wider access to the world outside of the family and the university. They can freely interact with the international population that makes up most of those living in the country, while many females are limited in their interaction to family members, and faculty and staff at the university.

There was a limited number of student participants in the study due to unavailability of records from entry to the university for some of the potential participants. Also four years ago was the first time the IELTS was administered at this institution and thus the potential sample group was small to begin with. Follow-

up studies with various cohort groups should continue as now almost all entering students possess IELTS scores, whereas four years ago most were still admitted with a TOEFL score. It also would have been beneficial to have access to direct entry student scores to compare with those entering via the foundation program. That may have given a broader range to the initial entry scores of students, since some research shows that score gains in IELTS are related to where students start (i.e., those with lower scores tend to make greater gains in a shorter period of time than those with higher scores).

Only 59% (35) of the student participants took the online survey and the research would have been fuller had all the students participated. Faculty participation was only about 33% (53 teachers). A fuller picture of teacher sentiment on student ability would have emerged had more teachers participated in the online survey. It is also difficult to make comparisons between departments with the limited amount of responses to the survey, though as an initial exploratory study, it will provide information that can be followed up on in more directed research at a later time, and it offers insights as to what generally is occurring in terms of score gains on IELTS (which has previously not been researched at this institution).

4.8.3 Validity Constraints

4.8.3.1 Level of Commitment of Participants at T2

In the first round of testing there was high motivation for doing well on the IELTS exam as it was the basis for admission into the undergraduate program. Without achieving at least a minimum level on the exam, students would not be able to move into the baccalaureate program, whereas for T2, it is unclear how much motivation there was for students to do well. In the case of education students, it is needed later for employment if they will work in a public school. Others may have been motivated because further education such as admission to graduate school in the UAE is often based on obtaining a set IELTS score.

4.8.3.2 Synchronization of T2 Timing

Students took the second IELTS test at various times during the second semester. It was not possible to have them sit the exam at the same time due to space limitations at the testing center and student scheduling issues. Due to the standardized

nature of the exam and testing conditions, this is expected to have little impact on the validity of results.

4.8.3.3 Different exam versions

A different version of the IELTS exam is used at each test date administration. While most students took the same version in June 2007, in 2011 they would have taken different versions depending on the date they took it. This should not have a major impact on the results as the different versions of the exam are statistically equated (IELTS, 2010b).

4.8.3.4 Lack of Piloting

Piloting of instruments was limited due to time constraints. Piloting would have been beneficial in the faculty questionnaire to turn some of the open-ended questions into selected response questions. Because they take more time and effort to respond to, open-ended questions are often not answered on surveys and some of my participants skipped these on the questionnaire, choosing only to answer those with options that could be selected. This was compensated for during the interviews by covering questions that may have been left blank on the initial online questionnaire. Other participants wrote full responses to the questions which is one of the reasons I decided to use them in this study. While closed-questions are quicker and easier for respondents to answer, oftentimes they may also feel limiting to the respondent. Open-ended questions allowed participants to respond with as little or as much information as they liked providing me with a more fully extended range of answers than may have been available through closed-question types.

4.9 Conclusion

Chapter 4 has laid out the research framework and design for this study. It explained the manner of data collection, offered a description of the participants in the study, and explained the instruments used to collect data, along with discussing the limitations of the research, and the data handling and analysis process. The next chapter will present and discuss the findings of this research.

CHAPTER 5 – Results and Discussion

5.1 Introduction

The previous chapter explained the research methodology, describing the research design and delineating the process for data collection and analysis. This chapter will present the findings of the study and explain the results of the research in relation to each of the research questions.

The effects of English-medium instruction can be seen from several points of view. In order to get a broader perspective of what has occurred during the four years of baccalaureate study for the participants in this research, along with looking at standardized test scores as a measure of improvement, I will also examine English language ability from the institutional, teacher, and student perspective, exploring perceptions surrounding the results of the IELTS exam and language ability. While results of exams are often seen as objective and straightforward, the interpretation of them can differ depending on the viewer's relationship to them and how the data is presented.

5.2 Research Question1: Institutional Perspective of English Language Improvement

Research question one asked whether students' English language skills adequately improved during their undergraduate study from an institutional perspective. The first step in examining the institutional perspective of students' language improvement is to determine the institution's expectations and how they are measured. To assess whether the institution felt that students' language was adequately improving a number of institutional data sources were investigated. Information presented at meetings and in university documents such as the course catalog, student handbook, and websites was used to formulate an institutional expectation for language development. Documents included materials publically available regarding the role that language development plays in the university's learning outcomes and the expectations for development of the students' language ability. The university catalog states that in order to earn a bachelor's degree "the student must have a minimum cumulative GPA of 2.0 and have demonstrated proficiency in both English and Arabic through satisfactory completion of coursework. The student must fulfill all core curriculum requirements and satisfy the

competencies" of the core learning outcomes established by the university when it was founded (Zayed University, 2009a, p. 42). Language learning is one of the six outcomes identified by the university as "essential in assuring the future success" of graduates (p. 10). The language learning outcome states that "graduates will be able to communicate effectively in English and Modern Standard Arabic, using the academic and professional conventions of these languages appropriately" (p. 10). The catalog goes on to state that "students focus on the importance of those abilities from the first day they enter the University through the end of their baccalaureate program. They demonstrate their accomplishments through work submitted to their ePortfolios (Electronic Learning Portfolios) in selected courses, and they reach acceptable levels of proficiency…." (p. 11) while "the college undertakes to support the development of competence in English of all students from the point of entry to degree completion" (p. 40).

While these learning outcomes are stated in university documents, evidence of whether language development actually occurred over the course of study was not being systematically collected when I first began researching students' language development throughout their undergraduate career. I asked how language was being assessed to date, and was told by a member of the newly formed learner assessment group that "no one has been looking in any great detail, or in a systematic way, at students' language development specifically" and with the collection of graduating senior IELTS results, it would be the "first time we have more than anecdotal evidence about the English language level of graduating students" (S. Jones, personal communication, November 4, 2010). Each department within the university is responsible for assessing the outcomes of their students, but the university's goal is to "move toward a culture of evidence-based support" for language (internal meeting, Learning Assessment Steering Committee Retreat, October 28, 2010). In order to make recommendations on assessing learning outcomes including the adequacy of English language ability of students, the university formed a learner assessment committee, and began looking more closely at the English language learning outcomes and the expectations of language development throughout the undergraduate study program. The English language learning outcomes are part of the six core learning outcomes that have been identified to be essential in assuring students future success.

5.2.1 English Language Learning Outcomes

To assess the learning outcomes, the institution is trying to implement a system of matrixes that can be used to look at student learning at key points during the undergraduate program. Each of the matrixes has indicators (statements of specific competencies that students need to demonstrate) and criteria (statements with specific evaluation points) stated at developmental levels that students should reach at various points during their undergraduate study. The language learning outcomes draft matrix (see Appendix H) was developed by a group of faculty members from the language department between 2009 and 2010 and contains the following indicators and criteria each with a statement of what the student is able to do at the various developmental levels (beginning, developing, accomplished, and exemplary):

- ➢ Comprehension of written English (reading)
  - • Comprehension of a range of written text types
  - • Awareness of source
- ➢ Production of written English (writing)
  - • Range of text types
  - • Use of sources (appropriate and accurate)
  - • Organization of text (coherence and clarity)
  - • Sentence structure, grammar, and punctuation (accuracy)
  - • Vocabulary (accuracy and appropriateness)
  - • Understanding of audience
- ➢ Comprehension of spoken English (Listening)
  - • Comprehension of a range of spoken text types
  - • Awareness of speaker's stance (listening)

The developmental levels are said to be designed so that a student with an IELTS band 6.0 is at the accomplished stage, while one with a 6.5 is most likely to fit the exemplary stage (internal meeting, Learning Assessment Steering Committee Retreat, October 28, 2010). In the language assessment cycle, it is expected that students will reach the beginning level in the first year of undergraduate studies, the developing level during year two or three, and the accomplished level by graduation at year four (internal meeting, Learning Assessment Steering Committee Retreat,

October 28, 2010). It is also at these stages that departments are expected to assess and report to students their progress towards achieving the language learning outcomes. The institutional viewpoint is that students' English language ability will improve during the four years of undergraduate study, and it is expected to improve one IELTS band score, increasing from a 5.0 band at entry to a 6.0 band at exit, thus indicating from an institutional perspective that if students are not reaching a band 6.0 by exit their language ability is not adequately improving throughout the course of their studies.

5.2.2 Percentage of Students Meeting IELTS 6.0 Score Expectation

To get an idea of the language development at an institutional level, in the 2010-2011 academic year the university asked all graduating students to take the IELTS exam during their final semester, with the goal being that 80% of students receive a band 6.0 or higher in every skill area and in their overall score by graduation. Thus, students expected to graduate in 2011 took an IELTS test so that the university could assess their language proficiency at the end of their four years of study. This is the group from which the participants in my study are drawn.

The way that the institution reported the IELTS results of students in their fourth year of study can be seen in Table 4, showing what percentage of students reached the target of IELTS 6.0 or higher on the IELTS and what percentage were below the expectation of a IELTS 6.0 score by the final semester of study as an overall test score and in each of the skill areas of listening, reading, writing, and speaking.

Table 4: IELTS Scores for Graduating Senior Students Reaching 6.0 IELTS Target

Key: % ≥ 6 *represents the percentage of students with an IELTS 6.0 or higher score;*

% < 6 *represents the percentage of students with less than an IELTS 6.0 score*

IELTS	Reading	Writing	Listening	Speaking	Overall	% Gap
All Majors Summary Results				(N=327)		
% ≥ 6	35%	49%	52%	86%	62%	
% < 6	65%	51%	48%	14%	38%	38%
Mean	5.7	5.8	6	6.6	6.1	
Art and Design				(n=45)		
% ≥ 6	38%	40%	60%	96%	73%	
% < 6	62%	60%	40%	4%	27%	27%
Mean	5.7	5.6	6	6.9	6.1	
Humanities and Social Sciences				(n=31)		
% ≥ 6	39%	33%	58%	90%	70%	
% < 6	61%	67%	42%	10%	30%	30%
Mean	5.8	5.6	6	7	6.1	
Business				(n=117)		
% ≥ 6	45%	61%	53%	85%	69%	
% < 6	55%	39%	47%	15%	31%	31%
Mean	5.8	6	6.1	6.6	6.2	
Natural Sciences and Public Health				(n=44)		
% ≥ 6	36%	41%	64%	89%	66%	
% < 6	64%	59%	36%	11%	34%	34%
Mean	5.8	5.7	6.1	6.7	6.1	
Communication				(n=59)		
% ≥ 6	31%	53%	49%	93%	64%	
% < 6	69%	47%	51%	7%	36%	36%
Mean	5.6	5.9	6	7	6.2	
Information Technology				(n=43)		
% ≥ 6	23%	44%	49%	77%	47%	
% < 6	77%	56%	51%	23%	53%	53%
Mean	5.4	5.7	5.7	6.2	5.8	
Education				(n=24)		
% ≥ 6	8%	33%	25%	67%	25%	
% < 6	92%	67%	75%	33%	75%	75%
Mean	5.1	5.5	5.4	6	5.5	

(Learning Assessment Steering Committee, 2011)

This table highlights which colleges or departments have the most students below the band 6.0 goal in each of the skill areas indicating they could be falling behind in developing their students' English skills. Similar to the Australian study by Humphreys and Mousavi (2010) discussed previously in Chapter 3, the problem with this type of reporting is that though the end goal is the same for all students, the starting point may have been different. Students may have entered using a TOEFL score or various combinations of scores on the IELTS or TOEFL. They did not all start out with an IELTS score of 5.0 in each of the skill areas. Some may have been direct entry students requiring no additional language training, possibly entering with scores above the 5.0 entry level expectation or even above the 6.0 exit level. When comparing exit scores, the institution is assuming not only that the students entered with a 5.0 on the IELTS, but that it was for every skill area. This is not necessarily true for the students who are graduating in June 2011, and is certainly not the case for the participants in my study (see Chapter 4, Table 3), who had scores ranging from 4.0 to 7.0 at entrance depending on the skill area. A band 5.5 overall was the most common entrance score for the participants in this study.

Thus, while this type of reporting is a quick way of showing how close the institution or a department is to the goal of 80% of students with band scores of 6.0 or above, it does little to reflect improvement, if any, that takes place during the four years of study at the institution. Also, certain departments tend to attract lower level students. As can be seen in Table 4, for example, 75% of the graduating students in the education department did not achieve a 6.0 or higher overall on the IELTS test, but what is not apparent in the table is that this department tends to attract students from more conservative families because it is a field in which men and women are segregated in the workplace. Many of these students attended the government public schools, which, unlike some of the private schools, are strictly segregated as well. This might mean that their English level was lower to begin with than students who attended private schools, where international English speaking staff are brought in to teach and more time is spent learning through English-medium instruction. The table indicates only the end point and not how much improvement was made over the course of four years of study.

Demonstrating that exam results and their presentation can be influential in shaping viewpoints, the institutional results were used to begin a campus-wide discussion on why improvement of English over four years of study was minimal.

Each department has been asked to begin looking more closely at their current program and the way that language development is viewed and assessed. By calling for a discussion on why language improvement over the four years is minimal for its students, it reveals that the institution assumes that improvement in language occurred, and that this improvement was minimal. As Ross (1998) points out, however, in order to assess a change over time there must be something to compare it to. Though the institutional data tells us that most graduating students have not reached the hoped for IELTS band 6.0 by their last semester, and that the education department was particularly far from the university's goal, it tells us little about the progress the students may have made in language learning during their four years of study.

The IELTS exam plays a significant role in the university and in the life of the students, and is viewed differently depending on how the scores are being looked at and for what purpose. For example, the IELTS required entrance score was waived for a group of male students recently because after several attempts they did not get the required admission score. These male students were enrolled in the undergraduate program and extra support and specially trained language teachers were assigned to their courses. This "pilot program," whereby the students' academic achievements will be monitored over the course of their studies, is clearly an issue of timing. As the university attempts to develop its program for male students, it cannot afford to lose students because they are unable to meet initial English language entrance requirements, and thus IELTS scores as a sign of entry-level English proficiency are disregarded in this case.

Some teachers believe that the university should set higher standards for IELTS admission scores, yet at meetings faculty question the validity of the IELTS test at exit because it showed that the students did not reach the institution's aimed for language levels. University professors question whether the test is an adequate measure of their students' abilities and whether the test is measuring the same language used in the classroom, and yet most departments have taken no other measures to assess whether the university's language learning outcomes are met by students graduating from their programs. It seems there is a preference for standardized measures as a guide for decision making (and to remove some of the responsibility), but only when the results are to our liking.

The university administration wants to begin promoting an atmosphere of evidence-based learning and would like to see more focus on developing the students' language abilities. The IELTS exam is seen as a useful tool to assess the departments' work by looking at their students' language abilities. This is clearly evident in the chart, presented at a university faculty meeting (Figure 6) which compares the language ability of various departments' students in relation to the goal of 80% of students reaching a band 6 in each skill area of the IELTS exam.
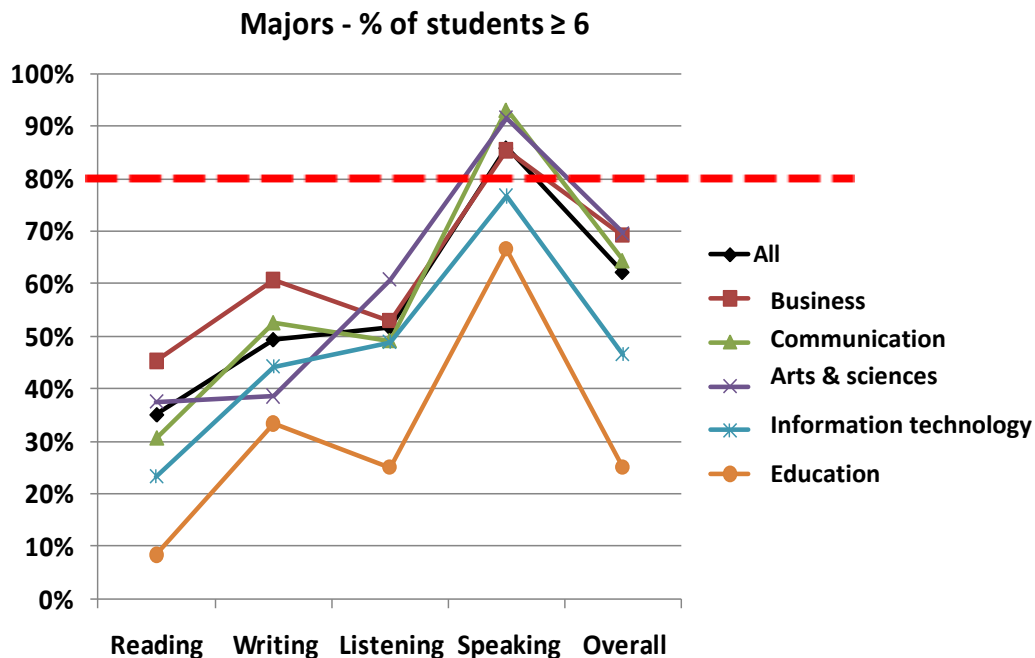
Figure 6: Institutional results presentation of graduating senior IELTS results
(Learning Assessment Steering Committee, 2011)

While senior administration question the validity of the exam as an entrance requirement for some of the male students, it appears they have no problem with it being used to measure progress at exit. And, while teachers think the IELTS entrance requirements should be raised, they do not think it adequately measures their students' language abilities when they finish their coursework.

In answer to research question one, from the institution's perspective the students' language ability does not adequately improve during their undergraduate studies. For adequate improvement to take place, at least 80% of the students would need to be graduating with IELTS scores of 6.0 or higher overall and in each of the language skill areas. According to information presented in Table 4 and Figure 6, only 62% of students in their final semester reach this level for an overall IELTS

score and in the individual skill areas of listening, reading, and writing this number is even less. The information presented by the institution to its faculty and staff indicates that it feels students' language ability is not improving adequately and that in all skill areas except for speaking there is a need for language improvement in order for at least 80% of students to reach the hoped for proficiency level as would be demonstrated by a band 6.0 on the IELTS. Table 5 shows the percentage of students who were tested that did not reach the expected 6.0 in each of the skill areas.

Table 5: Percentage of Students not Meeting IELTS 6.0 Expectation

Skill Area	Percentage of Final Semester Students *Below* 6.0 IELTS	Number of Students out of 327 Tested Not Reaching 6.0 or higher
Listening	48%	157
Reading	65%	213
Writing	51%	167
Speaking	14%	46

*Total Students Tested =327 (Data from Learning Assessment Steering Committee, 2011)

In order to examine more fully the effect of English-medium instruction on language proficiency of students, an investigation of the perceptions of the participants themselves and their teachers is needed. The above sections explored the university expectations for language ability, the way of assessing it, and the presentation of English language ability as represented from the institutional viewpoint by IELTS scores. The following section will answer the second research question concerning the perspective of the teachers and how they view their students' language ability and development during undergraduate study. This was investigated through an online questionnaire and interviews conducted with faculty members.

5.3 Research Question 2: Faculty Perceptions of Students' Language Ability

Data presented at an institutional level seems to indicate that students are not making much progress in increasing their English language proficiency as they study for their degrees with EMI. Research question two asked what the university professors thought about their students' English language ability. In order to discover what teachers' perspectives are regarding their students' language ability, the following questions were asked in the online survey.

- Do you feel that your students' general language skills meet the expectations required of undergraduate students studying in an English-medium environment?

- How would you characterize your students' overall English proficiency and ability in each of the skill areas (listening, reading, writing, and speaking)?

- Do you think your students' English proficiency improves during their four years of study for an undergraduate degree?

The answers to these questions will be addressed in the following sections in order to understand from a content teacher's perspective issues surrounding their students' English language ability and what happens regarding language development during EMI. These questions had selectable responses, but areas were available for open-ended explanation of the responses if the participant wanted to offer an explanation or comment on their responses. (All questions from the online questionnaire are available in Appendix D.)

5.3.1 Language Ability of Students Compared to Expectations for EMI

Table 6 shows the responses to the question of whether students' English skills met teachers' expectations for students studying in an English-medium environment.

Table 6: Do you feel that your students' general language skills meet the expectations required of undergraduate students studying in an English-medium environment?

Response	Response Percent	Response Total
Yes	29%	15
No	71%	37
	Total Respondents	52

Most faculty members who were surveyed (71 %) reported that they did not think that their students' general language skills meet the expectations required of undergraduate students studying in an English-medium environment. Thirty-four of the participants included an explanation of their answer to the question. Sixteen of these participants noted that there was a lot of variation in their students' language ability – from relatively low proficiency to near-nativeness. Variability in the sense of overall performance was noted by six of the respondents as being a result of whether the students had attended a public school or private school ("There is the usual difference between students from private schools whose capacities in English are very good, and students from government schools"). In response to this question teachers

made comments centering on the following areas where they felt their students struggled.

- Poor writing skills (13 comments)
- Poor reading skills (10 comments)
- Lack of understanding in general (6 comments)
- Issues with vocabulary (2 comments)

Similar to the institutional IELTS results presented above, teachers noted that students' ability varied depending on skill area, in general feeling that reading and writing skills needed to be improved. Some indicated they felt that speaking skills were adequate, with comments such as "most are able to communicate well verbally but are poor in reading and writing skills," while others felt that language ability impeded communication in general as "many have shown a poor ability to express (either written or verbally) what they wish to communicate."

