

**ENGINEERS IN QATAR AND LANGUAGE DIVERSITY:
APPLICATIONS FOR TRANSNATIONAL ENGINEERING EDUCATION**

An Undergraduate Research Scholars Thesis

by

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ABSTRACT

Engineers in Qatar and Language Diversity: Applications for Transnational Engineering Education

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This research looks at the cross-cultural communication practices, in particular those related to languages, used by engineers working in Arabian Gulf multinational corporations. Cross-cultural communication was particularly chosen to be the focus of that research as it is needed in any field, not only engineering, and an important skill that students from different backgrounds should have to excel in their careers in a global setting. Language is particularly of interest in this region of the world as more than fifty percent of the students currently enrolled at TAMUQ have a first language different from English, and they are living in Qatar, where Arabic is the official first language. At the same time every day they go out to either work in a predominantly English environment or go to classes at an American Institute. This environment makes them shift between languages daily, and over time they start losing skills of their own native language. Some of the questions this research is trying to answer are how do the alumni use language, English and their mother tongue, daily compared to undergraduate students? And, what can individuals and institutions do to protect their own language? The study is based in Qatar, where Texas A&M University one of the branch campuses is located. In this project interviews were used to study the different languages practices used by the engineering Aggie

alumni, as well as current students. The outcome of this research will take the form of a list of recommendations directed at individuals, educational institutions, and to companies on how each of them can implement practices that both preserve languages and promote cultural diversity.

Thesis Hypothesis

There is a risk of individuals losing portions of their native language written and oral communication skills as they work and live in a global setting. Those risks can be reduced by following some practices and suggestions in one's day.

Theoretical Framework

The fields of engineering education and language education, particularly research on experiential and active learning, will be the pillars driving the theoretical framework of the research.

DEDICATION

I dedicate this thesis to CTL, with all of its people and tutors. The place that became my comfort zone and the second place I like to be at after my room. The place that took in my little project and helped me make it a reality. Everyone of you supported me with a smile, a hug, or a help session. Thank you.

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ABBREVIATIONS

CHEN	Chemical Engineering
ECEN	Electrical Engineering
MEEN	Mechanical Engineering
PETE	Petroleum Engineering
TAMUQ	Texas A&M University at Qatar

INTRODUCTION

Many engineering educators are discussing the subject of cross-cultural communication lately, and many universities and educational systems are more aware of the importance of soft skills development for today's engineers. A lot of emphasis is put on how to better prepare the engineering students to join the global workforce, and a lot of those research projects are focusing on the importance of languages, and particularly English.

Some research in the area of cross-cultural communication expressed how the students were not prepared to effectively communicate in the workforce as they are still developing their English language skills. These examples include the group of researchers looking at engineers in China (Gilleard & Gilleard, 2002); another similar research was done in Japan (Danielewicz-Betz & Kawaguchi, 2014). While students in East Asia have fewer opportunities to practice the English language, the case in Qatar is very different, where students attend all classes, labs, and lectures in English, and also speak English in their interaction with their colleagues most of the time. Even those who are not English native speakers still communicate in English as they don't all share the same native language.

Those facts direct our attention that the engineering students here in Qatar and in the region are in a unique situation, and in order to develop their cross-cultural communication skills they need a special consideration, as the research out there does not necessarily apply to them. The background information collected were either directed toward native English speakers (Abu-aisheh, Congden, Manzione, & Sumukadas, 2016), or non-native English speakers who didn't master the English language during their time at university (Gilleard & Gilleard, 2002).

Given the unique diversity of the engineers in Qatar, and the array of different uses of language those engineers experience both at work and in their daily life, this research is aiming two main questions, first is how do the alumni use language, English and their mother tongue, daily compared to undergraduate students? The second question builds upon the results from the first question on what shall be done on the individual and the institutional level to protect the language.

This research would like to emphasize the importance of preserving one's native language proficiency while developing his/her proficiency in English. In the move towards Globalization, it is important to protect one's identity. Also, it is important to develop awareness about where different nations are on the global scale, to better prepare engineers to what they should expect in the workforce. For example, if a native English speaker engineer from the U.S. joins an engineering firm based in Qatar, he/she will have a better understanding of the diverse culture his/her Qatari colleague is coming from.