Of the 34 comments, all except for two noted that improvement is necessary and that the students' language ability is affecting their ability to cover course content, and the students' ability to learn. A faculty member teaching business courses put it this way,

> The majority of my students' reading and writing ability is not up to the standards. They are unable to cope with reading requirements necessary at this level in terms of reading speed and comprehension. A lot of pre-reading activities are needed which take away from what we can cover in class. Difficulty with reading results in less critical thinking and engagement. Similarly, students' writing ability lacks in regards to mechanics, critical thought and synthesis. Dealing with these issues takes away from the teaching and learning of course content.

Teachers said that they felt students' language proficiency was inadequate for admission to the undergraduate program. As one teacher stated, "It is clear that they are not adequately trained, although their informal ability with English is good." Another explained, "An average of 5 on the IELTS is insufficient – although students may 'catch up' by the time they are in the last year of their degree programs, they have missed out on a lot in between because of their lack in reading and writing." When looking at recommendations made by the IELTS organization to stakeholders

on acceptable scores for different courses (Chapter 2, Table 2), it can be seen that the minimum score noted is a band 5.5. Teachers are expressing an opinion that is not surprising considering a 5.5 band score is deemed to be "probably acceptable" only for "linguistically less demanding training courses" in the IELTS' suggestions to institutions on using band scores as a way to gauge applicants readiness for study in an English-medium environment (IELTS, 2009a, p. 9). Expressing concern about the starting level of students, one respondent suggests that "they need language training and support before they get to study proper university courses," and "I am surprised that some of them were accepted as it is obvious they cannot put their thoughts into cohesive sentences let alone write a basic description."

Three teachers also stated that they felt the environmental context affected their students (i.e., that all students spoke the same first language which was not the language of instruction). These teachers noted that "a problem is that out of the classroom the students switch back to their native language" and "students converse mostly in Arabic with themselves and at home and hence it becomes difficult to comprehend another language in classes" and that students "are not fully immersed in English. At university and outside of university they switch back to their native language." These comments are indicative of a larger issue that is outside the scope of the current research, the sociopolitical aspects of a largely western expatriate faculty teaching the local population. Decisions on the types of courses to be taught and the materials and methods used for teaching them are not made within the local community, but by a group from outside the Emirati community and culture.

5.3.2 Faculty Perception of Students' Language Ability

Quantitative data from the questionnaire answered by faculty was used to look at how teachers' view their students' English language ability in each of the skill areas of listening, reading, writing and speaking as well as overall. The questionnaire asked on a scale of 1 (poor) to 5 (excellent) how teachers would characterize the overall English ability and the language ability in each of the four skill areas of their students. Table 7 shows the frequency of responses for overall English and each skill area.

Table 7: Faculty Perception of Students' Language Ability
Key: 1 = poor to 5 = excellent (n=53)

How would you characterize your students . . .	1 (poor)	2	3	4	5 (excellent)
…***overall English*** proficiency?	1.9% (1)	22.6% (12)	58.5% (31)	17% (9)	-
…***listening*** ability?	-	17% (9)	50.9% (27)	32.1% (17)	-
…***reading*** ability?	9.4% (5)	34% (18)	43.4% (23)	13.2 (7)	-
…***writing*** ability?	20.8% (11)	45.3% (24)	30.2% (16)	3.8% (2)	-
…***speaking*** ability?	1.9% (1)	3.8% (2)	37.7% (20)	50.9% (27)	5.7% (3)

Unlike Chang's 2010 study where teachers viewed productive skills as being their students' weakest skill area, the table indicates a clear split in the view of the productive skills of students. Speaking is indicated as being the strongest of the four skill areas with 56.6 % of teachers rating it a 4 or 5, while teachers view students' writing ability as their weakest skill with 76.1% rating their students' ability as a 1 or 2. Listening ability was seen as stronger than reading ability, and as far as overall English proficiency, the majority (58.5%) rated their students as a 3 which is exactly in the middle of the 5-point scale.

5.3.3 Improvement in English during Undergraduate Study

If students' language ability upon entry is insufficient to meet the demands of studying in English as suggested by teachers, then it will be particularly important for continued development and support of language throughout the undergraduate program. One professor who teaches natural sciences stated that there is "no language development for some students once they enter the majors." With each unit responsible for assessing the core academic skills of the university and the discipline outcomes, little focus has been placed on language development up to this point by deans and administrators. One administrator suggested a plan should be put in place for writing across the curriculum and that there needs to be an institutional focus on language in order for teachers and students alike to take it seriously in the final years of study, while other teachers stated on the questionnaire that they strongly believe that it is not their responsibility to help with students' language development. As a teacher noted on the questionnaire, "My role is to deliver the content – that's

challenging enough without trying to provide language assistance / development as well." Table 8 shows the responses to the question regarding teachers' perceptions of their students' language improvement after four years of EMI undergraduate study.

Table 8: Do you think that students' English proficiency improves during their 4 years of study for an undergraduate degree?

Response	Response Percent	Response Total
Yes	63%	34
No	11%	6
I don't know	26%	14
	Total Respondents	54

Though 63% of teachers felt their students did make improvement in their language skills throughout the four years of undergraduate study, 14 reported that they didn't know if the students improved or not, and 6 teachers said they felt students did not improve during their time spent in the undergraduate program. On the questionnaire and during the interviews, teachers were also asked to comment on why they felt that students did or did not improve their language ability during the four years of undergraduate study. Comments focused on issues of exposure to English and expectations regarding language development within the various programs offered.

Thirteen of the online respondents commented that students improved because of the "regular exposure to courses" or because "classes and assignments are all in English." The overriding theme that emerged from the written comments to this question seems to be that if someone is exposed to the language their proficiency will increase. As a communication teacher said, "I guess it should improve since they are constantly using it for all classes" and an art teacher wrote, "obviously [language skills will improve as] they are receiving significant training in an immersive academic setting." One social science teacher felt improvement occurred even if accuracy did not: "They are forced to work in English, so naturally it becomes somewhat better, even as it remains grammatically sloppy." This coincides with research conducted by Storch (2009) which indicated that after one semester of college study, students' writing had improved in terms of structure and content, but there was no improvement in grammatical accuracy or vocabulary range. One of the business teachers thought that students improve because

> most of them are using English more than they ever had before. They are
> required to think, read, write and speak in English for courses. Most of them

are making an active effort to improve their language skills, [and] most teachers are trying to give support in this development. Simply put they are in an environment which facilitates English language development.

Another teacher also expressed that improvement occurred not only in ability, but in confidence in using the language. "They become better writers and more critical readers as they go through the program. Their speaking ability and confidence also improves."

Six teachers commented that mere exposure isn't enough for students to improve their English skills. A College of Education faculty member noted,

This is a very complex question. If the students aggressively work on their language, then yes [their language improves]. If they get lazy, and it's easy to get lazy because we don't focus that much on language acquisition in the upper levels, then I can see them remaining the same or possibly even regressing. Some teachers in the upper levels just give them poor grades on assignments and don't consider that a part of their jobs is to improve language skills. Other teachers build in some language instruction or requirement to every assignment.

Craig, 2007, wrote "As has been noted worldwide, both in L1 and L2 learning environments, students' writing and communication skills generally diminish if not developed and practiced over the 3 or 4 years of study" (p. 252). In his own study of EMI in the UAE, Craig (2007) suggests that support for language development and the integration of language development goals are needed within the curriculum if increasing proficiency is an objective.

Comments on both the online survey and during interviews suggest that it depends on the department of study whether there is a focus on language that will help with its development. "Unless they [students] are in departments that stress reading and writing they regress. Many feel they should do project work rather than read or write." It also depends on the skill areas and the amount of usage required by students. As noted by one business teacher, "Listening and speaking improve; writing skills decline because they are not required to write or held accountable for their written English in the majors. Their reading skills are poor to start and remain poor as reading is not emphasized." The lack of systematic concentration on language

development throughout the program or even within a department is noted on the questionnaire by a communication teacher.

> There's a concerted effort to improve their English proficiency during years one and two. After that, the effort is focused on teaching them subject matter in the major. In years three and four some faculty help students with their language skills and some don't consider it to be their responsibility. The [communication] college has decided recently to refer students with language needs to the language support faculty, but I don't know how many students are benefiting from this.

One thing that can be noted throughout the comments on improvement is the awareness that while input is needed in order for students to be able to make improvement, there must also be a focus on output. If students are not held accountable for what they produce or are required to do, then improvement will be negligible. From information in the above sections, a general picture of teachers' views of their students' English ability can be seen. In some areas it seems to be acceptable (for example in speaking), but in others it could use improvement, especially in the areas of writing, reading, and listening with less than 50% of teachers rating their students above 3 in these areas (Table 7). Teachers indicated that they do not feel the language abilities of their students meet the expectations necessary to study in an English-medium environment (Table 6). These views seem to line up with the institutions' presentation of graduating students' IELTS scores showing a gap in what was achieved and what was expected. While 63% of teachers feel that students do make improvements in their English while studying in the university's English-medium environment (Table 8), the skills that students possess at the time of graduation are still inadequate based on the institutional and faculty perspectives. As one teacher put it during an interview, there is a slight improvement from when they are admitted, "but it's not the kind of improvement that we're actually academically looking for" as "their spoken [sic] is the thing that improves the most giving a false impression during interviews for jobs as once they come to write or compose a letter or anything for the company, the spelling mistakes, grammatical, all the rest of it collapses." With both the institutional and faculty perspective indicating that students' English language ability is not meeting expectations, in order to broaden the outlook the following section will investigate research question three which asked what

students think about their own English language ability. This was investigated through an online questionnaire and semi-structured interviews with students.

5.4 Research Question 3: Student Perceptions of their Language Ability

Research question three asked about students' perceptions of their own English language ability and its improvement by attending an English-medium university. Data collected from questionnaires and interviews, along with an institutional survey of graduating seniors, was used to look at students' perceptions of their language ability. Similar questions to those asked of faculty members were asked on the student participant questionnaire including how they would rate their own English language abilities and whether they felt their English had improved since starting their studies. These questions will be discussed below. (All questions from the student online questionnaire are available in Appendix E.)

5.4.1 Students' Rating of their Language Ability

Do students have the same negative views of their language ability and their ability to cope with course materials during EMI as the institution and teachers? Quantitative data from the student questionnaire was used to look at the participants' perceptions of their own language proficiency. Participants were asked on a scale of 1 (poor) to 5 (excellent) how they would rate their overall ability and their ability in each of the four skill areas tested by IELTS (listening, reading, writing, and speaking). Table 9 indicates the percentages of students giving each of the ratings for their perceived language ability overall and in each of the four skill areas.

Table 9: Student Perception of Language Ability
Key: 1 = poor to 5 = excellent   *(n=35)*

How would you characterize your . . .	1 (poor)	2	3	4	5 (excellent)
…*overall English* proficiency?	-	-	28.6% (10)	51.4% (18)	20% (7)
…*listening* ability?	-	2.9% (1)	20% (7)	60% (21)	17.1% (6)
…*reading* ability?	-	5.7% (2)	37.1% (13)	34.3% (12)	22.9% (8)
…*writing* ability?	-	2.9% (1)	37.1% (13)	40% (14)	20% (7)
…*speaking* ability?	-	2.9% (1)	28.6% (10)	40% (14)	28.6% (10)

The table shows that most student participants (71.4%) feel that their English ability is above average by choosing a 4 or 5 response. No participant ever used the 1 ranking of *poor* for any of the skill areas, and the majority of participants ranked themselves as a 4 or a 5 in every skill area and overall. The skill students seem to have the most confidence in was their listening with 77.1% giving themselves a 4 or 5 ranking. Reading has the least participants giving themselves a 4 or 5, but still the majority (57.2%) thought their reading was in the good to excellent range. This contrasts with IELTS scores presented by the institution for all final semester students (Table 5) which indicated 65% of students had not met the institutions' reading expectation, 51% had not met the writing expectation, and 48% had not met the listening expectation.

5.4.2 Student Perceptions of Improvement

When asked whether they thought their English had improved since entering the general education program, 80% of the student participants answering the questionnaire *agreed* or *strongly agreed* that their overall English ability had improved (Table 10).

Table 10: Students' Feelings of Improvement of Language Ability
Key: 1 = strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree
     (n=35)

I believe my ... has improved since entering the general education program.	1 strongly disagree	2 disagree	3 neutral	4 agree	5 strongly agree
...***English*** ability…	-	2.9% (1)	17.1% (6)	28.6% (10)	51.4% (18)
…***listening*** ability…	-	5.7% (2)	2.9% (1)	45.7% (16)	45.7% (16)
…***reading*** ability…	-	2.9% (1)	11.4% (4)	42.9% (15)	42.9% (15)
…***writing*** ability…	-	5.7% (2)	11.4% (4)	42.9% (15)	40% (14)
…***speaking*** ability…	-	5.7% (2)	14.3% (5)	34.3% (12)	45.7% (16)

Table 10 shows the frequency of response for each of the skill areas and overall ability and indicates that the response for each of the skill areas was also 80% or higher saying their ability in the particular skill area had improved. The skill area with the most participants *agreeing* or *strongly agreeing* with the statement that their ability had improved was for listening with 91.4% of the respondents feeling they had made improvement. This corresponds with the information about language ability seen above as this was the area that most participants felt confident in with 77.1% rating themselves as good to excellent in listening. The least percentage for agreeing with the statement of improvement for a skill was in speaking, where only 80% of the respondents said their speaking had improved since beginning their studies. The mean, median, and mode for each of these responses are shown in Table 11.

Table 11: Descriptive Statistics for Student Question about Language Improvement
Key: 1 = strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

	n	Mean	Mode
I believe my ***English*** ability has improved since entry.	35	4.29	5
I believe my ***listening*** ability has improved since entry.	35	4.31	4[a]
I believe my ***reading*** ability has improved since entry.	35	4.26	4[a]
I believe my ***writing*** ability has improved since entry.	35	4.17	4
I believe my ***speaking*** ability has improved since entry.	35	4.20	5

a. Multiple modes exist. The smallest value is shown.

Table 11 shows that the most common choice to the statements about language ability was *strongly agree*, with only belief in writing ability not having 5 as a mode. Students are positive about their improvements in each of the skill areas since entering the university. Similar to teachers, some of the reasons students give for feeling that their language abilities have improved since entry have to do with exposure and usage. One participant said, "As I entered the program, I practice English more because I had different courses in English which I'm not used to. I studied in government school and studying in English was something new and a challenge for me. Now, this is my fifth year, so I think my English, of course, will be improved." Another commented, "Sure my English is improved a lot because of all the subjects that I study at the university are in English" and "because I start dealing with foreign people and I have to use English to deal with them. Therefore, my English skills were improved a lot." Only two of the participants did not feel that they had made improvement in some of the skill areas and attributed this to a decreased chance to practice once they left the English language foundation program and entered undergraduate study and their degree programs. One participant said her English got worse "because the chance of using the English has declined. In the [foundation program] my ability of speaking was much, much better than now."

5.4.2.1 Improvement on the IELTS Exam

The questionnaire also asked students if they felt their IELTS score had improved during the course of four years of undergraduate study and why they did or did not feel that improvement had taken place. Table 12 shows the data from this question.

Table 12: Do you think your IELTS band has improved since entering the general education program from when you finished the English readiness program?

Response	Response Percent	Response Total
Yes	67%	24
No	19%	7
I don't know	14%	5
	Total Respondents	36

Of those taking the survey, 67% felt their IELTS score had improved, 19% thought that it had not, and 14% said they didn't know if it had improved or not. Students were also asked to comment on the questionnaire why they felt their score had

improved or not improved. Students who felt they improved mentioned that they had the opportunity to practice in all four skill areas as they studied in their programs. They felt they were learning new vocabulary and that dealing with teachers gave them an opportunity to understand different accents.   Because of EMI, one student noted, "I think I can read faster, write more easily than before, and use academic phrases in my speaking."

Students saying their IELTS scores had not improved questioned the validity of the IELTS exam to test their English. They thought that the IELTS was something that needed to be studied for, possibly due to the extent of the exam preparation in the final term of the English foundation program. "I didn't improve because I stopped focusing on the IELTS in general. As soon as I finished general education, I forgot everything about IELTS." Another, a business student, said she had not made improvement in English because she did not have as much chance to use and practice English as she had in the foundation program and that once she entered her major program of study, there was a lack opportunities for speaking practice. Students also tended to question whether the exam is something that measures their English and to think that there is a difference between general English and the English that they are using in their major studies. One student said, "The IELTS exam is a test of our ability in English in general. In my opinion, my ability and improvement in English is more health and nutrition concept related. My English improved on my major much more than in general English." During interviews with faculty members regarding students' IELTS scores in their department, teachers also questioned whether IELTS is testing the same usage of English language that the students get practice with in their courses. In general, there does not seem to be awareness by either teachers or students that IELTS is a language proficiency test measuring ability in general and not a test of specific language items.

Above it was noted that 62.3% of teachers felt students had made improvement in language during the course of undergraduate study (Table 8), and according to the overall IELTS results as presented by the institution (Table 4), 62% of graduating seniors reached the band 6.0 overall on the IELTS, indicating improvement from the estimate of starting at a band 5.0. This fits with the 67% of the student participants who felt they had made improvement on IELTS (Table 12), but not the 80% of the student participants who felt their English ability had improved during the course of their four years of study (Table 10). This indicates that

improvement on IELTS test scores and improvement in English ability do not necessarily equate to the same thing for students.

The above descriptive statistics show that a majority of students feel that their ability in English is good to excellent, and they feel that their English has improved over the course of the four years of study especially in the area of listening. One or two students disagree that their English ability has improved, but not strongly. By looking at the information from faculty and students, some differences can be noted between the perceptions of faculty and students in the rating of ability and strength of various language skills. The following sections will examine the actual scores from entry and exit IELTS exams of the participants as means of measuring improvement in language ability and how these relate to the perceptions of ability and improvement discussed in the sections above.

5.5 Research Question 4: Difference in Proficiency at Exit and Entry as Measured by IELTS Scores

One way of investigating the effects of EMI on language proficiency is to look at language gain by comparing standardized test scores of the same individual over a period of time (Ross, 1998). Research question four asked about the differences in IELTS scores at entrance and exit and whether there was any significant change in the overall score in the individual skill areas after four years of EMI at the undergraduate level.

The amount of improvement made by the 59 participants in this study is reported below in terms of IELTS test band scores for each of the four skill areas and for the composite overall score. IELTS scores are reported on a scale with whole numbers, referred to as "bands," ranging from one to nine and are reported in increments of 0.5 (i.e. ½ bands). Zero is used to indicate that the test was not attempted. It should be noted, however, that in June 2007 the writing and speaking results were reported in whole numbers only, whereas after this date they were reported in ½ bands as well. This makes improvements of 0.5 in these areas a bit questionable because those falling between whole numbers during the administration in June 2007 would have a reported score that may actually have been 0.5 higher or lower had the exam been taken just one month later in July 2007 when IELTS changed the reporting process for the writing and speaking modules.

In looking at the effects of English-medium instruction from the point of view of score gain on a standardized test after four years of study, the following two questions were asked at the beginning of this research:

- Is there a significant change in the overall IELTS score used for admission to baccalaureate study as compared with the overall IELTS score prior to graduation?
- Are there differences in IELTS band scores for the four skill areas (listening, reading, writing, and speaking) from entry to exit testing?

These questions were investigated quantitatively in several ways. By comparing the two sets of tests scores with a paired samples t-test it can be seen whether there is significant improvement of the means in each skill area for the group, but variations in individual change are lost. In order to give better coverage of both individual and group change over the four years of study, results will be presented in the following ways

- a cross-tabulation table with numbers for IELTS entry and exit scores,
- tables of percentages for individual students whose IELTS scores increased, stayed the same, or decreased over the four year period,
- and paired samples t-test results from Test 1 (T1) and Test 2 (T2).

5.5.1 Cross-tabulation of Entry and Exit IELTS Test Scores

Cross tabulation was used as a means to show the amount of improvement made by the student participants in each of the skill areas and the overall score for the IELTS exam. It provides a means of comparing and analyzing the results of T1, entry level testing, with T2, exit level testing of students. The cross tabulation table below represents the results for the student participants on the IELTS exam for Test 1 and Test 2. On the far right column of the table the total number of participants receiving a particular score can be seen for Test 1 (Total T1), and under each type of test in a horizontal row the total number of participants receiving a particular score can be seen for Test 2 (Total T2). For example, in the "Overall" area of the cross tabulations table, it can be seen in the Total T1 column that 24 students had an overall score of 5, 30 students had an overall score of 5.5, and four students had a 6 on Test 1, whereas on Test 2, in the Total T2 row, one student had a 4.5 overall score, nine had a 5 score, 20 had a 5.5 score, 21 had a 6.0 score, and seven students had a 6.5 overall score.

Table 13: Cross Tabulations Table for IELTS Scores Test 1 and Test 2

Count – number of participants with each score									

		Overall Test 2								Total T1
	Band Score	4	4.5	5	5.5	6	6.5	7	8	
Overall Test 1	5	-	-	4	8	9	3	-	-	24
	5.5	-	1	5	12	10	2	-	-	30
	6	-	-	-	-	2	2	-	-	4
Total T2		-	1	9	20	21	7	-	-	58

		Listening Test 2								Total T1
	Band Score	4	4.5	5	5.5	6	6.5	7	8	
Listening Test 1	4	-	-	1	-	-	-	-	-	1
	4.5	-	1	-	1	2	-	-	-	4
	5	1	4	5	7	6	-	-	-	23
	5.5	-	-	8	7	7	4	-	-	26
	6	-	-	-	1	3	-	1	-	5
Total T2		1	5	14	16	18	4	1	-	59

		Reading Test 2								Total T1
	Band Score	4	4.5	5	5.5	6	6.5	7	8	
Reading Test 1	4	-	-	-	1	-	-	-	-	1
	4.5	-	3	2	-	2	-	-	-	7
	5	1	2	14	11	9	2	-	-	39
	5.5	-	1	1	2	5	3	-	-	12
Total T2		1	6	17	14	16	5	-	-	59

		Writing Test 2								Total T1
	Band Score	4	4.5	5	5.5	6	6.5	7	8	
Writing Test 1	4	-	-	1	-	-	-	-	-	1
	5	1	4	9	19	8	2	-	-	43
	5.5	-	-	-	1	-	-	-	-	1*
	6	-	-	2	6	1	4	1	-	14
Total T2		1	4	12	26	9	6	1	-	59

		Speaking Test 2								Total T1
	Band Score	4	4.5	5	5.5	6	6.5	7	8	
Speaking Test 1	5	-	-	2	6	12	6	2	1	29
	5.5	-	-	-	2	-	-	-	-	2*
	6	-	-	1	4	8	6	4	1	25
	7	-	-	-	-	-	1	-	2	3
Total T2			3	12	20	13	6	4		58

*Note: Two students sat the exam in July 2007 after the change from reporting only whole bands on the writing and speaking to reporting ½ bands as well.

The cross tabulation table provides a means of noting how many students started at each score level and where those same students were at exit. By reading

across a row of the table, the exit score can be seen as compared to the entry score. For example under the "Listening" scores area of the table, it can be seen that the highest score in Listening for T1 was a 6. In the Total T1 column, it can be seen that five students had a score of 6 on the listening section of the test at T1. By looking back across the row with the 5 students and at the band score header above each cell, it can be seen that at T2, one of these students scores decreased to 5.5, three of the students' scores remained at 6, and one student increased their listening score to a 7.

The overall band score is an average of the four skill area scores. As shown in the table above, overall scores for Test 1 ranged from 5.0 to 6.0 and in Test 2 from 4.5 to 6.5. The mode for the overall score for Test 1 was 5.5 and for Test 2 it was 6.0. That the mode for Test 1 was above the minimum university entry requirement of 5.0 is not surprising considering that entrance requirements at the time stated that students must have a 5.0 in each of the four skill areas or they could have one score of 4.5, if the overall score was a 5.5 or higher. This means that if a skill area was below a 5.0 other skill areas would need to be above a 5.0 to bring the overall total to 5.5. This is similar to results found by O'Loughlin and Arkoudis which showed that "many of the student participants exceeded the minimum entry scores" upon admission (2009, p. 13). There was missing data for one participant in the speaking area for the second exam, so her scores are not included in the cross-tabulation for the speaking test or the overall band scores.

5.5.2 Paired-samples T-test of IELTS Scores at Entry and Exit

"Paired-samples t-test (also referred to as repeated measures) is used when you have only one group of people and you collect data from them on two different occasions" (Pallant, 2001, p. 181). Paired-samples t-test in this research is used to compare the mean scores for the same group of student participants on the two occasions that they took the IELTS exam. The paired-samples t-test was chosen because it produces statistics that help to determine if mean scores for a group are significantly different at Time 1 and Time 2. It helps to answer the question of whether there is a statistically significant difference in the mean scores for the same group of participants from Time 1 and Time 2.

The outcome of a paired-samples t-test comparing the results of the participants' first and second IELTS exams is shown in Table 14. The mean, standard deviation, and standard error mean statistics are reported in the table for each of the

exam sections for both Test 1 (T1) and Test 2 (T2), along with the t, significance, and eta squared statistics for each of the paired-samples tests by skill area.

Table 14: Paired-samples Statistics

		M	n	SD	Std. Error Mean	t	Sig. (2-tailed)	Eta squared
Listening	L1	5.254	59	.4087	.0532	-3.339	.001	.1612
	L2	5.517	59	.6086	.0792			
Reading	R1	5.025	59	.3138	.0409	-5.556	.000	.3473
	R2	5.449	59	.6067	.0790			
Writing	W1	5.229	59	.4579	.0596	-3.558	.001	.1792
	W2	5.508	59	.5835	.0760			
Speaking	S1	5.534	58	.5913	.0776	-6.745	.000	.4439
	S2	6.164	58	.6310	.0829			
Overall	O1	5.328	58	.3042	.0399	-5.344	.000	.3338
	O2	5.707	58	.4779	.0627			

The paired-sample t-tests indicate a statistically significant improvement in IELTS scores from T1 to T2 for each of the skill areas (listening, reading, writing, and speaking), and the overall band score significantly increased from Time 1 (M= 5.328, SD = .3042) to Time 2 (M= 5.707, SD = .4779), t (57) = -5.344, p<.0005). The effect size statistic, eta squared, (.33) indicates a large effect according to Cohen's interpretation of effect size (1988 as cited in Cohen et al., 2007).

The table indicates that for this group of students on average the strongest skill at entry to the undergraduate program was speaking, followed by listening, writing, and then reading. This was the same at exit as well. This aligns with the institutional report of IELTS at exit showing the percentage of students below a band 6.0 in each skill area with the largest percent of students below for reading (65%), followed by writing (51%), listening (48%), and then speaking (14%). The spread of scores was slightly larger at exit than entry as indicated by the standard deviation statistics.

5.5.3 Score Gain on IELTS

Table 15 shows the differences in means from Test 1 to Test 2 in each of the skill areas and the overall IELTS test.

Table 15: Mean Difference Time 1 to Time 2 Test Scores

Skill Area	n	M	Std. Error	SD
Listening	59	.2627	.07867	.60427
Reading	59	.4237	.07627	.58585
Writing	59	.2797	.07859	.60366
Speaking	58	.6293	.09330	.71057
Overall	58	.3793	.07098	.54055

An increase in mean score was made in every skill area tested by IELTS. The most gain is in the area of speaking with more than ½ a band average score gain (.629). This is followed by a .424 gain in reading. The writing and listening areas had the least score gain with increases of .279 and .263 respectively. This is unlike previous research conducted in the ESL context which indicated more gain is made in receptive skills than in productive skills (O'Loughlin & Arkoudis, 2009). In their study of international students' IELTS score gains after a period of study in an Australian university, O'Loughlin and Arkoudis (2009) showed that improvement was made in all skill areas, but in their study the greatest improvement was made in reading (.532), followed by listening (.50), speaking, and finally writing (.206).

This difference may be an effect of adaptation of materials by instructors in this particular EFL context where all the students are non-native speakers of the instructional language. This is unlike the context of previous research (Humphreys & Mousavi, 2010; O'Loughlin & Arkoudis, 2009) in which the instructional language was the language of the surrounding culture and participants were international students outside of their own country who were studying amongst native English speakers.

These findings suggest that probably the skill used most during the four years of study is speaking while there may not be as much emphasis on listening and writing skills. This is confirmed in the interviews by teachers and students saying that they rely on discussions in class and handouts of PowerPoint presentations as a means of teaching and learning course content, and that often classes consist of discussion, presentations, and group projects. During interviews, students said that they did not take notes in classes though they may go back to the textbooks to review a point that they did not understand from the handouts they were given from a lecture. The idea of the textbook as reference (and not the main source of information) is reinforced by

teachers. As one teacher put it, "I say the textbook is there as a resource; if there's anything you don't understand in class you can get more information from the textbook, and if you still don't understand, come and talk to me, or even before the textbook, come and talk to me." So, even though a course may have textbooks associated with it in the syllabus, often the students are not expected to actually read the books.

As mentioned above (5.4.2), when asked about improvement in listening, reading, writing, and speaking, the majority of students felt they had improved in each of these areas. While students felt they had improved the most in reading, followed by listening, writing, and then speaking, in fact, the mean scores differences from Table 15 indicate that the greatest amount of positive change in the IELTS test scores from T1 to T2 was made in speaking and the least in listening. This seems to indicate a divergence between the perception of skill improvement and actual improvement in IELTS test scores. This difference could be due to the fact that students must use their speaking to communicate with teachers. In doing so, they receive instant feedback on their comprehensibility and thus may feel that their speaking is not improving if someone doesn't understand them, but in fact during the course of the interaction, they are receiving practice and may even be increasingly using new structures and vocabulary. In reading they are assigned texts to read and then given summaries. Thus, they may feel their comprehension level has increased based on the complexity of texts they are assigned, but in reality it isn't necessary for them to process the reading because the instructor explains and summarizes it for them.

5.5.4 Improvement in IELTS Scores and Institutional Expectations

Another way of exploring the improvement made by students is to consider the percentage of students who made score gains on the IELTS. Currently the institution is focusing on having students reach an IELTS band 6.0 by the time of graduation. The tables below show the percentage of the participants who were at the target scores for entry and exit at T1 and T2. For entry the target score is an IELTS 5.0 and for exit an IELTS 6.0.

Table 16: Percentage of Participants at Target Test 1 (Entry)

T1 Scores	Listening	Reading	Writing	Speaking	Overall
5 or above	92% (54)	86% (51)	98% (58)	100% (59)	100% (59)
6 or above	8% (5)	0	24% (14)	47% (27)	7% (4)

Table 17: Percentage of Participants at Target Test 2 (Exit)

T2 Scores	Listening	Reading	Writing	Speaking	Overall
5 or above	90% (53)	88% (52)	92% (54)	100% (58)	98% (57)
6 or above	39% (23)	36% (21)	27% (16)	74% (43)	48% (28)

In Tables 16 and 17, it appears as if little change has happened in the area of writing which also seems to be the case when looking at the mean for change for writing (.2797), but these statistics are for the group as a whole. Examining the percentage of individuals with change from T1 to T2 gives a broader picture of what has happened after four years. Table 18 shows the percentage of participants with a score change from T1 to T2. Improvement is equal to an increase of .5 band or above since IELTS is only reported in ½ or whole bands.

Table 18: Percentage of Participants with Score Change

T1 to T2 scores	Listening	Reading	Writing	Speaking	Overall
increase	49% (29)	59% (35)	59% (35)	69% (40)	59% (34)
same	27% (16)	32% (19)	19% (11)	21% (12)	31% (18)
decrease	24% (14)	8% (5)	22% (13)	10% (6)	10% (6)

Table 18 shows that more than 50% of the participants in this study improved in reading, writing, and speaking during their four years of undergraduate study. Listening had the least percentage of improvement with 49% increasing their scores from L1 to L2, while speaking had the most with 69% of participants making improvement.

When looking at exit scores for international students in Australian universities, Humphreys and Mousavi (2010) reported that 85% of undergraduates scored the same or higher at exit than was required for entry. They did not have the actual entry scores to compare with the exit scores, but instead reported this number based on the required entry score, whereas in this study participant scores are available for both entry and exit. According to the tables above 98% of participants in this study scored an overall band of 5.0 or higher at exit and most were scoring at least the entry requirement at exit for each of the skill areas (Table 17). The lowest percentage was in the reading area, but even here 88% scored at least a 5.0 or higher on the IELTS subtest for reading. In terms of improvement, when compared to

themselves and not just to the university required entry score, the majority of participants improved in every skill area except in listening where improvement was made by only 49% of participants. And while there was a decrease in scores for some of the participants from entry to exit, as seen in Table 18, in terms of overall score 90% of participants maintained their score or had a score increase. In terms of speaking and reading, at least 90% of participants maintained their entry score or increased it, while the percentage of participants maintaining or increasing their IELTS scores for writing and listening was 78% and 76% respectively.

5.5.5 Nature of Improvement

O'Loughlin and Arkoudis (2009) reported in their study of IELTS score gain that when looking at improvement of IELTS scores from Test 1 to Test 2, according to Principal Components Analysis (PCA), improvement in speaking did not seem to be related to the improvement in the other skill areas of listening, reading, and writing. While Principal Component Analysis is often used as a tool in the development of scales (to look for relationship between variables in order to group them into reduced categories), in this research it was used explore whether the skill area tests of the IELTS could be grouped together as an indicator of language ability. As speaking has been shown to be one of the strongest skills for participants in this study and the area with the most score gain, PCA was used to determine if as in the O'Loughlin and Arkoudis (2009) study, improvement of speaking is independent and unrelated to improvement of other skill areas. As part of the PCA, a correlation matrix was also generated to show the relationship between variables. Table 19 indicates there is a small to medium positive correlation between improvements in all four of the skill areas tested in the IELTS exam.

Table 19: Correlation of Improvement from Test 1 to Test 2

	Improvement L2 from L1	Improvement R2 from R1	Improvement W2 from W1	Improvement S2 from S1
Improvement L2 from L1	1.000	.447	.138	.233
Improvement R2 from R1	.447	1.000	.244	.191
Improvement W2 from W1	.138	.244	1.000	.228
Improvement S2 from S1	.233	.191	.228	1.000

The PCA had all variance loading on one component in both the rotated and unrotated version of the component matrix. Table 20 shows the unrotated version of the component matrix from the factor analysis indicating that improvement for all

four skill areas would group together and load on one principal component indicating that improvement in the areas of reading, listening, writing, and speaking have a relationship with each other.

Table 20: Component Matrix

	Component
Improvement R2 from R1	.758
Improvement L2 from L1	.730
Improvement S2 from S1	.584
Improvement W2 from W1	.554

Extraction Method: Principal Component Analysis.

Unlike the study by O'Loughlin and Arkoudis (2009) there is a relationship between all four skill areas' improvement making it feasible to look at the overall score as an indicator of language improvement in this particular study. The difference in correlations between speaking and the other skill areas in my study and the O'Loughlin and Arkoudis (2009) study may indicate how context can affect language development. In my sample population, there is a correlation between the average improvement in all of the skill areas, whereas O'Loughlin and Arkoudis found in their study of international students in an Australian university that there was no correlation between speaking and the other skill areas. For O'Loughlin and Arkoudis, the speaking skill improvement may have been related to interaction between the participant and those outside of the classroom perhaps due to a homestay or time spent with native-English-speaking friends rather than EMI.

In the case of the Emirates, however, exposure to English with this homogenous group is similar for all of their experiences. This is especially true with the sample population, Emirati women. Most of the female students are picked up and dropped off at the university. They are not allowed to leave the campus during the day without permission from a male family member, and their interaction outside of the home is chaperoned. Unlike males, they have even less interaction outside of the classroom with native English speakers, though satellite television and the Internet is widely available inside the home. Thus, their speaking ability along with listening, reading, and writing ability is primarily challenged in the academic environment (and not outside of it). Exposure to English in the university environment is a response theme noted on the questionnaire and during interviews as the primary reason students feel they have made improvement in English during the past four years. Two student

participants made unsolicited comments that the university setting was the first time that it was really necessary for them to communicate with foreigners in English.

5.5.6 Summary of Quantitative Test Score Analysis

Results from the paired-samples t-tests show there is a statistically significant difference between the IELTS scores of participants when they entered the undergraduate study program and four years later when they exited the program. There are also significant differences between entry and exit for each of the four skill areas and we can see that the biggest differences occurred in the skill areas of speaking and reading. In answer to the question, "Do IELTS scores improve after four years of EMI instruction?" according to paired samples t-tests, scores in every area improved from entry to exit. There are significant differences in the IELTS scores between T1 and T2 for the listening, reading, writing, and speaking subtests. At an individual level 59% or more of the participants increased their scores in reading, writing, and speaking, and 98% of participants met entry level requirements with an overall band score of 5.0 or higher at exit.

5.6 Research Question 5: Differences in Perceptions

Research question five asked how IELTS scores correspond with the institution, faculty, and student perceptions of English language proficiency and improvement. In this section I will explore some of the differences in perception between students and faculty regarding language ability as indicated through comparison of data collected from the online survey and during semi-structured interviews.

5.6.1 Differences in Perceptions of English Language Ability

The online questionnaire asked students and faculty to rate language ability overall and in each of the skill areas tested by IELTS. Table 21 shows the mean, mode, standard deviation, range of responses, and the differences in the means of students and faculty regarding language ability on a scale of 1 (poor) to 5 (excellent).

Table 21: Comparison of Student and Faculty Perception of Language Ability*
  Key: S=Students; F= Faculty   Student Participants = 35; Faculty
  Participants = 53

Ability	M		Mode		SD		Range		Difference in Means
	S	F	S	F	S	F	S	F	
English	3.91	2.91	4	3	0.702	.687	3-5	1-4	1.00
Speaking	3.94	3.55	4	4	0.838	.748	2-5	1-5	0.39
Listening	3.91	3.15	4	3	0.702	.690	2-5	2-4	0.76
Writing	3.77	2.17	4	2	0.808	.802	2-5	1-4	1.60
Reading	3.74	2.60	3	3	0.886	.840	2-5	1-4	1.14

*The question stated, "On a scale of 1 (poor) to 5 (excellent), please rate your (students') English ability in each area"

If the language skills were ordered according to the mean from highest to lowest, for students they would be shown as speaking, listening, writing, and finally reading. For the faculty members the same order would be true except that reading would be before writing. The students' perceptions of their abilities match the ordering of the gaps shown in the institutional representation of IELTS scores (Table 4) where it was shown that 14% of students had not reached a 6.0 band or higher on speaking, 48% of students had not reached this level in listening, 51% of students hadn't reached the 6.0 band level in writing, and 65% of students were below a 6.0 band in reading.   This could be because students are better able to estimate the difficulty of each of the skill areas in relation to each other for themselves, or they have the knowledge of what their IELTS scores were for testing purposes at various points in their academic careers. Another explanation in the differences between students and teachers perceptions could be that teachers do not test the reading ability of their students and often do not expect students to read course materials, but instead explain reading materials in class and summarize important points on PowerPoint slides, so teachers do not have a way of knowing how well their students are able to read.

Table 21 also shows the mode for each of the items and the range of scores selected by the participants. Student responses fell in the range of two to five, whereas faculty member responses were usually between one and four. Students never choose *poor* (1) in relation to their language ability, whereas in only one area did teachers use the *excellent* (5) rating (speaking). The standard deviation of the means is generally similar for students and faculty, but the overall mean is higher for each of the items for student participants. By looking at the average means in the table we can see that

students estimate the level of their ability in English higher in all areas than teachers rate it, but in order to test whether this is a significant difference, an independent-samples t-test was conducted. An independent-samples t-test is a way to compare the mean score for two different groups of participants and determine whether there is a significant difference between the groups (Pallant, 2001). According to the independent-samples t-test conducted to look at teacher and student responses, there is a significant difference in scores for students and faculty regarding their perceptions related to English language ability in every skill area. The results are shown in Table 22.

Table 22: Results of Independent Samples T-test of Difference between Student and Faculty Rating of Language Ability

	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Eta squared
English Ability	0.697	6.685	86	0	1.009	0.151	0.34
Writing Ability	0.727	9.142	86	0	1.602	0.175	0.49
Reading Ability	0.691	6.093	86	0	1.139	0.187	0.30
Listening Ability	0.486	5.043	86	0	0.763	0.151	0.23
Speaking Ability	0.808	2.314	86	0.023	0.396	0.171	0.06

The magnitude of the difference was looked at using Eta squared. Effect size was large for the overall ability and the skill areas of listening, reading, and writing, and the effect size was moderate for speaking ability per guidelines proposed by Cohen (1988, as cited in Cohen et al., 2007) for interpretation. The smaller effect size of the difference between teacher and student perceptions of speaking ability is probably due to the fact that while teachers view students' speaking ability as notably different and much better than students' other language abilities, students do not see this particular skill as markedly different from their other language skills, and in fact cite communication in English as being a problem for them just as often as other skill areas when utilizing English. The largest magnitude of difference in mean scores was for writing (Eta squared=.49) with the difference in means at 1.602 indicating a large perceptual gap between students and teachers in regard to students' writing ability. Teachers indicated during interviews that they did not give marks based on language accuracy (spelling and grammar), but on whether students seemed to have mastered the content, while students noted that in general their teachers did not care about their spelling and grammar. While teachers might find students' grammar and spelling in

writing unacceptable as indicated by faculty participants in this study, by not commenting on this when marking papers, it may send a message to students that their writing is acceptable.

5.6.2 Problems Faced Due to English Ability

Not only do teachers' and students' views about language ability differ, but also data from the online questionnaires show that teachers and students have different perceptions as to whether students face problems in their courses as a result of their English language ability, as indicated in Table 23.

Table 23: Do Students Face Problems in Courses Due to English Language Ability?
Survey Questions:
For Students: Do you face any problems in your courses due to your English-language ability?
For Faculty: Do you think that your students face any problems in your courses due to their English-language ability?

Response	Students		Faculty	
Yes	42.9%	(15)	84.9%	(45)
No	57.1%	(20)	15.1%	(8)
Total (Respondents)		(35)		(53)

While only 42.9% of student participants thought they faced problems with courses due to their English ability, 85% of faculty participants said that they felt their students faced problems with their coursework due to their English language abilities. This notable difference in the perceptions of faculty and students as to whether students face problems in their courses due to their English language ability could be due to several factors including perceptions related to adaptations to materials, grading, or even exposure or non-exposure to English in a wider context than just the UAE.