CHAPTER I

CONTEXT AND LITERATURE REVIEW

Context of the Study

Before delving into the details of the study, it is important to understand the context in which it is placed. This study was done in Qatar, where one of the branch campuses of Texas A&M University is located. Qatar is a peninsula located in the Arabian gulf in Asia. It is 4440 square miles (“Qatar’s National Profile | Visit Qatar,” n.d.), which is about sixty times less the area of Texas. The population is about 2.7 million (“Qatar’s National Profile | Visit Qatar,” n.d.) comprising both nationals and expatriates. The official language of the country is Arabic (Sawe, 2017) even though Arabic didn’t become the official language to be used in governmental entities until January of 2019 (“Amir Issues Law to Protect Arabic Language - Hukoomi - Qatar E-government,” 2019).

TAMUQ the branch campus was founded in 2003 (“Texas A&M University at Qatar | Home,” n.d.) and only offers engineering disciplines. The four engineering majors offered are Mechanical, Electrical and Computer, Chemical, and Petroleum engineering. In addition, the campus offers a graduate degree in Chemical engineering. The female percentage of the students is as high as 43% (“Texas A&M University at Qatar | Home,” n.d.) and on the rise.

The use of language at the institute is of a particular interest as 45% of the student population are international students (“Texas A&M University at Qatar | Home,” n.d.). The other 55% are Qatari students whom native language is Arabic. Also, the international students don’t all share the same native language. TAMUQ students represent over 40 nationalities (J.L. Bolch, personal communication, October 31, 2018). There is an interesting shift of languages and

cultures that those students experience every day. They leave their home and native language behind, and they spend about half of their day at an American institution whose official language is English, while interacting with a mixed group of international and local students. Then another shift happens at the end of the day when they leave the American institution and the Aggie culture and head either to their home and homeland culture or to a third hybrid culture in their dorm where they are likely living with international students.

Defining Communication Skills

Before delving into the details of this paper, it is important to define its scope. Per the Oxford dictionary, communication is “The imparting or exchanging of information” (“Definition of communication in English,” n.d.). Communication can take many forms, oral, written, visual, and cross-cultural. Oral communication usually involves public speaking, delivering a presentation to an audience, or even talking via phone to colleagues or clients at work. Written communication at work involves writing reports, emails, and memos. Visual communication in engineering usually takes the forms of sketches and drawings. On the other hand, cross-cultural communication doesn’t take a physical form. It can be exhibited in all of the other communication methods previously mentioned, as well as integrating linguistic skills, and a wide range of human relations skills (Marc J. Riemer, 2007). As these communication methods vary a lot, this paper will mainly focus on cross-cultural communication. Nevertheless, written and spoken communication will be analysed later in this paper, but it will be used as a mean to understand how communication happens across cultures.

Why Communication Skills Are Important

The first importance of having good communication skills, especially to engineers, is to be able to communicate ideas and thoughts to others. Engineering is a profession highly

dependent on team work, and one engineering project usually involves many teams. Clear communication will make sure that knowledge doesn't get misinterpreted. Another challenge that engineers face in today's world is working in inter-disciplinary and multinational teams (Committee on the Engineer of 2020, 2005). Not only they are required to communicate technical knowledge to multiple audiences, but they need to communicate across cultures.

The importance of communication skills to engineers became a wide spread subject recently. To mark its importance, many organizations and universities started having courses dedicated to address that subject. To mention a few, *Communication Skills for Engineers*, the online course offered by Rice university (Rice University, n.d.). Another course under the same title offered by The Royal Institute of Naval Architects (RINA, n.d.). The establishment of such programs and many more reflects an increasing need for effective communicators in the engineering workplace.

Why Cross-Cultural Communication?

Besides narrowing down the scope of the research, cross-cultural communication was particularly chosen as it is considered one of the most important skills to become a global engineer (Riemer, 2002). Cross-cultural communication involves different aspects like language, identity, inclusiveness, and respecting other people's cultures. As these are many different aspects, this research will focus on language mainly. Language in itself also has an effect on identity and inclusiveness. But the main handling of the data in the research will be done using the lens of languages.