When asked about problems faced in their courses on the questionnaire and during interviews, students and teachers commented on some of the same areas which included schooling prior to university entrance, inability to communicate, and reliance on memorization. Comments students made on the questionnaire included that they felt they had a problem understanding materials due to vocabulary, and that they had problems with grammar both when speaking and writing. Students who felt they faced problems in their courses due to their speaking ability said they had difficulty expressing their point of view and finding the right words. Shyness and dealing with

teachers in English was also one of the reasons given for having problems in English. As one student said, "Sometimes I don't understand a word and I'm too shy to ask, but it's not a big problem because I can deal with it by asking my classmates."

During an interview, one of the business college teachers also noted that his students are shy and unable to express themselves. He commented, "A good amount of the students, they're so shy that they're not even willing to raise their hand and ask a question." Students often attribute their communication problems as stemming from having studied in the public school system. Fareeda, a communication and media studies student noted that she had problems speaking, "Especially because I studied in public school where everything was in Arabic, nothing was in English. Just one class [was] in English, mostly [we were taught] in Arabic," while Hanan, a business student said, "Maybe because I'm from public school…my friends like some from private they speak maybe English more than me." One student interviewed even said that she was shy and felt students attending public schools were intimidated by the students who went to private schools. Private school students have more experience dealing with foreign teachers and are perceived to have better language skills by both teachers and students. Salma, a communication major noted,

> You can read by yourself and never mind about the mistakes, but speaking especially I notice that if we have girls from private schools [in our classroom] and we know that they are speaking English well, but we can't [then] we can't interact in this class when they are with us. I asked many students if they suffer from this same point, and they said, "Yes, we feel uncomfortable to talk in English while they are in our class." You know [this is] because they are laughing at us, and so we try to be silent.

Faculty members felt that students faced problems with reading, writing, and vocabulary, and that students had an "inability to clearly understand instructions both verbal and written." The issue of understanding could be related to problems with listening, reading, or vocabulary knowledge or even to academic skills. Mentioned along with understanding are motivation and critical thinking skills as problems. An art and design teacher comments, "They have difficulties writing and reading high level texts. The most significant result of this is decreased motivation to do library based research." Others note a "lack of motivation to excel" and claim "their ability and inclination to read assignments is poor." A communication professor noted that

reading in general isn't just a problem for the students at this university, but one for the region as the "Arab Human Development Board has identified reading as a major problem across the Arab world." This lack of reading skills and the problems with understanding vocabulary leads to an inability to comprehend materials. As noted by one teacher, "Oftentimes a student sort of misses the forest for the trees. They get caught up in each specific word (or sentence) and miss the overall theme of the section or paragraph." Along with the areas of reading and writing, teachers also mention that note taking skills are weak, and that students lack both vocabulary knowledge and critical thinking skills.

In order to cope with materials, a business teacher noted that "some students simply rely upon memorization as opposed to truly understanding the concepts and being able to think issues through." Part of the problem may not be related to the linguistic ability of students, but instead to a lack of honed academic study skills and strategies. The public education that these students received prior to their entry into higher education relied mostly on memorization and rote learning. Memorization seems to play an important role in learning for students and comments seem to indicate that it may even be reinforced in the way they are being taught and assessed at the university level. As Fareeda, a communication student said, "In my major we don't have any exams. There are just a little and for those you have like study guides and you just memorize it … but that's it. We all have projects, so actually we don't study." Laila, a student in the humanities and social sciences department, relies on memorization to the point of even memorizing the teacher's body language and gestures. She comments, "I like to remember [memorize] too much…. So, I memorized everything he [the teacher] was doing with his gestures during the lesson, and put them in my notes saying when he did this or that he was talking about this or that."

Even though students and teachers differ when asked whether English language ability causes students difficulty, both mention similar issues when discussing what problems exist. Even with the majority (57.1%) of students saying that they do not face any problems in their courses due to their English-language ability, students do acknowledge that language may be an issue in relation to how much they are able to achieve academically. As Hanan, a business student wrote, "I am doing academically well, but it is not the level I wished to achieve. The reason is

my English. For sure, my English has been improved since early I attended the university, but it isn't like a native speaker."

5.7 Academic Task Ability in English

Much of the literature related to level of proficiency in English at entry into higher education has focused on language ability to predict academic success (Bayliss & Ingram, 2006; Feast, 2002; Hirsh, 2007; Seelen, 2002; Sert, 2006). This often brings up the issue of whether it is students' linguistic abilities or academic abilities that leads to success in higher education for those studying in a second language. The ability to perform academic tasks in a second language will be related to students' second language proficiency. If a student doesn't have a certain level of proficiency, they will be unable to ask questions in the second language or read assigned materials. In order to get a better idea about how teachers and students perceive the ability to performing academic tasks in English, the questionnaire asked them to rate performance on academic tasks. Table 24 shows the items asked related to academic task ability on the questionnaire and the mean and mode for each of them for both students and faculty.

Table 24: Academic Task Ability*

Task	Students n=35		Faculty n=53	
	Mean	Mode	Mean	Mode
Reading course materials	4.06	5	2.42	3
Taking notes from course textbooks	4.20	4	2.42	2
Doing course assignments	4.46	4	3.23	3
Listening to and understanding lectures in class	4.40	4	3.28	3
Taking notes during lectures	4.09	5	2.40	3
Dealing with instructions	4.37	5	2.88	3
Seeking information orally	4.17	4	3.55	4
Giving information orally	4.14	4	3.26	3
Making formal oral presentations	4.26	5	3.42	4
Asking questions during class	4.03	5	3.38	3
Writing academic papers	4.09	4	2.06	2

* The question asked, "On a scale of 1 (poor) to 5 (excellent), how would you rate your (students') ability to perform the following tasks?"

The table indicates that there is a difference between the perceptions of faculty and students regarding students' ability to perform academic tasks in English. Students generally felt they performed well on these tasks. The mode for each item

was either a four or five with the lowest mean average related to *asking questions in class* with a 4.03 mean. Conversely, the modes for teachers on the academic task items were generally a three, except for those items related to speaking, such as *seeking oral information* and *making formal presentations*, which had a mode of four, and the writing tasks, such as *taking notes from course books* and *writing academic papers* which each had modes of two. The teachers' lowest mean score was for students' ability to write academic papers (2.06).

One item to note is *asking questions in class*. This item had the lowest mean score (4.03) of all the academic task questions for students, yet had the highest mean (3.55) for the faculty participants. Even though it had a mode of five (n = 14), three students rated themselves as a 2 and seven students thought they were a 3, putting it at the bottom on the list for students if items were ordered from highest to lowest according to average mean. The table shows that faculty rated *seeking oral information* and *asking questions in class* as the highest of the various abilities of students with mean scores of 3.55 and 3.38 respectively. This seems to indicate that students are less comfortable with their speaking skills in relation to other skills than probably teachers perceive.

While students gave themselves ratings on average of more than 4 in every academic task category, the highest mean score for the teachers' group was a 3.55. The students' highest average means were on *doing course assignments* (4.46) and *listening to and understanding lectures in class* (4.40). In fact most students (97.1%) believed that they were good to excellent regarding *doing class assignments*, whereas only 37.8 % of faculty indicated this to be the case by selecting a 4 or 5 on the scale. I believe that this difference in perception is due to the fact that the students are passing the courses, and so feel they are adequately doing the course assignments, while teachers during interviews commented on the need to adapt materials and provide an explanation and summary of readings as the students did not do the assigned reading. Another comment made by teachers was the need to schedule time during the course for students to work on assignments as they did not do homework. This adaptation by teachers to giving time to work on assignments in class may be viewed differently by student and teachers.

To investigate whether these differences between the teacher and student responses were significant, an independent-samples t-test was conducted to compare how students perceived their ability to perform various academic tasks with how

faculty perceived them. Table 25 shows that there was a significant difference in scores which was large in magnitude as indicated by the eta-squared statistic (the table also shows the mean difference for each item along with other relevant statistical information).

Table 25: Independent Samples Test: Comparison of Student and Faculty Perception

On a scale of 1 (poor) to 5 (excellent), how would you rate your (students') ability to perform the following tasks?"	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Eta Sq
Reading course materials	.888	-8.312	86	.000	-1.642	.198	0.45
Taking notes from course textbooks	.106	-9.773	86	.000	-1.785	.183	0.53
Doing course assignments	.061	-7.413	86	.000	-1.231	.166	0.39
Listening to and under-standing lectures in class	.414	-7.240	86	.000	-1.117	.154	0.38
Taking notes during lectures	.800	-8.633	86	.000	-1.689	.196	0.46
Dealing with instructions	.906	-8.129	85	.000	-1.487	.183	0.44
Seeking information orally	.809	-3.614	86	.001	-.624	.173	0.13
Giving information orally	.874	-5.159	86	.000	-.879	.170	0.24
Making formal oral presentations	.560	-4.726	85	.000	-.834	.176	0.21
Asking questions during class	.343	-3.428	86	.001	-.651	.190	0.12
Writing academic papers	.098	-12.271	86	.000	-2.029	.165	0.64

Based on the statistics generated by the independent samples t-test (Table 25), it can be seen there is a significant difference in the perception of teachers and students regarding the students' ability to perform academic tasks. There are large differences in the mean and effect size in *writing academic papers, taking notes from course textbooks*, *taking notes during lectures*, and *reading course materials* with more than a 1.5 difference in average scale ratings for these items. It is worth noting that the three items with the most difference in means all deal with written tasks and this is the language skill that teachers report as being the weakest for their students.

5.8 Graduating Senior Survey

Due to the small size of my student sample for the online questionnaire (n=35), I also wanted to see how the participants' thoughts on their ability compared with those of the graduating class as a whole (N=355). In order to do this I asked for the raw data to analyze from a survey given to graduating seniors in May 2011. During their final semester of study, students are asked to complete a questionnaire, the Graduating Senior Survey (GSS), which asks them questions related to their experience studying at the university. Along with questions about how they would rate their educational experience and the university sponsored social events, there are also questions related to language and academic tasks. Table 26 shows the responses for the following question on the survey which relates to language ability:

To what extent has your university experience contributed to your knowledge, skills and personal development in the following areas:

- Writing clearly and effectively in English

- Speaking clearly and effectively in English

- Reading English

Table 26: University Education's Contribution to English Language Skills

Key: 1 = very little; 2=some; 3=quite a bit; 4=very much   (N=355)

To what extent has your university experience contributed to your knowledge, skills and personal development in the following areas:	no response	1 very little	2	3	4 very much
Writing clearly and effectively in English	(3)	1.7% (6)	4.8% (17)	28.5% (101)	64.2% (228)
Speaking clearly and effectively in English	(1)	2% (7)	5.9% (21)	33% (117)	58.9% (209)
Reading English		3.4% (12)	5.1% (18)	22.5% (80)	69% (245)

The survey uses a 4-point scale with responses of *very little* (1), *some* (2), *quite a bit* (3), and *very much* (4). In the survey for the graduating students from the 2010-2011 academic year, 92.7% of the respondents said that the university experience had contributed *quite a bit* or *very much* to their knowledge and skills in personal development in writing clearly and effectively in English; 91.9% felt the same for speaking clearly and effectively in English; and 91.5% felt this way for

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reading in English. The institutional research department at the university reports the difference in mean scores between the various academic departments. These can be seen in the charts of Figures 7, 8, and 9 which are distributed internally to the university community.

Department	Score
Information Technology	3.68
Education	3.64
Communication	3.59
Business	3.59
All Students	3.57
Art & Design	3.56
Info. Systems & Tech. Mgt.	3.47
International Studies	3.40
Health Sciences	3.17
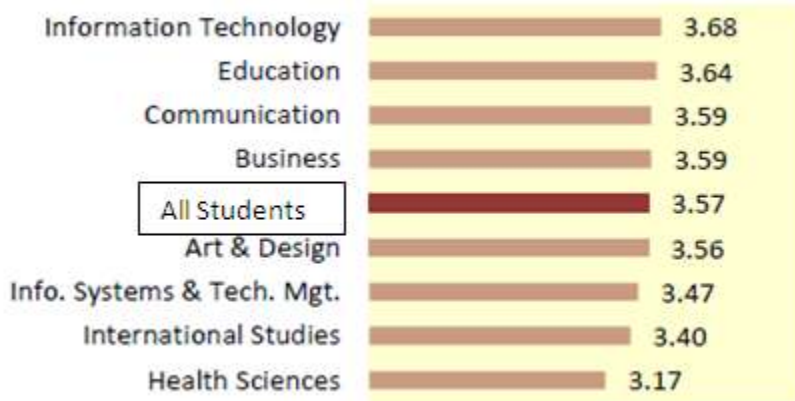
Figure 7: Contribution to writing clearly and effectively in English
(Office of Institutional Research, 2011)

Department	Score
Art & Design	3.67
Communication	3.61
Business	3.56
All Students	3.49
Education	3.43
Information Technology	3.29
Info. Systems & Tech. Mgt.	3.24
International Studies	3.20
Health Sciences	3.00
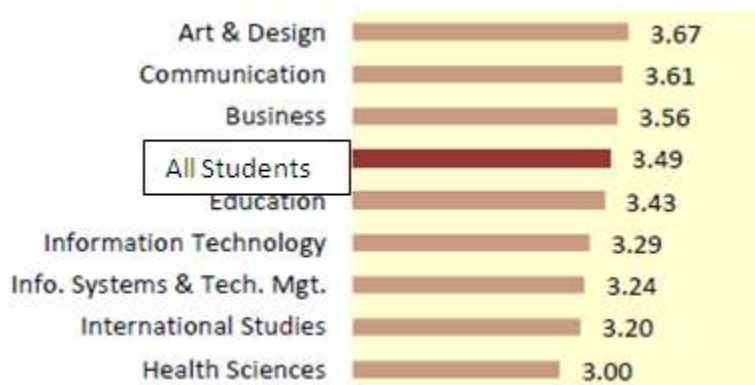
Figure 8: Contribution to speaking clearly and effectively in English
(Office of Institutional Research, 2011)

Department	Score
Information Technology	3.79
Education	3.79
Communication	3.61
Business	3.58
All Students	3.57
Art & Design	3.56
Info. Systems & Tech. Mgt.	3.53
Health Sciences	3.25
International Studies	3.20
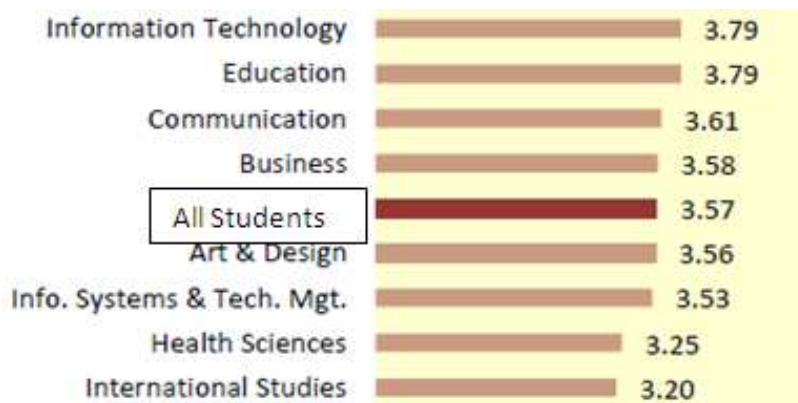
Figure 9: Contribution to reading English
(Office of Institutional Research, 2011)

Looking at the information from the GSS for all graduating students it can be seen that for each skill area reported in Table 26 more than 90% of students feel, as did the students participating in my study, that their university experience has contributed to their English language ability. While there are slight differences between each of the individual departments listed in the ratings, the means still indicate students choosing options from the positive categories of *quite a bit* (3) and *very much* (4). It is interesting to note the placement of the College of Education students in the figures as they were shown as having 75% of their final semester students below the band 6.0 mark in the institutional reporting of IELTS scores (Table 5), and yet the GSS indicates that education students feel that their EMI university education has contributed to their writing, reading, and speaking skills equal to students from other departments.

5.9 Summary of Results

The results of this study indicate that there has been statistically significant improvement in the average IELTS scores of student participants from the time of entry to almost four years later. Students are generally positive about their ability levels and the amount of improvement that they have made in the course of four years of study and credit this largely to EMI. Teachers, on the other hand, are not as positive about the students' ability in English and think that although there has to have been improvement due to the exposure to English, the amount of improvement and English language ability of students is not enough. This thinking corresponds with the institutional perspective that the graduating students' English language ability is insufficient because 80% of students have not reached the band 6.0 level on the IELTS test. When investigating perceptions of English ability, one of the issues that arises is that the teachers and the institution are not taking into account the individual starting point for the students, but just looking at the end point scores.

Another possible reason for perceptual differences may be that there is a gap in how teachers present content and assess work in comparison to what teachers really expect in terms of English ability. The online survey asked about the adaptation of materials due to language ability of the students. Teachers tend to adapt materials and assessments to allow their students to be successful. When it came to the delivery of materials, content, and assessments, 90.6% (48) of teachers responded that they

adapted materials because English was a second language for students. This adaption of materials may be giving students a false sense of their language abilities, while the fact that they feel they have to adapt materials leads teachers to feel the students' ability is weak and does not meet the expectations of undergraduate students studying in an EMI environment. As one faculty member wrote in the comment area of the survey, "Degree courses are hard enough in our first language; to add the 'filter' of a second language is inevitably going to make the process of learning and writing assignments harder. It's the main reason why I adjust all final grades to reflect this reality (i.e., this is much more generous than would otherwise be the case)." This adjustment of grades may be one of the reasons there seems to be a discrepancy in how students and faculty perceive the language ability of the students. With more than half of the student participants saying that they do not face problems in their classes due to English and more than 80% of teachers saying they do, one must wonder about the causes of such a disconnect. During interviews, students often told me that teachers understood the students and that it was not the actual language that was important but the content. Some even mentioned that teachers do not care about students' language abilities (this was said in a positive manner) and the teachers were thought to be understanding. As one teacher put it, the students do not face problems with their English in courses because "I adjust to the students as a result of my experience dealing with EFL/ESL students." In some cases it may be this adjustment that allows a student to understand the content which ends up limiting the amount of language development actually taking place. If students are not expected to read materials, take notes, write papers, and produce accurate language, they most likely will not take the time to do so.

In this chapter I have explored the perceptions of the institution, faculty and students regarding English language ability, along with score change in IELTS scores. In the final chapter, I will discuss the implications, make recommendations for program development and further study, and briefly discuss my thesis journey.

CHAPTER 6 – Conclusion

This chapter will summarize briefly the research findings and implications of the study. It will make recommendations for future research and for improving learning outcomes when using EMI in tertiary institutions in EFL contexts where the goal is both the learning of content and language development. It will also briefly look at my thesis journey, and what I have learned as an educator and researcher within the field of TESOL during the course of this research.

6.1 Summary of Main Findings

The overarching purpose of this research was to empirically investigate the assumption that language proficiency increases when content delivery takes place in English. It sought to discover what happens to students' English language skills while studying in English-medium classes at one university in the UAE, and to look at how this compared with what instructors and students believe happens to proficiency during the four years.

This research indicates a statistically significant increase in all English skill areas on the IELTS test for the participants after four years of English-medium instruction at the tertiary level. While improvement was made in each of the skill areas, a paired-samples t-test indicated the most improvement was made in the area of speaking. Results from a questionnaire and interviews with students and teachers indicate that there are differences in perception between students and faculty members regarding language ability and problems associated with the use of English for instruction. Students generally do not feel that studying in English causes them problems and rate their ability in listening, reading, writing, and speaking in English as good to excellent. On the other hand, teachers do not feel students' language ability meets expectations for students studying in an English-medium environment and think that their students' weakest skills are in writing and listening. Both students and teachers believe improvement in English language skills occurs over the course of four years of EMI, generally citing exposure to the language as the reason. By and large there is a strong feeling among students and teachers that EMI at the university level in the UAE is necessary for students to be able to compete in a global world.

6.2 Implications

There was a notable difference in the way that students and teachers rated language ability in each skill area and their responses to the question about students facing problems due to their English ability. While the main purpose of this research was not to look at the causes of differences in perception between faculty and students, the results of this study indicate that some speculation as to the cause for these differences is appropriate, since it may influence how teachers present materials and the level of motivation students have for improving. This in turn can affect how much language learning is taking place during the course of study.

Reasons for the differences in perception may be related to grade inflation and the system of student evaluation at the end of the course. Teachers are evaluated by students at the end of each course and the evaluation results become part of the teachers' portfolios for the renewal of their contracts. This is important because in the UAE, there is no tenure system for faculty members, and thus everyone is on a temporary contract in the sense that if students are not happy with teachers, they could lose their jobs based on poor student evaluations. Teachers may simplify course material, adopt encouraging attitudes toward minimal progress, or decrease the demands of assessments in order for students to feel they are doing well in the course, thus increasing the chances that student evaluations will be positive.

Difference in perception could also be related to the ability (or inability) to think of English in a larger context. The teachers have been exposed to English speakers in other contexts, whereas most of the students' experience is limited to other non-native speakers in their classroom environment. There is possibly a difference in the perception of what constitutes good English language skills, and the grades students receive in courses might have an influence on the perception of their own abilities. That is to say, students may assume that if they are passing, their English must be good, whereas, teachers may actually have lowered their standards for grading and adjusted content presentation according to what they feel students are able to accomplish. Students, on the other hand, perceive that the work they do is equal to the mark they receive. While investigating language learning ability it became apparent that teachers felt a need to adjust content delivery because of what they believed students were capable of and a culture of learning that did not include studying outside of the classroom. Teachers felt they had to compromise standards

and adjust their normal practices in order to allow students with poor language ability to be able to pass courses. I believe this illustrates a self-perpetuating cycle of behaviors within this academic context that affects language learning and development.

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┌─────────────────────────────┐                    ┌─────────────────────────────┐
│ There is not a culture of   │ ←───────────────   │ Teachers adjust and do not  │
│ students studying outside   │                    │ assign academic work to be  │
│ of the school. Students do  │                    │ done outside of class time. │
│ not complete homework or    │                    └─────────────────────────────┘
│ reading outside of class    │                              ↓   ↑
│ time.                       │                    ┌─────────────────────────────┐
└─────────────────────────────┘                    │ Students develop expectation│
┌─────────────────────────────┐                    │ about how and when learning │
│ Teachers produce more       │                    │ takes place.                │
│ materials in order to       │                    └─────────────────────────────┘
│ explain content and support │
│ the limited amount of time  │
│ students spend interacting  │                    ┌─────────────────────────────┐
│ with academic materials.    │                    │ Teachers feel they are doing│
└─────────────────────────────┘                    │ enough to support students, │
┌─────────────────────────────┐                    │ and that they only have time│
│ Students become more passive│                    │ to deliver the content and  │
│ as learners in response and │                    │ no time to focus language   │
│ take less responsibility for│                    │ development.                │
│ own learning.               │                    └─────────────────────────────┘
└─────────────────────────────┘
┌─────────────────────────────┐
│ Students think that their   │
│ English languages skills are│
│ acceptable as there is no   │
│ focus on them and they are  │
│ able to cope with materials │
│ as presented in the adjusted│
│ format.                     │
└─────────────────────────────┘
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Figure 10: Self-perpetuating academic culture that does not promote learning

Figure 10 shows a self-perpetuating academic culture that does not promote language development and learning. In this cycle, the students do not complete academic work outside of the classroom, so the teachers adjust to this and do not assign outside work including reading assignments, research, or writing. Students develop expectations about how and when learning takes place. This means teachers have to produce more materials to explain and support learning of the course content. Teachers work harder and begin to feel there really is no time for anything other than trying to get content across. Students become more passive in response to expectations. As teachers have less time, they will focus on getting content across

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rather than on the language usage of students, thus increasing a perception that students' language ability is adequate.

In this self-perpetuating culture, there is little chance for students to become active participants in their learning. Due to a culture that does not support studying outside of the classroom and adjustment to this by teachers, students are not offered a learning opportunity. Leo van Lier (1996) suggests real learning or integration of new materials happens between lessons, on the participants own time. Thus, in order for students to participate in their learning, they need to be able to interact and engage with the materials. In the case of language development this would mean having the opportunity to use language and grapple with the meaning of texts, but as teachers adapt to what seems to be a culture in which learning only takes place in the classroom and they adapt materials to get content across or assessments to fit skills that students are better at, students are not afforded the opportunity to take control of their own learning and thus learning seems to become more the responsibility of the teacher than the student. If as van Lier (2008) notes, "learning depends on the activity and initiative of the learner," then this lack of interaction and engagement with the materials presented may be leading to students becoming passive recipients of the language input they receive. It seems that in this particular situation agency and learning as participation are diminished in terms of the language learning that could be taking place during content instruction. This cycle needs to be broken in order for the students to become agents for their own learning which includes a sense of responsibility for their own actions and how they affect their learning.

Another explanation for differences in perceptions of ability could be related to the particular students that participated in this study. As final semester students, these participants were getting ready to graduate and maybe this in itself signifies to them that they do not have problems in English, whereas the faculty may be looking at the overall picture of students, including those who are not going to successfully graduate or those that may have to repeat courses. The participants in this study are a group of students who will complete their undergraduate studies in four years, and according to figures from the university, only about 41% of students complete the undergraduate program within this time. However, faculty members were not asked specifically about students graduating, but about their students in general. In order to get a more comprehensive picture, future research should include participation by all students in the third and fourth year of the program, and then a comparison could be

made which would include perceptions of students at different stages of their studies, not just of those who are nearing a successful completion of the program.

Prior knowledge of the results of the graduating students' IELTS test scores may also have affected the perceptions of teachers. During the course of the year that this study took place, there was a focus on assessing learning outcomes at the university. As results from various IELTS exams came in, these were presented to faculty members at meetings. The presentation of results at these meetings revolved largely around the issue of why graduating students were not meeting the expectation of a 6.0 on the IELTS after four years of academic study in English. If faculty participants had attended meetings related to the IELTS testing results of their students, this may have influenced their thinking about their students' ability in English. Students, on the other hand, may have received their IELTS scores before taking part in the online survey or being interviewed, but they received no feedback on the score and were not aware that the university had an expectation that students should graduate with a 6.0 or higher. Discussion related to scores and expectations for improvement has thus far been limited to the university administrators presenting results to faculty members.

6.3 Recommendations

During interviews with students and teachers, comments regarding responsibility and expectations for language learning lead me to consider ways of improving current practice by having clearer language goals, changing attitudes toward responsibility of language learning, increasing support for both students and teachers, and improving the marketing and tracking of support services that are offered. The following sections will highlight comments from participants and focus largely on recommendations for the development of programs and services that would provide a more integrated content and language learning experience for students.

6.3.1 Clear Language Goals

As Wilkinson (2004) points out, merely offering programs in a foreign language without content related language targets puts the program at risk. In the current research teachers often noted the need to adjust materials, decrease the amount of content covered, and change their expectations in relation to grading work. While this is one way of coping with students' inability to meet language expectations, it may not be in the best interest of maintaining program standards. Part of the problem

in deciding how to deliver and assess content learning in regards to language comes from a lack of clear guidelines on what is expected in terms of language development. If a university continually emphasizes language admission requirements, but fails after admission to provide ongoing support to language learners, it sends the message that the entry language level is enough for a student to be successful in their studies. Thus, if a student is not successful, it is often considered to be the fault of the teacher in the delivery of content, or the students' fault for not applying themselves to their studies. In order to resolve this problem, the teacher begins to find ways to help students cope with the materials, which may involve giving them less challenging reading assignments or having them do presentations to demonstrate what they have learned as opposed to writing about it. In regard to not demanding too much reading materials for classes, one teacher responded, "Maybe because I'm not their English teacher, I'm concerned with getting important content over, and not necessarily in teaching English. So for me I have to get my content over, and if they're struggling in the reading and then they're not understanding the concepts, I need to massage that reading to get that content to them." Other teachers have noted that the students have textbooks assigned for the course, but are not required to read anything from them. They can be used as reference in case the student did not understand something presented in class. This may allow students the opportunity to engage more fully with the content, but offer them less chance to interact with the language, and they may not be pushed to make improvement in certain skill areas.

6.3.2 Changing Attitudes

The attitude of both teachers and students seems to be that English is to be learned before entering the baccalaureate program and that once students enter into their major program of study, it is too late to expect much improvement in English language ability. If a student wants or needs to work on their language, they must do it on their own.

Some teachers indicated that when students had language related writing problems, they did not feel a responsibility to help, but sent them to have the problem "fixed" at the writing center.   Teachers say that they do not feel adequately trained to deal with students' writing.   Commenting on a writing assignment one teacher gave her students, she said, "[Their writing was] so horrible. I can tell you, I didn't understand what they were writing about in some cases . . . sent them to the writing

center." Another teacher notes, "I tell the students …find someone in the writing center who will diagnose your problems so that you can get rid of [them]." The view presented here is that deficiencies in language development can be fixed with a prescription like an illness, instead of approaching the problem with an awareness of how language development takes place and the need for continual practice and feedback. Practice and feedback should occur within the study of the content material in English, and not separately from the teacher presenting materials and concepts. This separation tends to divorce the concepts of language development and content learning from each other, yet one of the key reasons that institutions purport to have EMI at the tertiary level is to develop language skills while teaching content.

Teachers often noted in the survey that they did not feel it was their responsibility to help with language development. When asked, "What do you feel your role is in your students' language development?" a professor from the IT department noted, "Minimal - my role is to deliver the content - that's challenging enough without trying to provide language assistance / development as well." This sentiment was echoed by another participant in my study: "I am a science teacher...not an English teacher." Other teachers see a relationship between teaching in English and language development, but may not feel adequately trained to handle their students' language related problems. As one colleague stated, "I think I do play a role since I try to teach them reading, understanding texts and writing essays. It definitely broadens their knowledge about different forms of writing; however, I am not a trained English teacher." As Arkoudis and Starfield point out, "Many of the expectations academics have as to what counts as successful performance are tacit and as they are not trained as language teachers they may struggle to communicate to their students exactly what the language-related expectations of their discipline are. Moreover, they often do not see this as their role. Their responsibility is primarily in teaching the content of their discipline" (2007, p. 6).

Students, in general, feel that just studying content in English is enough support and that additional measures are not necessary to increase their ability to develop their English language skills. Many departments have no system in place for assessing the language ability of their students, and until recently were not asked by the institution how they assess their students' language ability. This I think has sent a message to both faculty and students that language development after entry is not important, and that the language ability that the students have is enough. Students are

passing their courses. Teachers are not holding students accountable for language on assessments, just content knowledge. As more than one student put it, "the teachers don't care" about the students' language, and teachers confirm this by saying that generally if they can tell what a student is trying to say, they will let them pass. As one teacher said, "I had one student who managed to do well in spite of the fact she had the worst spelling and grammar I've ever seen. She's really smart. Her ideas are really good, but her language is appalling."

6.3.3 Clarity of Institutional Goals

There is a need to make sure institutional goals for language development are clear to all members of the university community. Both students and teachers need to be aware of where their responsibility lies in making sure continued language development takes place. In this study, it has been shown that the institution holds each department responsible for assessing its learning outcomes, while at the same time wanting evidence that the learning outcomes held in common by the university for all graduating students (such as language development) are being accomplished. Yet, at the department level few teachers know what other teachers are doing and there seems to be a feeling it is up to the individual teacher whether to support language development or not within their own classrooms.

An institution expecting language development during the course of content delivery will need to set clear guidelines for expectations, learning points, and assessment of language. It cannot be left to individual teachers to decide whether to make part of the grade on a writing assignment related to language. Teachers within departments need to be more aware of what other teachers are doing and work together to see that there is continuity in how issues of language are dealt with. This will provide clear expectations across courses, so that students understand what the university expects from them and that it is not just an individual teacher who cares (or doesn't care) about their English language skills. Language development throughout the four years of study becomes something to work toward, and there is an expectation that there will be a focus on it instead of the current position that it is too late for improving English language skills.

6.3.4 Support of Teachers and Students

For language development to continue during the course of the students' time at the university, institutions teaching in a second language need to have an

underlying system of language support. Without an emphasis on support for language development and clear expectations about the responsibility for improving students' language skills throughout the program, the institution sends a contradictory message to both students and teachers when they admit students at one level and then expect them to be at a higher level at graduation.

EMI institutions need to coach teachers on structuring and presenting content in ways that will help with language development. Diagnostic information related to students' language ability should be collected at an institutional level and made available to teachers. During the initial orientation after hiring of content teachers, workshops should be offered on what to expect in terms of language ability of the student, along with presentations related to services available to help support student language learning throughout the undergraduate study program. More interaction and collaboration is also needed between those teachers trained in teaching English and content teachers to ensure that there is a smooth transition from the pre-admission language courses to the content courses, so that language development continues across the curriculum rather than stopping after entry to undergraduate study.

6.3.5 Marketing and Tracking of Support Services

Teachers interviewed for this research were generally aware that there was a writing center available to help students with writing, but commented that they didn't really know what support was offered by the center or how effective the support was for their students. They also stated that their students told them going to the center was not helpful.

Students generally knew there was a writing center and said that they had used it initially but as they progressed in their studies found that it wasn't necessary to take their papers there as the teachers of their courses didn't really care about their grammar mistakes. When discussing the writing center it was often referred to as a place to "fix" papers. For example, Abeer, a business student, said she uses the writing center as a way to correct mistakes in her papers, but is frustrated when they won't correct the whole paper, instead just correcting a page or two as an example.

The support systems in place need to be promoted so that students and faculty know what is available, and record keeping needs to be maintained of usage. These records will allow the institution to carry out research related to the use of support systems and successful language development. By tracking student usage of support

services offered, such as the writing center in this case, it could be seen which students are using the services and at what level of their studies. Without any tracking, it is difficult to know whether the resources used for a particular type of support are effective or if investment should be made into another type of support. At the university where this study took place, there is a software system in place for students to make online appointments for the writing system and for those tutors in the center to make notes on attendance of students, but the system has not been fully utilized and many visits go unrecorded. Records of attendance and usage are currently not being updated or analyzed to provide input and evaluation of the support offered and whether they have had an impact on those who utilize them.

By adequately promoting the role of the writing center within the university, frustration by students who are disappointed when they try to have their paper "corrected" the day before it is due could be avoided and a more developmental approach to writing could be reinforced. Informing teachers of the purpose of the center and hours of operation may help them in presenting assignments to students and making recommendations for how to use the support offered by the writing center.

6.3.6 Defining Responsibility for Language Development

Everyone needs to work together on language development and think of it as their responsibility. As one teacher wrote,

> There is a blaming culture. Faculty members tend to blame administration, faculty in the English program, instructors in other departments, or colleges for the poor English proficiency of students. Students are also blamed, as is the entire public school system. There seems to be little self-reflection on the part of faculty. There is heavy denigration of the students' language ability that smacks of racism. Faculty need to explore ways of improving their own teaching strategies.

In other words, as teachers our job is to find a way to provide a high quality learning and development experience for our students no matter what level we receive them at. We cannot just say it is not our responsibility. During the course of my study, a few teachers noted that it is everyone's responsibility to aid with language development and that is why the university hires speakers of English to teach. This

attitude is reflected by a communication teacher who said, "For me language development is one of the learning outcomes of all my courses. Part of my assessment for my courses is for language use. I expect my students to follow grammatical rules and [to use] correct spelling and punctuation. I offer continued support in the classroom and during office hours. I explain to my students their mistakes and help them correct them always." When asked "What do you feel your role is in your students' language development?" an art and design teacher commented, "Hugely important as I am a direct doorway to them learning their major in English to be able to perform their professional skills in English in an English-speaking environment. This is a massive [and] important role that we have as educator of the next generation of educated Emiratis in the UAE."

When looking at the results of this study, it is important to acknowledge that many of the problems that the students encounter are not unique to this context. As one faculty member commented on the survey, "Honestly, the standard of written English is – on the whole – fairly poor. In terms of academic writing however, it seems to be appalling everywhere in the world! Students worldwide do not seem to be taught how to reference properly or how to justify arguments – or even create an argument in an essay or critical review! I have found this to be the case of students here, in Singapore, and in Australia." Language development, whether in a foreign language or the native language, is something to be worked on throughout one's academic experience.

6.3.7 Focus on Language Skills across the Curriculum

Generally teachers participating in this study admit that they do not focus on writing because they do not know how to deal with it. Teachers repeatedly emphasized that they are not trained to handle problems students have with English. The teachers come with little or no experience dealing with second language learners and are not even sure what to expect, but quickly seem to adapt to the fact they need to slow down their rate of speech. One business teacher explained,

> I mean nobody gave me here's the typical level or here's the distribution or here's the things you can expect. Here's what not to do with the language. I didn't get any of that. I don't know whether that's so terrible because their English is generally pretty good. But you know I have really had no technical, no professional training in it. So for me it was just a combination of that and

other things like critical thinking, or not knowing the content or vocabulary words… So what I found myself doing was just slowing down and saying things in different ways, with lots of repetition. But, I don't know if this is the best way to teach second language learners.

Or as a communication teacher said, "My expectations get lower and lower each term… I try to simplify it….I assign groups to go through chapters together and then present it verbally." Written assignments often become group projects that are then presented to the class orally instead of individual assignments with feedback and correction.

If there is not a focus on error correction or accuracy by teachers, students may not even be aware that these are a problem. Fareeda, a communication student, noted, "Teachers generally aren't concerned about language. Students really need to take care of this before they are in their majors." Fatima, a business student, agreed that "teachers are more concerned with content delivery than language ability of the students and understand the students' first language is not English." Another business student, Abeer, feels that teachers should not mark on language at all, but just on content, ignoring both spelling and grammar when grading assignments.

In order for the university to achieve its goal of a band 6.0 on IELTS for its graduating seniors there must be more emphasis on the language skills so that students are forced to notice their errors, correct them, and thus make them part of their implicit knowledge system. The skill area that has shown the most improvement during the four years of undergraduate study is speaking, and while teachers rate this skill area as more developed than the other areas, students generally do not see this as one of their more developed skills. Throughout the interviews and on the questionnaire responses, a lot of emphasis was placed on speaking skills during the four years of undergraduate study. Many of the courses focus on presentations and discussions in class. Even when asked about ways of helping with language development, teachers focused on getting students to speak in class as the way they help to develop the students' language skills. Teachers may offer points for participating in class discussions or asking questions in class that become a percentage of the coursework. This emphasis on oral participation in class may be one of the factors leading to increased scores on the speaking part of the IELTS exam. Also, there is constant feedback and interaction with speaking. If someone doesn't understand you, you adjust your output until they do, whereas if a percentage of the

mark on a writing assessment does not deal with language, there may be little focus on language usage, and if there is any feedback related to language it may be ignored if correction is not required. Students have noted that as they progress in their studies, they stop using the one language support system available to them (a writing center) as teachers are not concerned about their language usage.

6.4 Suggestions for Further Research

In investigating the questions related to this research, other questions emerged that should be the focus of further research in the area of language development. These include more research into the role of exposure and focus on output at higher levels of proficiency in relation to IELTS score changes, how exposure to language in countries with increasing globalization of English-language media and expatriate labor affects proficiency, and what effect perceptual differences in teaching and learning may have on how language ability is viewed.

6.4.1 Exposure and Focus on Form in Language Development

This study's results show that students did make improvement in their language proficiency, based on the results of the IELTS exam, from when they entered and when they exited the university. Based on SLA theories, we know that there is interplay between input, output, interaction, and noticing when it comes to learning a language. Participant responses seem to be indicative of the idea that mere exposure will lead to language learning, but the university expectations for improvement in English are not being met through incidental learning. Results from surveys and interviews reveal that there is little focus on language development once students reach their major area of study, and yet the participants in my study all made statistically significant improvement in their language skills as measured by an IELTS exam from the time they entered university until they graduated. They are receiving comprehensible input which is modified to meet their level. The material presented seems to be challenging enough to continue some language improvement, but it is not enough improvement to meet the institution's expectations for graduating students. What seems to be missing from the necessary requirements of language learning beyond a certain level are the noticing and the focus on form that would push them beyond where they currently are and increase their accuracy, especially if the IELTS exam is being used as a the measuring instrument for improvement. When looking at the IELTS bands for the productive skills of writing and speaking, it is seen that

around the 5 to 6 band level, accuracy of grammar and punctuation plays an important role in increasing band scores. At the lower band score levels improvement is more of an issue of fluency and not accuracy in usage. Once students reach the Band 6 level, accuracy becomes increasingly more important. Thus because the university admits low level learners to begin with, we can see improvement, but they are unable to increase proficiency much beyond this level as they are not being asked to produce with accuracy, nor is attention being called to their mistakes.

Table 27: IELTS Writing and Speaking Public Band Descriptors for Grammar

Band	Writing	Speaking
5	• uses only a limited range of structures • attempts complex sentences but these tend to be less accurate than simple sentences • may make frequent grammatical errors and punctuation may be faulty • errors can cause some difficulty for the reader	• produces basic sentence forms with reasonable accuracy • uses a limited range of more complex structures, but these usually contain errors and may cause some comprehension problems
6	• uses a mix of simple and complex sentence forms • makes some errors in grammar and punctuation but they rarely reduce communication	• uses a mix of simple and complex structures, but with limited flexibility • may make frequent mistakes with complex, structures, though these rarely cause comprehension problems
7	• uses a variety of complex structures • produces frequent error-free sentences • has good control of grammar and punctuation but may make a few errors	• uses a range of complex structures with some flexibility • frequently produces error-free sentences, though some grammatical mistakes persist

Information from IELTS, 2009c. *IELTS scores explained* [DVD].

Table 27 shows the grammar descriptors for the bands 5, 6, and 7 on the IELTS writing and speaking subtests. Looking at the information in the public rubrics for the IELTS writing and speaking components in relation to grammar, an increasing level of accuracy can be seen as one moves from band 5 to band 7.   A band 5 for writing reflects "frequent grammatical errors and punctuation may be faulty," while the speaking descriptors note that "uses a limited range of more complex structures,

but these usually contain errors." In order to achieve a band 6, errors need to "rarely reduce communication." Previous research related to score gain has focused around the score range related to entry into academic programs which tend to fall at the 7.0 range and below (Elder & O'Loughlin, 2003; A. Green, 2005; T. Green, 2004; Humphreys & Mousavi, 2010). More research is needed on what it takes for improvement in scores to occur at the upper end of the IELTS band score range.

6.4.2 General Exposure and Effect on Language Ability

This research showed that participants in this study had a statistically significant increase in their IELTS scores from the time they started university to four years later, but it does not tell us much about why the scores increased. Further research is needed to answer the question of whether the same language score increase would occur over the course of four years for Emiratis who are not enrolled in the university, just because of the everyday exposure to the English language in the Emirates. With globalization there is an ever increasing amount of information pouring into the country from the internet, newspapers, television, movies, signage, etc. Is the language development seen in the course of four years of EMI undergraduate study due to studying in English or is it due to the naturally occurring exposure to the language outside of the classroom? Most of my student participants said that they used Arabic with friends and family and that the television shows that they watched were in Arabic. But, there is an acknowledgement that Arabic and English sometimes get mixed together and increasingly they do not know the technical words from their area of study in Arabic. Further study could include investigating what happens in general over time to the language ability of the local population including groups who may have finished studies or never enrolled in higher education. This would be especially relevant in contexts where English has become a lingua franca for communication between large numbers of expatriate workers, such as in the Gulf States.