According to the literature review done for this research, there is not any other similar research projects that are focused on Qatar. Only one other research project was based in Lebanon (Ramadi, Ramadi, & Nasr, 2016), an Arabic speaking country with a diverse

population. Still, the situation in Qatar is very different with people from 87 different nationalities living in the country (Snoj, 2017). Around the world, many similar researches have been done, especially those looking at the intersection of language and identity. Researches from Poland and Denmark raised a similar concern in their research about cross-cultural communication in engineering (Chojnacka & Saryusz-Wolski, n.d.). Here lies the importance of this research as it looks at a unique area, and it also handles a subject that has not been offered in the country before.

Difference between Writing and Speaking a Language

On the biological level, writing and speaking are categorized as two different activities by the brain. Even though they both involve language, and represent a mean to communicate, they come from different parts of the brain (Kellogg, 2015). An example on that is sometimes we may write a grammatically incorrect sentence, but when we say it out loud we say it correctly. A research paper titled *What We Write May Not Be What We Say* supports this phenomena and give it the name ‘orthographic independence’. This paper won’t delve further into the biological side of language development, but it is important to mention the differences between writing and speaking as many of the participants in this research expressed that for them speaking a certain language is easier than writing it.

Scholars have two different point of views on the relationship between speaking and writing in a language. Some argue that the oral language is related to the written language, and written is simply a replica of the spoken written down, while others argue that the spoken form of the language moved a long way from the written one (Kroll, 1981), like in the case of the Arabic language. Even though these are two different relations between speaking and writing, we can’t deny that there is a relation between the two. Scholars called this relation a ‘developmental’

relation, as in that if we improved one of these two forms, the other will develop too (Kroll, 1981).

Language and Identity

Identity can be defined in many ways, and there are many scholars and philosophers who discussed what is identity. As this is not the main focus of this research, one definition only will be given, keeping in mind that it is not the only one. Identity refers to “the ways in which individuals and collectivities are distinguished in their social relations with other individuals and collectivities” (R. Jenkins, 1996). There are also different dimensions to identity, it can be social identity, sociocultural identity, cultural identity, and ethnic identity (Norton, 1997).

Scholars in the field of sociology claim that identity “constructs and is constructed by language” (Norton, 1997). In each of the identity aspects previously mentioned, language has a clear contribution. Also, identity in part is formulated by communication, and as language, or ‘text’ is a form of communication, it is a representation of identity (Morgan & Clarke, 2011). Our daily language practices form us as humans, as they shape the way we think of ourselves and of the world around us (Morgan & Ramanathan, 2005).

English as a Killer Language

English language was named by language experts as the number one cause for other languages’ death (J. Jenkins, 2003). The main reason for that is more and more people have acquired English bilingualism for economic and scientific reasons but didn’t necessarily keep using their native language. English is seen as a form of power, where if you want to have a higher-level job, or publish and be read by more people, you have to know English. English became ‘The global language’. It didn’t only spread geographically over many areas in the

world, but it became the official language for multi-national companies, conferences, and the lingua Franca for science (Gil, 2010).

In a global context, English is the accepted language for communication, where 20% of the world population speak it (Lyons, 2017). Even though some people might consider the spread of English as a form of cultural imperialism, this is not only perspective on the use of English by non-native speakers. People from different nations and backgrounds have means to communicate with each other and succeed in their careers through English, but some face the problem that sometimes in the process of gaining knowledge in the English language, people over time might lose skills of their own language.

Language Preservation

The core of this research revolves about language, as language is not only a means of communication, but it is also a representation of one's culture and identity. Due to its importance, language should be preserved. If not preserved, there is a chance that this language will die and forever forgotten. There are estimates that over the next century, two languages will die every month (J. Jenkins, 2003). Although languages don't die overnight, any early signals if noticed and remedied will help not to reach a point where nothing can be done to save the language.

Perseverance Vs. Preservation

Some scholars argue against the concept of preservation itself, saying that a language is dynamic, and preserving it indicates it is a constant that doesn't change over time. Ellen Cushman, who is a professor of writing and American culture was looking into the endangered language of Cherokee people when she came up with the importance of language perseverance rather than preservation (Cushman, 2013). An evidence of this point can be seen in the Arabic

language, where the daily spoken Arabic became very distinct from the classical written one. Over time, the language evolved while the written one remained 'preserved'. This is an important point to keep in mind when coming up for recommendations about language protection later on in this paper.