6.4.3 Perceptual Differences in Relation to Culture and Expectations of Learning

The context of education in the Gulf region often involves students from one culture with teachers from a different one. This provides a multitude of different expectations of teaching and learning that interact with each other which may promote or hinder learning. Perceptual differences between students and teachers regarding their language ability are an area worth exploring in future research. It could provide

an opportunity for learning more about the culture and expectations of this institution, and possibly institutions in general, along with improving practices that would promote learning.

6.5 Personal Reflection on Thesis Journey

My thesis journey started with the idea that many of the expatriate university professors hired to teach content in UAE universities do not know how to deal with students who are non-native English speakers and who may not have the same English ability as native speakers in their home countries. I felt that if teachers did not understand how to develop language skills and work with these limited proficiency students that the accommodations they were making in order to deliver the materials may not promote the further development of the students' English skills. Realizing that most of my thinking was not based on empirical evidence and the fact that previous research did not include the specific context I worked in, I decided to investigate what actually happened to students' language as they passed through the system.

I started my thesis journey by asking what is happening to the students' language after they enter the university during their four years of instruction. I thought I had a way to answer it using the IELTS test, however in the course of the investigation and during the literature review, I realized there are a lot more ways of looking at language development than just through test scores. I began to think about the students' perspectives of their language ability, and then began to consider teacher perspectives as well. Consequently, I realized that there is also an institutional view that may not exactly be the same for the individuals making up the groups of students and teachers.

While investigating the improvement of language, it was difficult to ignore the question of why language proficiency might or might not increase and the urge to dig more deeply into the question of what actually happens in the classroom and environment that surrounds these participants during their undergraduate studies. It is that thirst for information and the need to try to look for explanations and causes even when you do not know what the final result will be that drives exploratory research and encourages researchers to look for ways of discovering that may not always fit neatly into one paradigm or research design. Thus, by doing this research, I have found more areas to explore in the future. As a faculty member at the institution

where this research takes place, I learned a lot about the divergence of student and teacher perspectives related to language that I can use in developing my own teaching style and in providing information to the institution that can be used to develop programs for professional development of novice and continuing teachers. I also learned a lot about myself as a researcher.

During the course of this research, my role within the university influenced the way that I approached the research, the data analysis, and presentation of results. It also influenced the program that I was researching along with the participants. By discussing the effects of EMI on language proficiency, it raised awareness of the issue among administrators, teachers and students. During the course of the research, the undergraduate curriculum and the way people were thinking about language learning began to change as I spoke with administrators and teachers about the research I planned to do. The university started a Learner Assessment group to look at how learning was being measured and decided to test all fourth year students to get an idea of their English proficiency level at exit.

When sketching out my research questions and the approach that I would take I was the assessment supervisor for the pre-admission English language program. In this role, I worked with teachers and administrators to ensure that students had the minimum level of English required before they were granted entry into the four-year baccalaureate program. My perception was that though students entered university studies with the prescribed language proficiency once they entered little was being done to maintain or encourage language learning. When students did not seem to have the English skills necessary for completing course work at the undergraduate level, there were accusations that they were admitted without the proper skill level and that the foundation English courses were not doing a good job providing them the skills they needed. I felt that the university instructors were not taking any responsibility for helping to develop language skills in their students and this in turn might actually cause students' proficiency to decrease. So, I set out to design a study to find out what was happening to students' English ability and what was expected of them in terms of language improvement over the course of their studies.

My professional role within the university changed during the course of the research. I moved from working in the English foundation program to working as an alumni development coordinator. In this new role, my main focus was on helping the local community and university staff to recognize the achievements of the students.

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This shifting focus from what had not been accomplished by students to what had been accomplished influenced how my research results were presented. The presentation of results of the IELTS scores in this paper focus on the improvement that students made from entrance to exit. This is shown as a statistically significant mean change for IELTS scores in the paired samples t-tests for the group and in the presentation of the actual percent of students who improved their IELTS scores. My original design thinking revolved around how students were not improving their English and the university was failing them. By the time I was doing the data analysis and writing the results chapter, my view had changed to how students were making improvement, but there was no recognition of this by faculty because of a difference in the perception of language ability. Now, that I have left the university and my role is that of an outsider, as I look at the research, I see that I could just as easily have focused differently on the IELTS results presentation. Instead of pointing out the students who had made improvement, I could just as easily have questioned why half of my participants (51%) did not increase their Listening IELTS score, or why 10% of students had a decrease in their overall IELTS score. Though statistically it can be shown that there was a significant positive change in mean scores from entry to exit, I realize in retrospect that I could also have questioned whether this is what would be expected from students who spent four years of fulltime undergraduate study learning in a foreign language. As I write this concluding section, I am able to see more clearly my own researcher bias and how my shifting perspective was shaped by my changing role within the organization that I was researching.

In conclusion, I think with various support measures in place English learning levels at this institution could be increased, but at this point language development is either ignored or thought of as someone else's responsibility by participants. The current trend of pushing so hard to make sure the students pass an IELTS exam at entry causes students to think that they are finished with English language learning, and that their level is adequate once they are admitted to the undergraduate program. Students do not question the current system as education is provided to them free of charge, and the paternalistic nature of the government encourages a passive attitude and a feeling that everything is done in the best way possible for the citizens. Another possibility for a lack of focus on language development is that the teachers' belief that they are doing everything possible to deliver the content and cannot be expected to do more than that is carrying over to their students. Students begin to think that just

getting the content is enough and there is no time for them to focus on language skills as well. A program of consciousness-raising as it relates to the responsibility for and necessity of ongoing language development throughout undergraduate study is necessary in order to change the current entrenched attitude of both teachers and students that once they enter the university there is no time to focus on language development and that, in any case, it is of no importance.

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APPENDICES

Appendix A: Student Participant Descriptive Information

Table A1: Student Participant Demographics

Participants – All female, All Emirati n=59	Number of respondents	Age	Avg. foundation terms	GPA
College of Arts and Sciences		22-26		
Art and Design	6	(22-24)	5.16	2.98
Humanities and Social Sciences	3	(22-24)	5.33	3.20
Natural Sciences and Public Health	8	(22-26)	5.00	2.88
College of Business (joint degree with Information Technology)	28 (2)*	22-35	5.64	3.07
College of Communication and Media Sciences	2	22-23	6.00	2.72
College of Education (joint degree with Information Technology)	4 (1)*	22-32	4.5	2.96
College of Information Technology (joint degree with Business College) (joint degree with Education Collage)	5 (2)* (1)*	22-23	4.0	2.79
All Respondents	59	22-35	5.20	2.99

*Note that three students are joint majors, parenthetically listed for each department, but not listed in the counts by department or in the average foundation terms column.

      Table A1 shows aggregate demographic information for all student participants in the study. The age stated was that at the time of the study's final data collection point, May 29, 2011. Average foundation terms, typically about 9 weeks, is the amount of time that students spent in the English foundation program before meeting the requirements for entry into the undergraduate program. This means meeting an IELTS benchmark score and passing the final level of English in the program or an equivalency test for the final level. All of these participants were provisionally admitted to the university in August 2005 or 2006 based on their high school records and a pre-admission Common Educational Proficiency Assessment (CEPA) exam on the condition that they meet the English-language requirements prior to entering the undergraduate program within a two year period (eight terms). The CEPA is an English exam required of all students who wish to study in higher education institutions in the country.

Table A2: Student Participant Descriptive Statistics

SurveyID	Area of Study	Age	GPA	Terms in English program	T1 Date	L1	R1	W1	S1	O1	T2 Date	L2	R2	W2	S2	O2
Lateefa	Art and Design	23	2.70	8	09.06.2007	5.0	5.0	5.0	5.0	5.0	08.01.2011	4.5	4.5	4.5	6.5	5.0
Alia	Art and Design	22	3.31	4	09.06.2007	6.0	5.0	5.0	5.0	5.5	08.01.2011	6.0	5.5	4.5	6.5	5.5
Aisha	Art and Design	22	3.05	4	09.06.2007	4.5	5.5	5.0	6.0	5.5	08.01.2011	4.5	4.5	5.0	6.0	5.0
Amna	Art and Design	24	2.89	7	09.06.2007	5.5	5.0	5.0	5.0	5.0	08.01.2011	5.0	5.5	5.0	6.0	5.5
Mona	Business	22	2.84	4	09.06.2007	6.0	5.0	5.0	6.0	5.5	17.02.2011	7.0	6.0	5.0	5.5	6.0
Amal	Business	23	3.10	6	09.06.2007	5.5	4.5	5.0	6.0	5.5	17.02.2011	5.0	5.0	5.5	5.5	5.5
Fauzia	Business	22	3.60	2	09.06.2007	5.5	5.0	5.0	6.0	5.5	17.02.2011	6.5	6.5	6.0	7.0	6.5
Omaima	Business	24	3.14	8	09.06.2007	5.5	5.0	5.0	5.0	5.0	17.02.2011	5.5	5.5	5.5	5.5	5.5
Huda	Business	23	2.66	8	09.06.2007	5.0	5.0	5.0	6.0	5.5	17.02.2011	4.0	4.0	4.5	5.5	4.5
Muna	Business	23	3.02	8	09.06.2007	5.0	5.5	6.0	5.0	5.5	17.02.2011	6.0	5.5	6.0	6.0	6.0
Nora	Business	35	3.69	6	09.06.2007	5.0	5.0	6.0	5.0	5.5	17.02.2011	5.5	6.0	5.5	5.5	5.5
Abeer	Business	23	3.59	8	09.06.2007	4.5	5.0	6.0	6.0	5.5	17.02.2011	5.5	5.0	6.5	6.5	6.0
Raisa	Business	23	3.60	4	09.06.2007	5.0	5.5	5.0	5.0	5.0	17.02.2011	5.5	5.5	6.0	6.5	6.0
Fatima	Business	22	3.63	4	09.06.2007	5.5	5.5	6.0	6.0	6.0	17.02.2011	6.0	6.0	7.0	6.5	6.5
Nabeela	Business	22	2.95	4	09.06.2007	5.0	5.0	5.0	6.0	5.5	17.02.2011	6.0	5.5	5.5	6.0	6.0
Najma	Business	23	2.23	8	09.06.2007	5.5	5.0	5.0	5.0	5.0	17.02.2011	5.0	5.0	5.5	5.5	5.5
Rania	Business	23	2.87	8	09.06.2007	5.0	5.0	5.0	5.0	5.0	17.02.2011	4.5	5.0	5.5	5.5	5.0
Kalthoom	Business	22	3.01	4	09.06.2007	5.0	5.5	5.0	5.0	5.0	17.02.2011	5.5	6.5	5.5	6.0	6.0
Fareeda	Communication	22	2.83	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	4.6.2011	6.5	6.0	6.5	6.5	6.5
Reem	Education	23	2.78	4	09.06.2007	5.0	5.0	5.0	5.0	5.0	19.03.2011	5.0	5.5	6.0	5.5	5.5
Hend	Education	22	3.12	4	09.06.2007	5.5	5.0	5.0	6.0	5.5	19.03.2011	6.0	5.0	5.5	6.0	5.5
Shamsa	Education	32	2.93	4	09.06.2007	5.5	5.0	5.0	6.0	5.5	19.03.2011	5.5	5.0	6.0	6.0	5.5
Safia	NSPH	22	3.32	4	09.06.2007	5.0	5.5	5.0	6.0	5.5	17.02.2011	6.0	6.5	5.5	7.5	6.5
Shaima	IT	23	2.74	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	17.02.2011	6.0	5.5	6.5	6.0	6.0
Asma	IT	23	2.40	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	17.02.2011	5.0	5.0	5.5	6.0	5.5
Salwa	Business	23	3.05	9	02.02.2008	5.0	4.5	6.0	5.5	5.5	17.02.2011	5.0	4.5	5.5	5.5	5.0
Moza	Business	23	3.14	8	08.09.2007	5.0	5.0	6.0	5.5	5.5	17.02.2011	4.5	4.5	5.5	5.5	5.0
Shukran	Business	24	2.87	8	08.09.2007	5.0	5.0	5.5	5.0	5.0	17.02.2011	5.0	5.0	5.5	6.0	5.5
Hajar	NSPH	24	2.97	8	09.06.2007	5.0	4.5	5.0	5.0	5.0	08.01.2011	5.5	5.0	6.0	7.0	6.0

SurveyID	Area of Study	Age	GPA	Terms in English program	T1 Date	L1	R1	W1	S1	O1	T2 Date	L2	R2	W2	S2	O2
Taimaa	NSPH	22	3.45	4	09.12.2006	4.5	5.5	6.0	5.0	5.5	17.02.2011	6.0	6.0	5.0	5.0	5.5
Yasmiin	Business	23	2.90	4	09.06.2007	4.0	4.0	6.0	6.0	5.0	17.02.2011	5.0	5.5	6.5	6.5	6.0
Yumna	Business	23	2.82	5	Sept 20 07	5.5	5.0	5.0	5.0	5.0	17.02.2011	5.5	5.5	5.0	0	4.0
Zainab	Business	23	2.91	4	09.06.2007	4.5	5.0	5.0	6.0	5.0	17.02.2011	6.0	5.5	5.5	6.5	6.0
Hasna	Business	23	3.54	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	11.12.2010	6.0	5.5	6.0	6.0	6.0
Zamzam	Art and Design	23	2.98	4	09.06.2007	5.5	4.5	5.0	6.0	5.5	08.01.2011	5.5	4.5	4.5	6.0	5.0
Asmaa	Art and Design	22	2.96	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	19.03.2011	5.5	5.0	5.5	6.0	5.5
Manal	Business / IT	23	2.59	4	09.06.2007	6.0	4.5	5.0	6.0	5.5	19.03.2011	6.0	4.5	5.0	6.0	5.5
Shaikha	Business / IT	31	2.91	4	09.06.2007	5.5	5.5	5.0	6.0	5.5	04.06.2011	6.0	6.0	5.5	7.0	6.0
Hanan	Business	22	3.31	4	09.06.2007	5.0	5.0	5.0	5.0	5.0	04.06.2011	6.0	6.0	5.5	6.0	6.0
Rafia	Business	24	2.85	6	09.06.2007	5.5	5.0	6.0	5.0	5.5	04.06.2011	6.0	6.0	5.5	5.5	6.0
Hessa	Business	22	3.04	4	09.06.2007	5.5	5.0	5.0	5.0	5.0	04.06.2011	6.0	6.0	5.5	7.5	6.5
Sara	Business	23	2.81	8	09.06.2007	5.5	4.5	5.0	6.0	5.5	04.06.2011	5.0	6.0	6.0	5.5	5.5
Alanoud	Business	22	3.53	4	09.06.2007	5.5	5.0	6.0	7.0	6.0	04.06.2011	5.5	6.0	5.5	6.5	6.0
Suaad	Business	22	2.52	4	09.06.2007	5.5	5.0	5.0	6.0	5.5	11.6.2011	5.5	5.0	5.0	6.0	5.5
Masha	Business	22	2.85	4	09.06.2007	6.0	4.5	5.0	6.0	5.5	04.06.2011	5.5	6.0	5.0	7.0	6.0
Osha	Education	23	3.02	6	09.06.2007	5.0	5.5	5.0	5.0	5.0	11.06.2011	4.5	6.0	6.0	6.5	6.0
Alyazia	Education / IT	22	2.91	4	09.06.2007	5.5	5.5	5.0	5.0	5.5	04.06.2011	6.5	6.0	5.5	6.0	6.0
Budoor	NSPH	22	2.43	4	09.06.2007	5.0	5.0	6.0	5.0	5.5	17.02.2011	5.0	5.0	5.5	6.5	5.5
Hamda	NSPH	22	2.88	4	09.06.2007	5.0	5.5	5.0	5.0	5.0	17.02.2011	6.0	6.5	5.5	7.0	6.5
Nadya	NSPH	26	2.20	8	09.06.2007	5.0	5.0	5.0	5.0	5.0	17.02.2011	5.0	5.0	4.0	6.0	5.0
Khadija	NSPH	23	2.60	4	09.06.2007	5.5	5.5	5.0	6.0	5.5	17.02.2011	5.0	5.0	5.5	7.0	5.5
Mariyam	NSPH	22	3.22	4	09.06.2007	5.5	5.0	6.0	5.0	5.5	17.02.2011	6.5	6.0	5.0	6.0	6.0
Marwa	IT	22	3.10	4	09.06.2007	5.0	5.0	6.0	7.0	6.0	19.03.2011	6.0	6.5	6.5	7.5	6.5
Samya	IT	22	3.02	4	09.06.2007	5.0	5.0	5.0	5.0	5.0	19.03.2011	5.5	5.0	5.0	5.0	5.0
Sanaa	IT	23	2.69	4	09.06.2007	5.5	5.0	5.0	6.0	5.5	19.03.2011	5.0	5.0	5.0	5.0	5.0
Salama	HSS	23	3.72	4	09.06.2007	5.0	5.0	6.0	7.0	6.0	08.01.2011	5.5	5.0	6.5	7.5	6.0
Laila	HSS	24	2.79	8	09.06.2007	5.5	5.0	5.0	6.0	5.5	08.01.2011	5.0	5.5	5.5	6.0	5.5
Hekma	HSS	22	3.08	4	09.06.2007	6.0	5.0	5.0	6.0	5.5	08.01.2011	6.0	6.0	5.5	6.5	6.0
Jamila	Communication	23	2.60	8	09.06.2007	5.0	5.0	4.0	6.0	5.0	17.02.2011	5.5	5.5	5.0	6.5	5.5

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Appendix B: Faculty Participant Demographics

Table B1: List of Nationalities of Full-time Faculty Members

Country	Number	%
USA	72	44.72%
United Kingdom	22	13.66%
Canada	21	13.04%
Australia	12	7.45%
New Zealand	4	2.48%
Germany	4	2.48%
United Arab Emirates	4	2.48%
France	3	1.86%
Jordan	3	1.86%
Other countries (less than 3)	16	9.94%
Totals	161	100%

Table B2: Number of Faculty in each Department and Participation in Research

College / Department	Faculty N=161	Respondents (% of dept)	Percent of total respondents	Interview response (conducted)
College of Arts and Sciences				
• Art and Design	13.66 % (22)	8 (36.36%)	15.01%	2 (-)
• Humanities and Social Sciences	16.15% (26)	8 (30.77%)	15.01%	2 (1)
• Natural Sciences and Public Health	9.94% (16)	4 (25%)	7.55%	1 (1)
College of Business	25.47% (41)	11 (26.83%)	20.75%	7 (3)
College of Communication and Media Sciences	11.18% (18)	9 (50%)	16.98%	6 (3)
College of Education	11.80% (19)	7 (36.84%)	13.21%	3 (2)
College of Information Technology	11.80% (19)	6 (31.58%)	11.32%	3 (2)
Total	161	53 (32.92%)	100%	24 (12)

Table B3: Participant Teaching Experience

Teachers	n	Min	Max	M	SD
Years as university lecturer	50	1.0	35.0	11.874	8.2100
Years at this institution	50	.5	13.0	4.850	3.8351

Appendix C: IELTS Structure and Test Components

The IELTS exam takes about three hours to complete and has four sections: listening, reading, writing and speaking. The listening, reading, and writing exam are administered on the same day with no breaks between sections. The speaking test is a one to one assessment with a trained examiner and may be taken up to seven days before or after the other three tests. Everyone takes the same listening and speaking assessments, but there are different reading and writing tests for the Academic and General Training modules.

The listening test is 30 minutes long with an additional 10 minutes to transfer the answers to an answer sheet. It has 40 questions, each counting as one mark. The final score out of 40 is converted to the nine-band scale. The listening exam has four sections which are only heard once. Using a variety of question types (e.g., multiple choice, matching, completion, and short answers) skills such as understanding main ideas and listening for specific facts, along with recognizing the opinion, attitudes, and purpose of the speakers, and following an argument are assessed.

The reading test has four sections and is 60 minutes in length with no additional time to transfer answers. Similar to the listening, it has 40 questions from which the final score is converted to the nine-band IELTS scale. Question types included are similar to those in the listening along with True/False/Not Given for identifying factual information and Yes / No / Not Given for identifying a writer's views or claims. The Academic Reading test has three sections, each with an authentic text taken from books, journals, magazines, and newspapers that are written for a nonspecific audience. The topics are academic, of general interest, with texts that "range from the descriptive and factual to the discursive and analytical. Texts may contain non-verbal materials such as diagrams, graphs or illustrations" (IELTS, 2010a, p. 4). "A wide range of reading skills is assessed, including reading for gist, reading for main ideas, reading for detail; understanding inferences and implied meaning; recognizing a writer's opinions, attitudes and purpose; and following the development of an argument" (IELTS, 2010a, p. 4).

The writing assessment consists of two tasks which are to be completed in 60 minutes. For the Academic Module, the first task is to summarize or explain a chart, graph, table, or diagram in 150 or more words. The second task is to write an essay of at least 250 words in response to a prompt which presents an opinion or problem. The

two writing tasks are assessed based on the test takers' "ability to write a response which is appropriate in terms of content, the [organization] of ideas, and the accuracy and range of the vocabulary and grammar" (IELTS, 2010a, p. 5). The second task counts for twice as much as the first and the two scores are combined to give a single band score on the IELTS nine-band scale for writing.

The speaking assessment is a recorded 11 to 14 minute face-to-face three-part oral interview with a certified IELTS examiner. The first part lasts between four to five minutes and includes an introduction and short interview about familiar topics such as work, family, studies, and interests. In the second part the test taker is given a topic and after a one-minute preparation period must speak about it for one to two minutes. The third part is a general discussion related to the topic of the previous part, giving the test taker a chance to discuss more abstract issues and ideas. Test takers are assessed on four criteria during the speaking assessment: fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation which are then reported as a band score for speaking.

Appendix D: Faculty Questionnaire (Perceptions of Student Ability)

What department / college do you teach in?

How many years have you been a university lecturer / professor?

How many years have you worked at this university?

Have you taught elsewhere where the language of instruction is English, but the students

are not native English speakers? If so, where?

On a scale of 1 (poor) to 5(excellent), please choose the answer that best relates to your experience here at Zayed University.	poor	←		→	excellent
How would you characterize your students' **overall English proficiency**?	1	2	3	4	5
How would you characterize your students' **listening** ability?	1	2	3	4	5
How would you characterize your students' **reading** ability?	1	2	3	4	5
How would you characterize your students' **speaking** ability?	1	2	3	4	5
How would you characterize your students' **writing** ability?	1	2	3	4	5

Do you feel that your students' general language skills meet the expectations required of undergraduate students studying in an English-medium environment?
> Yes
> No

Comments about your students' language ability:
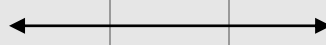
Do you think that Zayed University students' English proficiency improves during their 4 years of study for an undergraduate degree?
> Yes
> No
> I don't know.

Why or why not?

On a scale of 1 to 5, how would you rate your students' ability in performing the following tasks?	poor				excellent
Reading course materials	1	2	3	4	5
Taking notes from course textbooks	1	2	3	4	5
Doing course assignments	1	2	3	4	5
Listening to and understanding lectures in class	1	2	3	4	5
Taking notes during lectures	1	2	3	4	5
Dealing with instructions	1	2	3	4	5
Seeking information orally	1	2	3	4	5
Giving information orally	1	2	3	4	5
Making formal oral presentations	1	2	3	4	5
Asking questions during class	1	2	3	4	5
Writing academic papers	1	2	3	4	5

Do you think that your students face any problems in your courses due to their English-language ability?
    Yes
    No

If yes, what are the problems?

How is your teaching at ZU different from teaching the same content in your home country?

Do you adapt the materials, delivery, or assessment in any way because English is a second language for your students?
        Yes
        No

If yes, how?

What do you feel your role is in your students' language development, if any?

Do you offer any type of support to students? If so, what kind? Is this different than what you would offer in your home country?

What does the university do to help with student's language development after they are admitted to the baccalaureate program?

What does your department do to help with student's language development after they are admitted to your program?

Do you feel there is a need for ongoing language support in the third and fourth year of a student's studies?

What type of support is offered by your department?

What type of support, if any, do you feel should be offered?

Would you be willing to participate in an interview to discuss your answers to the above questions?
    Yes
    No

If yes, please include your contact information:

Name:

Email:

Mobile Number:
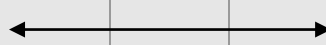
Appendix E: Student Questionnaire about Language Ability

Student ID: Program of Study:

On a scale of 1 to 5, please choose the best choice for you.	poor				excellent
My **overall English** ability is	1	2	3	4	5
My **listening** ability in English is	1	2	3	4	5
My **reading** ability in English is	1	2	3	4	5
My **writing** ability in English is	1	2	3	4	5
My **speaking** ability in English is	1	2	3	4	5

On a scale of 1 to 5, please choose the best choice for you.	Strongly Disagree				Strongly Agree
I believe my **English** ability has improved since entering the general education program.	1	2	3	4	5
I believe my **listening** ability has improved since entering the general education program.	1	2	3	4	5
I believe my **reading** ability has improved since entering the general education program.	1	2	3	4	5
I believe my **writing** ability has improved since entering the general education program.	1	2	3	4	5
I believe my **speaking** ability has improved since entering the general education program.	1	2	3	4	5

If you took the IELTS exam today, what IELTS band do you think you would get for each of the sections?									
Listening	1	2	3	4	5	6	7	8	9
Reading	1	2	3	4	5	6	7	8	9
Writing	1	2	3	4	5	6	7	8	9
Speaking	1	2	3	4	5	6	7	8	9
Overall Score	1	2	3	4	5	6	7	8	9

Do you think your IELTS band has improved since entering the general education program at Zayed University from when you finished the English Readiness Program?

Why or why not?

On a scale of 1 to 5, how would you rate your ability in performing the following tasks?	poor				excellent
Reading course materials	1	2	3	4	5
Taking notes from course textbooks	1	2	3	4	5
Doing course assignments	1	2	3	4	5
Listening to and understanding lectures in class	1	2	3	4	5
Taking notes during lectures	1	2	3	4	5
Dealing with instructions	1	2	3	4	5
Seeking information orally	1	2	3	4	5
Giving information orally	1	2	3	4	5
Making formal oral presentations	1	2	3	4	5
Asking questions during class	1	2	3	4	5
Writing academic papers	1	2	3	4	5

Do you face any problems in your courses due to your English-language ability?
    Yes
    No

If yes, what are the problems?

What services does the university provide to help you with your English?

Other comments you would like to make about your English ability:

Would you be willing to participate in an interview to discuss your answers to the questions?
    Yes
    No

If yes, please include your contact information:

Name:

Email:

Mobile Number:

Appendix F: Interview Themes and Questions

Interview Schedule

Interviews conducted will be open-ended with questions developed and based on extending and explaining responses from the online survey.

The general issues to be explored will be:

- Perception of proficiency in English language skills (listening, reading, writing, and speaking)
- Perception of improvement in language skills throughout 4 years of study
- Ability to cope with material presented in English during the time of study
- Problems faced due to language ability and how these are dealt with
- Types of perceived support available

General Interview Themes (Students)

Explore the reasons behind the answers given in the online survey:

- Do you think your IELTS score has improved since entering the general education program at Zayed University from when you exited the ABP? Why or why not?
- Do you face any problems in your courses due to your English-language ability? If yes, what are they? How do you deal with these issues?
- What services does the university provide to help you with your English? Do you take advantage of any of these services?
- Do you use the Writing Center? When? Why? How often?

Explore ability to cope with course delivery in English:

- What is the general format of your courses? (lecture, group work, course materials, handouts)
- How do you study for your courses? When you study with friends do you use Arabic or English to discuss the course content? Do you take notes in Arabic or English?

General Interview Themes (Faculty)

Explore the reasons behind the answers given in the online survey:

- Do you feel that your students' general language skills meet the expectations required of undergraduate students studying in an English- medium environment?
- Do you think that Zayed University students' English proficiency improves during their 4 years of study for an undergraduate degree?
- What are the most persistent language-related problems your students face?
- How is your teaching at ZU different from teaching the same content in your home country?
- Do you adapt the materials, delivery, or assessment in anyway because English is a second language for your students? If yes, how?
- Do you offer any type of support to students? If so, what? Is this different than what you would offer in your home country?
- Do you feel your students' English proficiency is adequate to study at the undergraduate level?
- What do you feel your role is in your students' language development, if any?
- What does the university do to help with student's language development after they are admitted to the baccalaureate program?
- What does your department do to help with student's language development after they are admitted to your program?
- Do you feel there is a need for ongoing language support in the third and fourth year of a student's studies?

Appendix G: Ethical Clearance Approvals

UNIVERSITY OF
EXETER

Graduate School of Education

Certificate of ethical research approval

STUDENT RESEARCH/FIELDWORK/CASEWORK AND DISSERTATION/THESIS
You will need to complete this certificate when you undertake a piece of higher-level research (e.g. Masters, PhD, EdD level).

To activate this certificate you need to first sign it yourself, and then have it signed by your supervisor and finally by the Chair of the School's Ethics Committee.

For further information on ethical educational research access the guidelines on the BERA web site.
http://www.bera.ac.uk/publications/guidelines/ and view the School's statement on the GSE student access on-line documents.

Your name: Dawn Rogier

Your student no: 570037397

Return address for this certificate: P.O. Box 4783, Abu Dhabi United Arab Emirates

Degree/Programme of Study: EdD in TESOL

Project Supervisor(s): Christine Coombe

Your email address: dawn_rogier@zu.ac.ae

Tel: +971-50-189-0504

I hereby certify that I will abide by the details given overleaf and that I undertake in my thesis to respect the dignity and privacy of those participating in this research.

I confirm that if my research should change radically, I will complete a further form.

Signed: _Dawn M. Rogier_   date: November 20, 2010

*NB For Masters dissertations, which are marked blind, this first page must **not be included** in your work. It can be kept for your records.*

Chair of the School's Ethics Committee
Updated: July 2010

Certificate of ethical research approval

Your student no: 570037397

Title of your project: Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE

Brief description of your research project:
In the United Arab Emirates, the medium of instruction of higher education is often English. Thus, in order to enter university students must exhibit a minimum level of English-language proficiency based on the results of an internationally recognized exam (i.e. TOEFL or IELTS). Students may study up to two years in a foundations program to meet the English-language requirement. But what happens to their language skills after entry as they are no longer focused on studying English as a language to meet a minimum entry requirement for enrollment into the university? The majority of students' coursework will be taught in English, but is this enough to maintain or increase their language proficiency? I will investigate the effects of English-medium instruction on language proficiency (as measured by internationally recognized assessments) in the context of higher education in the UAE, and look at perceptions related to language development in this context.

This study will use a test / re-test method to look at the language proficiency of 4th year students at Zayed University in the UAE as measured by the International English Language Testing System (IELTS) exam. It will compare initial entry-level IELTS scores with scores obtained after studying for 4 years in English-medium courses at the university. The sample will include as many final year students as possible who entered the university via the foundations courses with an IELTS score in the fall of 2007. Using statistical analysis, the researcher will investigate changes in IELTS scores by looking at both overall scores and individual skill area scores on the IELTS exam along with relationships between scores and area of study.

Along with the IELTS scores, I will use a survey approach (online questionnaire and interviews) to find out the students' beliefs about how English-medium instruction affects their language proficiency and the need for language support. I also plan to look at teachers' perception of their students' language proficiency and how this affects the selection and delivery of course materials.

The overall aim of this research is to discover what happens to students' English language skills while studying in English-medium classes in UAE universities, how this compares with what instructors and students think happens to students' English proficiency during the 4-years of study, and to make recommendations regarding practices that may help students with their language development.

Give details of the participants in this research (giving ages of any children and/or young people involved):

4th year baccalaureate students at Zayed University: These participants will all be females who are at least 20 years or older at the time of the study. Along with the collection of data related to the participants' academic records and use of English-language support services, I will administer a questionnaire and select some participants for interviews which will look at participants' perceptions of language proficiency and development during their time of study

Instructors at Zayed University: I will administer a questionnaire and select some participants for interviews regarding perception of students' language abilities, the use of course materials and what accommodations are made due to students' language proficiency. These teachers will all be adults with varying nationalities, but most will have degrees issued from a western university (and most likely hold passports from a western country as well)

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Give details regarding the ethical issues of:

a) **informed consent:** **An example of the consent form(s) must accompany this document.** a blank consent form can be downloaded from the CSE student access on line documents;

All participation will be voluntary and each participant will be informed of the nature and purpose of the research at each phase of the data collection process (collection of exam scores, participation in answering online questionnaire and participation in semi-structured interviews). Participants will be informed that their participation is voluntary and they may withdraw at any time during the study. Participants will be provided with name and contact information of the researcher. For the online questionnaire, the information and consent form will be presented before the first page of questions and be included in the initial email to solicit participation. For those participating in any interviews, an information sheet and consent form will be provided prior to participation.

Participation will be voluntary and participants may withdraw at any time during the study without any consequences.

b) **anonymity and confidentiality**

There will be provisions in place to maintain the privacy of all subjects and all information will be confidential. In any reporting of results the participants will be anonymous. All data (from test scores, questionnaires and interviews) will be stored on the personal computer and backed up on an external hard drive at the home of the researcher. Access to files will be limited through a login password known only to the researcher. Data will remain stored for a period of five years after the completion of the study, at which time, it will be permanently erased.

Give details of the methods to be used for data collection and analysis and how you would ensure they do not cause any harm, detriment or unreasonable stress:

Some of the data to be used will be from institutional information that is already publically available (e.g., graduating student surveys). Other data (e.g. exam scores, major area of study, GPA) are available as part of each students' academic record, but consent will be asked of each of the participants before collection and analysis of this data takes place. Identification of participants will be by assigning an id number to each participant, but this information will not be linked with any reporting of the data, thus providing anonymity for participants.

Information related to perception of language proficiency will be collected by online questionnaire that will include a consent form and statement about the research. After consenting to participate, research participants will be asked to answer questions about (their language development during their four years of study or their students' language abilities). Some participants will be selected for follow up interviews.

Quantitative data will be entered into SPSS software to allow for statistical analysis. Information from open-ended response questions and interviews will be treated as qualitative data, and content analysis will be undertaken to find commonalities and themes to investigate more fully their relationship with quantitative data gathered.

Risks – There are no foreseeable risks to the participants as the information obtained will remain confidential and in any reporting of the results the participants will be anonymous.

Give details of any other ethical issues which may arise from this project (e.g. secure storage of videos/recorded interviews/photos/completed questionnaires or special arrangements made for participants with special needs etc.):

All data collected related to this research (exam scores, questionnaire results, and transcripts or audio files related to interviews) will be securely stored by the researcher in a location only accessible to her. In the reporting of results participants will be anonymous and not identifiable.
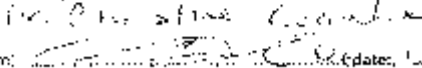
Give details of any exceptional factors, which may raise ethical issues (e.g. potential political or ideological conflicts which may pose danger or harm to participants):

There are no known "exceptional factors which may raise ethical issues" at this time

---

This form should now be printed out, signed by you on the first page and sent to your supervisor to sign. Your supervisor will forward this document to the School's Research Support Office for the Chair of the School's Ethics Committee to countersign. A unique approval reference will be added and this certificate will be returned to you to be included at the back of your dissertation/thesis.

N.B. You should not start the fieldwork part of the project until you have the signature of your supervisor

---

This project has been approved for the period: **until:**

By (above mentioned supervisor's signature) _____ (date) _____, 2016

N.B. To Supervisor: Please ensure that ethical issues are addressed annually in your report and if any changes in the research occur a further form is completed.

This form is available from http://education.exeter.ac.uk/student/

Chair of the School's Ethics Committee
updated: July 2010

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Ethical Clearance Form for Institution

جـامـعـة زايـد
ZAYED UNIVERSITY

**EXEMPTION FROM FULL APPLICATION
FOR ETHICAL CLEARANCE**

Please read the *Ethical Clearance Guidelines* before completing this form to determine whether you should complete the *Full Application for Ethical Clearance*. Exemption is only awarded where the proposed research meets one or more of the exemption criteria below.

Complete ALL sections of this form. An incomplete application will not be reviewed, and may delay the approval process.

Completed forms must be submitted electronically to the Office of Research.
Researchers should visit the Research Website for more information, or contact the Office of Research with any specific questions regarding their application.

SECTION A

Project Title:	Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE			
Principal Investigator (PI):	Name:	Dawn Rogier	College:	NA - OEM
	Title:	Senior Coordinator	Degree(s):	M.A. Linguistics
	Telephone:	02-599-3653	Email:	Dawn.Rogier

SECTION B

The proposed research is exempt from the full ethical clearance process based on the following criteria:	
1. Research is undertaken by students at Zayed University This includes both undergraduate or graduate student-led projects. Graduate research thesis which are considered externally, are subject to ethic review and NOT exempt. "Thesis" refers to the traditional instrument that is reviewed by a panel and catalogued/accessible to the public in the library or other sources.	☐ YES
2. Research is primarily focused on quality assurance or process improvement Such projects are generally backwards looking within an institution, comparing reality/practice to established standards, and are carried out and applicable only within the institution, and not intended for publication. Eg: seeking staff opinions about IT or library services; SELEs; annual faculty surveys etc.	☐ YES
3. Research which does NOT involve human or animal subjects Involvement of human subjects includes as recipients of surveys, interviews or focus groups, as well as more invasive or clinical research activities.	☐ YES
4. Research involving the collection or study of existing data etc, if these sources are publically available *Existing* means existing before this research is proposed, and at the time of this exemption request. For example data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publically available or if the information is recorded by the investigator in such a manner that subjects cannot be identified.	☒ YES
5. Research conducted in established educational settings, involving normal educational practices For example research on regular and special education *instructional strategies*, or research on the effectiveness of or the comparison among *instructional techniques, curricula, or classroom management methods.* Research is NOT exempt if subjects involved are children.	☒ YES
6. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior Effective as long as human subjects CANNOT be identified directly or indirectly at any time, and that disclosure of responses could not reasonably place the subjects at risk including potential damage to financial standing, employability or reputation. Research is NOT exempt if subjects involved are children.	☐ YES
7. Research does NOT involve children as participants, or participants who are known to be prisoners. *Children* are defined as those under 18 years old.	☒ YES

If you have answered YES to any of the above questions, and you are **seeking exemption** from *Full Application for Ethical Clearance*.

SECTION C

Describe (maximum 300 words) what your **research aims** to achieve, **who are the research subjects**, and in what ways it will or will not involve **human or animal subjects**. It should be clear in this statement if your project involves the collection of **culturally sensitive information**.

Please provide details:

The overall aim of this research is to discover what happens to students' English language skills while studying in English-medium classes in UAE universities, how this compares with what instructors and students think happens to students' English proficiency during the 4-years of study, and to make recommendations regarding practices that may help students with their language development. The research will use Zayed University as an in-depth case study.

It will compare initial entry-level IELTS scores with scores obtained after studying for 4 years in English-medium courses at the university. The sample will include as many final year students as possible who entered the university via the foundations courses with an IELTS score in the fall of 2007. Using statistical analysis, the researcher will investigate changes in IELTS scores by looking at both overall scores and individual skill area scores on the IELTS exam along with relationships between scores and area of study.

Participants in the research will be 4th year baccalaureate students and teachers at Zayed University. Along with the collection of data related to the student participants' academic records and use of English-language support services, I will administer a questionnaire and select some participants for interviews which will look at participants' perceptions of language proficiency and development during their time of study. For teaching participants, I will administer a questionnaire and select some participants for interviews regarding perception of students' language abilities, the use of course materials and what accommodations are made due to students' language proficiency. I will also draw on available institutional data (i.e. Graduating Student Survey, IELTS entry /exit scores).

Data collected will not involve culturally sensitive information.

SECTION D

Complete the following questions in relation to this research project, if applicable:		
Research activities do not present more than minimal risk to human subjects Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. Reference 45 CFR 46.102 (i).	☒	TRUE
Selection of subjects is equitable No segment of the population should be unfairly burdened with research involvement; unfairly discriminated against or neglected. It is strongly recommended that teachers do not use their own students as subjects in their research, unless the necessity of this is clearly argued for a particular project.	☒	TRUE
If there is recording of identifiable information, **there are adequate provisions to maintain the confidentiality of the data**	☒	TRUE
If there are interactions with subjects, **there will be a voluntary consent process** (including some type of documentation) that will disclose such information as: - That the activities involve research - The procedures/activities in which subjects will be involved - That participation is voluntary - Name and contact information for the investigator It is strongly recommended that teachers do not use their own students as subjects in their research, as student may feel undue pressure to participate. All subjects must give consent, however **documentation of consent may be waived** if there is no more than minimal risk to subjects; the information collected is not personal, private or culturally sensitive; and the release of the information would not cause harm to the subject. ☐ I request that documentation of the consent process is waived	☒	TRUE
There are adequate provisions to maintain the privacy interests of subjects	☒	TRUE
I have completed the required **CITI human subjects research online training** modules	☒	TRUE

SECTION E

Attach all relevant documentation:		
Copies of all data collection instruments, including surveys, interview questions, etc	☒ YES	
Copy of all consent and information forms, including translated forms, as appropriate	☒ YES	
Copy of any wording, advertisement or script etc intended to use when recruiting subjects	☒ YES	☐ NA
Copy of any ethical approval for co-investigators external to ZU, or collaborative institutions	☒ YES	☐ NA
Copy of CITI human subjects research completion report	☒ YES	
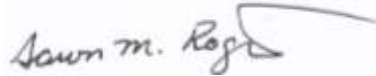
SECTION F

I am aware of the relevant health authority requirements for research involving human subjects and the possible consequences and sanctions for non-compliance.

I agree to a continuing exchange with the ZU Research Ethics Committee (REC) and to obtain approval before making any changes or additions to the project.

I will provide progress reports at least annually, or as requested, and a final report within 60 days of project completion. I agree to report promptly to the REC all unanticipated problems or serious adverse events involving risk to human subjects.

Signature of PI: *Dawn M. Rogers*   Date: January 2, 2011

Attachments: Consent Forms

Information Sheet and Informed Consent *(for collection of academic record data from student files)*
I'm conducting research for my doctoral studies in TESOL at the University of Exeter. My research involves looking at the effects of English-medium instruction on language proficiency. I'd like to ask for your help in completing this project. Please read below for information on the study, what it entails, and to give your informed consent if you decide to participate.

Project Title: Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE.