CHAPTER II

METHODOLOGY

Data Collection

The data used for the results and recommendations section in this research will be extracted from interviews that has been previously administered for another research project (Hodges, Javiad, & Abdalla, 2018). The interviews were run over the period of two years, from 2014 to 2016. Thirty interviews in total were done (the interview questions can be found in the appendix). Fourteen interviews were done with current undergraduate TAMUQ students (at the time), and sixteen with TAMUQ alumni who work at a range of different industries. Each interview was approximately 30 minutes long. The interviews were conducted by undergraduate researchers who were involved in a research project at the time. It is important to mention that all people who were interviewed were located in Qatar, as this is the location of the institution. The alumni interviews were contacted through the outreach department at TAMUQ. The survey was IRB approved under the number 2018-0740.

Preliminary Analysis

This step in the methodology was followed as a direct suggestion from the book *Becoming a Writing Researcher* (Blakeslee, 2010). Before the data was analyzed, all of the interviews were transcribed, then all real names of the interviewed people were randomly changed to maintain their anonymity. Meanwhile, the names of the companies were kept unchanged, because knowing the company, and its industry specialization is believed to be important and will affect the way the results are analysed. All of the transcripts were read to fill in gaps that were missed from the recording.

Coding

To be able to analyze the data collected, a coding system is used to look for relevant information to serve the purpose of the research. The coding software Dedoose (“Dedoose,” n.d.) was used as a data analysis tool. The coding was done in two iterative cycles. The first cycle involved going through all of the interviews to notice general trends forming about cross-cultural communication. After that all relevant information was highlighted under the code titled ‘languages ’in the software. This code looked at all information mentioned in the interviews that is relevant to languages, either spoken or written.

Analysis

After coding the data, recurring themes emerged that were related to cross-cultural communication and languages. Beyond the instances where the interviewees explicitly state the languages in which they write and speak, the following themes were noticed. First, in most cases the participants felt more comfortable writing in English, regardless of their native language. Secondly, the engineers who ended up working in governmental agencies (in Qatar) expressed that the main language used for documents is English, and not Arabic (the official language of the country). That particular theme was noted as it came in opposition to what the hypothesis of the thesis.

CHAPTER III

RESULTS

As we are looking at languages, we will mainly look at languages used by the engineers for writing and speaking. The writing component will include both formal and informal writing. The formal writing includes official documentation done for work like memos, emails, reports, etc. The informal writing looks at day to day communication through texting and posting status on social media. In terms of speaking, both speaking at work, and elsewhere e.g. at home will be considered. That was done just to show the different trends those engineers follow in their daily life.

To show the language diversity of the participants, table 1 below summarizes the languages that the industry participants spoke or wrote in.

Table 1: Language Diversity of Alumni

Pseudonym	Gender	B.S. Degree	Spoken and Written Languages
Abdullah	M	CHEN	Arabic, English, some Spanish and French
Ali	M	ECEN	Arabic, English
Ammar	M	MEEN	English, Urdu
Dana	F	ECEN	Arabic, English, some French
Hamad	M	PETE	Arabic, English, Norwegian
Hassan	M	ECEN	Urdu, English, some Arabic
Maryam	F	ECEN	Arabic, English
Riya	F	CHEN	English, Hindi
Saad	M	Unknown	Arabic, English
Tariq	M	MEEN	Arabic, English, some French

Writing in English, Speaking in Native Tongue

During the course of this research, many of the interviewed engineers expressed how by time they prefer writing in English rather than in their native language. They didn't necessarily express that in terms of a concern that they no longer practice writing in their native language. Overall, this change might started to happen over time as the engineers started depending on English more and more to communicate, whether that was in school attending classes, or later when they joined the workforce. There was no need at any point in time to communicate in a written form using their native language, especially in a formal setting.