Researcher: Dawn Rogier (Phone: 02-599-3653 or 050-189-0504 / Email: dawn.rogier@zu.ac.ae)

Purpose of the Study:
The aim of this research is to investigate the effects of English-medium instruction on language proficiency in the context of higher education in the UAE, and look at the perceptions related to language development in this context. This research project will be used to partially fulfill the requirements of an EdD at the University of Exeter and possibly for submissions to academic journals and conference presentations.

What will I be asked to do?
Your participation will involve allowing access to your student academic records which will include entrance exam scores, exit IELTS scores, course of study and GPA. You may also be asked to participate in an online survey and an interview to discuss your views about your language proficiency and studying in English while at Zayed University.

What type of personal information will be collected?
Should you agree to participate in the study, you will need to sign below to give your consent. Information about your entrance exam scores, IELTS scores from this year, course of study and GPA will be collected. This information will be coded with an identification number that will not be traceable to you and any results will be reported for individuals anonymously. The academic data collected about you and any information or responses that you give during the research process will be confidential.

Risks to Participation
There are no known risks to participation. Your participation in this study is completely voluntary. You are free to cease participation from the study at any time.

CONSENT
I have read the above information related to this study and I understand that I am not compelled to participate in this research project, and if I do choose to participate, I may at any stage withdraw my participation. Any information given will be treated as confidential, and the researcher will make every effort to preserve my anonymity.

.............................………………..   ……………………..………………….   ……………………
(Signature of participant)   (Printed name of participant)   (Date)

If you have any concerns about the project that you would like to discuss, please contact:
Dawn Rogier
dawn.rogier@zu.ac.ae
Phone: 02-599-3653 / 050-189-0505

Email for Online Questionnaire for Students

Dear _____,

My name is Dawn Rogier and I am in the process of conducting my doctoral research in TESOL at the University of Exeter. I am conducting a research project on the effects of English-medium instruction on language proficiency of second language learners. The results of this study I hope will help in understanding effects of English-medium instruction in the context of higher education in the UAE.

One phase of the research is to gather information on your beliefs about your language proficiency and how studying course materials in English have affected it.   If you decide to volunteer, you will be asked to complete an online survey. The survey should take no more than about 20 minutes to complete. At the end of the survey, you will be asked if you would be willing to participate in a short follow up interview. Information concerning the confidential and voluntary nature of this study is detailed on the Consent to Participate in Research webpage which is the initial page once you have entered the survey. However essential highlights of the consent include:

- Participation in this study is voluntary.
- There are no known or anticipated risks from participating in this study.
- All comments and responses will be treated as confidential and individual responses will be reported anonymously.

This study has received ethical clearance from the University of Exeter and Zayed University.

This link will take you to the online survey.

 Click here to take survey

If you have questions or would like further clarification regarding this research project please feel free to contact me.

Thanks for your help with this,

Dawn

050-189-0504

Attachments: Consent Forms

Online Consent to Participate in Research: Information Sheet for Student Participation

Research Statement

I am conducting research about the effects of English-medium instruction on language proficiency of higher education students in the UAE.

Your participation will involve completing an online questionnaire designed to indicate your beliefs about how English-medium instruction has affected your English language skills during your four years of study and the need for language support systems. This questionnaire is not expected to take more than 20 minutes to complete. Upon completion of the questionnaire you will be asked if you would be willing to participate in an individual interview to gather more in-depth information on how you feel about studying your subject area in English, your use of language support offered, and how you deal with course materials. By completing the questionnaire, you are under no obligation to also participate in an interview. Your participation in this process is completely voluntary and all information gathered will remain confidential.

Expected Risks and Benefits

There are no known risks associated with your participation in this research. It is expected that this research will benefit you through reflection on your language development over the past four years and your participation may aid in the development of more support services for students in the future.

Confidentiality

All comments and responses will be treated as confidential and individual responses will be reported anonymously.

Voluntary Participation

Your participation in this research project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the process without comment or penalty.

Questions /Further Information

If you have further questions or want clarification regarding this research and/or your participation, please contact:
Dawn Rogier
dawn.rogier@zu.ac.ae
Please print this consent form for your records if you desire.

Do you agree with the conditions of the research and agree to participate?

If so, click the Next button below.

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

Attachments: Consent Forms

Email for Online Questionnaire for Faculty Members

Dear _____,

My name is Dawn Rogier and I am in the process of conducting my doctoral research in TESOL at the University of Exeter. I am conducting a research project on the effects of English-medium instruction on language proficiency of second language learners. The results of this study I hope will help in understanding effects of English-medium instruction in the context of higher education in the UAE.

One phase of the research is to gather information on your beliefs about your students' level of English proficiency, their ability to cope with materials presented to them, and accommodation or support you feel is necessary when teaching your subject to English second language learners at the tertiary level in the UAE. If you decide to volunteer, you will be asked to complete an online survey. The survey should take no more than about 45 minutes to complete. At the end of the survey, you will be asked if you would be willing to participate in a short follow up interview. Information concerning the confidential and voluntary nature of this study is detailed on the Consent to Participate in Research webpage which is the initial page once you have entered the survey. However essential highlights of the consent include:

- Participation in this study is voluntary.
- There are no known or anticipated risks from participating in this study.
- All comments and responses will be treated as confidential and individual responses will be reported anonymously.

This study has received ethical clearance from the University of Exeter and Zayed University.

This link will take you to the online survey.

 Click here to take survey

If you have questions or would like further clarification regarding this research project please feel free to contact me.

Thanks for your help with this,

Dawn

050-189-0504

Attachments: Consent Forms
Online Consent to Participate in Research: Information Sheet for Faculty Member Participation

Research Statement

I am conducting research about the effects of English-medium instruction on language proficiency of higher education students in the UAE.

Your participation will involve completing an online questionnaire designed to indicate your beliefs about your students' level of English proficiency, their ability to cope with materials presented to them, and accommodation or support you feel is necessary when teaching your subject to English second language learners at the tertiary level in the UAE. This questionnaire is not expected to take more than 45 minutes to complete. Upon completion of the questionnaire you will be asked if you would be willing to participate in an individual interview to gather more in-depth information on how you feel about teaching your subject area in English and accommodations that you feel are necessary in delivery course materials because English is a second language for your students. By completing the questionnaire, you are under no obligation to also participate in the interview phase of the research. Your participation in this process is completely voluntary and all information gathered will remain confidential.

Expected Risks and Benefits

There are no known risks associated with your participation in this research. Benefits in participation are purely altruistic in nature as no other compensation is provided. (Your participation may aid in the development of more support services for students in the future.)

Confidentiality

All comments and responses will be treated as confidential and individual responses will be reported in anonymously.

Voluntary Participation

Your participation in this research project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the process without comment or penalty.

Questions /Further Information

If you have further questions or want clarification regarding this research and/or your participation, please contact:

Dawn Rogier

dawn.rogier@zu.ac.ae

Please print this consent form for your records if you desire.

Do you agree with the conditions of the research and agree to participate?

If so, click the Next button below.

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

Interview Consent Forms – STUDENT

Research Information Sheet

I'm conducting research for my doctoral studies in TESOL at the University of Exeter. My research involves looking at the effects of English-medium instruction on language proficiency. I'd like to ask for your help in completing this project. Please read below for information on the study, what it entails, and to give your informed consent if you decide to participate.

Project Title: Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE.

Researcher: Dawn Rogier (Phone: 02-599-3653 or 050-189-0504 / Email: dawn.rogier@zu.ac.ae)

Purpose of the Study:
The aim of this research is to investigate the effects of English-medium instruction on language proficiency in the context of higher education in the UAE, and look at the perceptions related to language development in this context. This research project will be used to partially fulfill the requirements of an EdD at the University of Exeter and possibly for submissions to academic journals and conference presentations. Both Zayed University and the University of Exeter have granted ethical clearance for this research.

What will I be asked to do?
Your participation will involve an interview to discuss your views about your language proficiency and studying in English while at Zayed University. This interview is not expected to take more than 30 minutes to complete. With your permission I will record the interview with an MP3 player. The audio files for these will be securely stored with password protection and will remain confidential.

What type of personal information will be collected?
Should you agree to participate in the study, you will need to sign a consent form.

Expected Risks and Benefits
There are no known risks associated with your participation in this research. Benefits of participation are purely altruistic in nature as no other compensation is provided. (Your participation may aid in the development of more support services for students in the future.)

Confidentiality
All comments and responses will be treated as confidential and individual responses will be reported anonymously.

Voluntary Participation
Your participation in this research project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the process without comment or penalty.

Please see the reverse side to sign for consent to participate.

CONSENT FORM

I have been fully informed about the aims and purposes of the project.

I understand that:

- There is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.

- I have the right to refuse permission for the publication of any information about me.

- The information which I give will be used for the purposes of this research project (which may include publications) and to provide information to the university that may be helpful in evaluating and improving its programs related to student language learning and assessment.

- If applicable, the information which I give may be shared between the researcher and her supervisors of this project in an anonymous form.

- All information I give will be treated as confidential.

- The researcher will make every effort to preserve my anonymity.

.......................…………….. ....
(Signature of participant) (Date)

…………………
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher

Contact phone number of researcher: **+971 50 189 0504**

If you have any concerns about the project that you would like to discuss, please contact:

Dawn Rogier
dawn.rogier@zu.ac.ae

Interview Consent Forms – FACULTY

Research Information Sheet

I'm conducting research for my doctoral studies in TESOL at the University of Exeter. My research involves looking at the effects of English-medium instruction on language proficiency. I'd like to ask for your help in completing this project. Please read below for information on the study, what it entails, and to give your informed consent if you decide to participate.

Project Title: Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE.

Researcher: Dawn Rogier (Phone: 02-599-3653 or 050-189-0504 / Email: dawn.rogier@zu.ac.ae)

Purpose of the Study:
The aim of this research is to investigate the effects of English-medium instruction on language proficiency in the context of higher education in the UAE, and look at the perceptions related to language development in this context. This research project will be used to partially fulfill the requirements of an EdD at the University of Exeter and possibly for submissions to academic journals and conference presentations. Both Zayed University and the University of Exeter have granted ethical clearance for this research.

What will I be asked to do?
Your participation will involve an interview to discuss your views about your students' level of English proficiency, their ability to cope with materials presented to them, and accommodation or support you feel is necessary when teaching your subject to English second language learners at the tertiary level in the UAE. This interview is not expected to take more than 30 minutes to complete. With your permission I will record the interview with an MP3 player. The audio files for these will be securely stored with password protection and will remain confidential.

What type of personal information will be collected?
Should you agree to participate in the study, you will need to sign a consent form.

Expected Risks and Benefits
There are no known risks associated with your participation in this research. Benefits of participation are purely altruistic in nature as no other compensation is provided. (Your participation may aid in the development of more support services for students in the future.)

Confidentiality
All comments and responses will be treated as confidential and individual responses will be reported anonymously.

Voluntary Participation
Your participation in this research project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the process without comment or penalty.

Please see the reverse side to sign for consent to participate.

Attachments: Consent Forms

<u>CONSENT FORM</u>

I have been fully informed about the aims and purposes of the project.

I understand that:

- There is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.

- I have the right to refuse permission for the publication of any information about me.

- The information which I give will be used for the purposes of this research project (which may include publications) and to provide information to the university that may be helpful in evaluating and improving its programs related to student language learning and assessment.

- If applicable, the information which I give may be shared between the researcher and her supervisors of this project in an anonymous form.

- All information I give will be treated as confidential.

- The researcher will make every effort to preserve my anonymity.

...........................………………..   ....
(Signature of participant)   (Date)

…………………
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher

Contact phone number of researcher: **+971 50 189 0504**

If you have any concerns about the project that you would like to discuss, please contact:

Dawn Rogier
dawn.rogier@zu.ac.ae

CITI Collaborative Institutional Training Initiative

Social & Behavioral Research - Basic/Refresher Curriculum Completion Report
Printed on 12/7/2010

Learner: Dawn Rogier (username: dmrogier)
Institution: Zayed University
Contact   Department: Office of Enrollment Management
Information   Email: dawn.rogier@zu.ac.ae
Social & Behavioral Research - Basic/Refresher: Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in Social/Behavioral Research with human subjects.

Stage 1. Basic Course Passed on 12/07/10 (Ref # 5320946)

Required Modules	Date Completed	Score
History and Ethical Principles - SBR	12/06/10	4/4 (100%)
Defining Research with Human Subjects - SBR	12/06/10	5/5 (100%)
Assessing Risk in Social and Behavioral Sciences - SBR	12/06/10	5/5 (100%)
Informed Consent - SBR	12/06/10	5/5 (100%)
Privacy and Confidentiality - SBR	12/06/10	5/5 (100%)
Zayed University Institutional Page	12/06/10	no quiz
Elective Modules	**Date Completed**	**Score**
Internet Research - SBR	12/07/10	4/4 (100%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Research Ethics Committee (REC)
Proof of Ethical Clearance

Chair of the Research Ethics Committee
Zayed University

Dawn Rogier
Senior Coordinator
OFM
Zayed University
Abu Dhabi, UAE

Date	16ᵀʰ February 2011
Ethics Application Number	ZU11-001-F
Research Title	Effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE
Submitted Form	☐ Full Application for Ethical Clearance ☒ Exemption from Full Application
Valid until	15ᵗ February 2012

Dear Dawn,

Thank you for submitting the above mentioned research proposal to the Research Ethics Committee at Zayed University. The following submitted documents were reviewed:

1. Exemption from full ethical clearance application form
2. Information sheets and consent forms
3. Certificate of ethical research approval, University of Exeter, Graduate School of Education
4. Data collection instruments
5. CITI completion report

The project was discussed at Research Ethics Committee meeting held on the 11ᵗʰ January 2011, and I am pleased to advise you that that Committee has granted

☐ Full Ethical Clearance	☒ Exemption from Full Ethical Clearance

The following Committee members and Office of Research representatives were present at the meeting when your study was discussed:

Dr Brigitte Howarth (Chair), Assistant Professor, College of Arts and Sciences, Natural Science and Public Health
Dr David Palfreyman, Associate Professor, University College
Dr Gaelle Duthler, Associate Professor, College of Communication Sciences
Dr Grant Regan, Senior Consultant (Ex-officio ICF)
Dr Mercedes Sheen, Assistant Professor, College of Arts and Sciences, Natural Science and Public Health
Dr Sadiq Midraj, Assistant Professor, College of Education
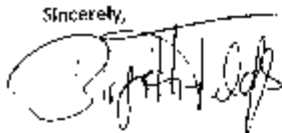**Birgitta Feldges**, Post-Award Research Specialist (Recorder, Ex-officio Office of Research)

Notes from Committee	n/a

Approval is given on the understanding that the Principal investigator reports the following to the Office of Research at Zayed University:

- Any amendments or significant change that occur in connection to the study which may alter the ethical consideration, such as
  - any serious or unexpected adverse events, and
  - any unforeseen events that might affect the continued ethical acceptability of the project

- Any proposed changes to the research protocol or the conduct of the research
- Premature suspension or termination of the study

On behalf of the Committee, I wish you success with this study.

Sincerely,

Birgitta Feldges on behalf of
Brigitte Howarth, Ph.D.
Chair, Research Ethics Committee
Zayed University

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Appendix H: English Language Learning Outcomes Matrix

English

ZU graduates will be able to communicate effectively in English and Modern Standard Arabic, using the academic and professional conventions of these languages appropriately.

Indicator	Criteria	LEVEL Beginning	Developing	Accomplished	Exemplary
1. Comprehension of Written English (Reading)	1.1. Comprehension of a range of written text types	Can extract most key information and some of the supporting details from a range of written texts designed for an educated non-specialist reader.	Can extract all the key information and most of the supporting details from a written text designed for an educated non-specialist reader.	Can identify and comprehend key points of profession-specific texts.	Can identify and comprehend key points, supporting points, and inference.
			Can extract some key information and supporting details from a subject-specific text	Can identify different profession-specific text types, and understand purpose and aims of each.	Can identify different profession-specific text types, and understands purpose, aims, and is able to identify biases of each.

Indicator	Criteria	LEVEL Beginning	Developing	Accomplished	Exemplary
	1.2. Awareness of source	Can identify bias and judge reliability of non-specialist academic source materials to a limited extent.	Can identify bias and judge reliability of non-specialist academic source materials. Can evaluate bias and reliability in specialist academic texts to a limited extent.	Can comprehend graphic channels most commonly used in the professional field. Can identify bias and reliability in the text/source.	Can comprehend the full range of graphics used in the professional field. Can accurately critique quality, reliability, and bias of text/source.
2. Production of Written English (Writing)	2.1. Range of text types	Can write academic essays or reports of 500-800 words, and appropriate semi-formal emails to make requests or ask for clarification.	Can write a simple research paper of 2500-3000 words, using APA referencing style.	Can produce most frequently used, non-technical/non-specialist professional texts. Can select most appropriate text type for context, purpose, aim, and audience.	Can produce the full range of non-technical/non-specialist professional texts. Can use channels in combination to ensure communicative effectiveness.
	2.2. Use of sources (appropriate and accurate)	Can quote source material accurately, and attempt to paraphrase/summarize sources. APA referencing style is mostly well-organized and accurate, although it may be overused.	Can quote source material accurately and paraphrase/summarize with reasonable accuracy. APA reference style is well organized and accurate.	Can appropriately use templates, boilerplates, and reference materials. Can use reference style of professional field.	Can accurately use reference style of professional field and explain structure of reference style.

Indicator	Criteria	LEVEL Beginning	Developing	Accomplished	Exemplary
	2.3. Organization of text (coherence and clarity)	Can write a text that is mostly coherent and logical in its organization though it may lack clarity in places.	Can write an extended text that is mostly coherent and logical in its organization though it may lack clarity in places.	Organization style used is appropriate/logical for text type, context, purpose, aim, and audience and is accepted in the professional field. Ideas sequenced into a single, logical pattern appropriate for the topic, audience, and text type. Transitions aid coherence and logical flow.	Organization employs text and graphic elements that complement each other, are appropriate/logical for text type, context, purpose, aim, and audience, and are accepted in the professional field. Can convert existing text into different organizational style without changing integrity of text (purpose, aim, intention, tone).
	2.4. Sentence structure, grammar and punctuation (accuracy)	Can write well-controlled simple and compound sentences and attempt complex sentences. Basic grammar structures are reasonably accurate; there are frequent errors with more complex structures.	Can write well-controlled simple, compound and complex sentences. Basic grammar structures are well-controlled; there are some errors with more complex structures.	Can write neutral and good news messages that are grammatically correct with clear, accurate, and focused purpose and aim that follow the rhetorical style of the text and the professional field. Errors identifiable but do not impede communication. Content is relevant, focused, concise, complete, and accurate.	Can write negative and/or contentious messages and make requests that are grammatically correct with clear, accurate, and focused purpose and aim that follow the rhetorical style of the text and the professional field. Errors do not impede communication and may go unnoticed unless sought out. Can accurately apply mechanical structures to create appropriate tone.

| Indicator | Criteria | LEVEL | | | |
		Beginning	Developing	Accomplished	Exemplary
	2.5. Vocabulary (accuracy and appropriateness)	Can use a range of basic and academic vocabulary with reasonable accuracy.	Can use a range of basic, academic and subject-specific vocabulary with reasonable accuracy.	Can appropriately employ jargon and technical terms of the professional field.	Can appropriately employ jargon and technical terms of the professional field to make the written product more concise. Can accurately apply vocabulary to create appropriate tone.
3. Production of Written English (Writing)	3.1. Understanding of audience	Can write texts that demonstrate limited awareness of audience.	Can write texts that demonstrate some awareness of audience.	Shows consideration of contextual factors (cultural, social, chronological, linguistic, physical) impacting intended primary audience. Shows intention of sensitivity to audience through tone. Can apply understanding of contextual factors (cultural, social, chronological, linguistic) impacting intended primary audience to manipulate mechanical structures, organization and vocabulary to assist decoding.	Can rewrite existing text to meet needs of alternate audiences without changing integrity of text (purpose, aim, intention, tone). Tone displayed meets audience needs. Can apply understanding of contextual factors (cultural, social, chronological, linguistic) impacting intended primary audience to manipulate mechanical structures, organization and vocabulary to ensure achievement of aim(s)
4. Comprehension of Spoken English (Listening)	4.1. Comprehension of a range of spoken text types	Can extract most key information and some of the supporting details from a range of spoken texts designed for an educated non-specialist listener.	Can extract all the key information and most of the supporting details from a spoken text designed for an educated non-specialist listener. Can extract some key information and supporting details from a subject-specific presentation.	Can identify oral text type, purpose, and aim of speaker.	Can identify rhetorical devices employed by speaker. Can predict direction and structure of speaker's presentation.

| Indicator | Criteria | LEVEL | | | |
		Beginning	Developing	Accomplished	Exemplary
	4.2. Awareness of speaker's stance.	Can identify bias and alternative points of view to a limited extent.	Can identify bias and judge reliability of non-specialist academic source materials. Can evaluate bias and reliability in specialist academic presentations to a limited extent.	Can ascertain relational message through analysis of context, vocabulary and vocal elements. Uses verbal and nonverbal signals to communicate understanding.	Can ascertain bias, hidden messages/agenda, and tacit information through analysis of context, vocabulary, and vocal elements. Uses verbal and nonverbal signals to communicate respect and understanding. Uses appropriate devices (questions, paraphrase, non-verbal communication) to ensure and to communicate understanding.

Source:

Zayed University (n.d.). Assessment of Student Learning. Retrieved August 25, 2011, from http://www.zu.ac.ae/main/en/_assessment_resource/assessment_student_learning.aspx

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