Saad, a Jordanian student whose native language is Arabic, who is working as a project manager, said the following when asked about the use of language in his daily life "when speaking, probably Arabic, but when writing, definitely English." He wasn't the only one who preferred to speak in his mother tongue, but to write in English. Another Qatari engineer who works as Joint Interest-Facilities Advisor, meaning that he provides technical support to engineering facilities, when asked about the language he feels most comfortable in when writing, he replied "Surprisingly enough, English. More than my own language".

Riya, a chemical engineer and a native Hindi speaker expressed a similar idea "The mother tongue was commonly used for speaking and we still use it at home for speaking, but it was never predominantly used for writing because one school was in all English, university was all English. The work place where we spend most of our day now is English. So we just got used to it." Another engineer expressed a similar problem on how it is difficult for him to convey information in his native tongue "if want to, to get a point across through, through using the Arabic words, it's difficult."

There is a trend noticed among the interviewed engineers that for them they still practice speaking in their native tongue as well as in English. They almost get a chance daily to speak both. While in the case of writing, over time expressing their thoughts in English became easier, and that can be contributed to the fact that overtime they don't need in any situation to use the written form of their native language.

English Communication in Governmental Agencies

Ali, a Qatari engineer who works at the ministry of finance said "I prefer to talk in Arabic, but I prefer to write in English." Even though Ali works at a governmental entity he still uses English to communicate with Arabic speakers around him. In his interaction with the minister he said "I do most of my reports in English, and I submit it to His Excellency in English, even though I know we'll both Arabic speakers".

Perspective of Undergraduate Students on Use of Language

In order to find the point where the engineers started to stop writing in their native language and write mostly in English, the writing practices of current undergraduate students will be examined. That is necessary not only to identify the source of the problem, but to also see if the time students spend at university affected their preferences of language in any way.

Arjun, an Indian student who was born and raised in Qatar, and who was a freshman at the time of the interview said that "I stopped writing in Hindi a long time ago." For him that was in grade ten. When asked about the reason behind that he said "I don't find it necessary nowadays to write in Hindi". Faisal, a Qatari mechanical engineering student expressed a similar thought when he was asked about the communication modes he uses daily "I speak Arabic and I used to do a lot of Arabic writing, but I stopped since I came here". He followed that note by saying that even the personal writing he does, like creative writing in his diary not done for any

of the classes changed to be done in English too “I can’t, sometimes I can’t find the expression that I want to use in Arabic, but I could find it in English”.

That latter point was particularly surprising to the researcher, as one might expect that personal writing, or writing in a diary not intended to be published or read by anyone else one will do it in his/her mother tongue. Further investigation and reflection on this point, and the use of language in formal and informal settings is done in the discussion in the upcoming section.

CHAPTER IV

DISCUSSION

After looking at the results, the main themes that emerged revolved around the participants continuing to use their native tongue in their daily life for informal speaking, and mainly English for both formal and informal writing. That phenomenon was traced back to undergraduate students to see if a similarity is shared. Another part of the results looked at the use of language in governmental agencies, and how the official language of the country was not the one commonly used for written communication.

In this section, the themes that emerged from the results will be looked at more closely and analysed to discuss their significance, and what recommendations can be taken from them.

Language Use in Different Modes: Writing and Speaking

Overall, the professional engineer participants, regardless of their native language, generally expressed that speaking is easier done in their mother tongue, but when it comes to writing they all preferred English. The participants had comments like:

” When speaking, probably Arabic, but when writing, definitely English.”

In the case of formal writing, the vast majority of documentation and writing at the workplace, even at the governmental institutes, is done in English. The engineers do not get many chances to practice professional writing in their own language, which explains why over time the engineers preferred writing in English. They perform it everyday, and over time their skill level improves, which makes writing in English easier for them. One participant commented the following when asked about the languages he uses for writing and speaking:

“I’ll speak in English and Urdu. Write. I can write Urdu, I just don’t end up in settings where I would write it.”

On the other hand, in the case of informal writing, it is harder to reason why the participants use English rather than their own language. Informal writing reflects personal thoughts and opinions, when it is done it is not done for a job assignment or wouldn’t necessarily include technical terms, but still the participants did it in English mainly. One example from the interviews went as follows:

Q. “Do you text or do social media in Arabic or is it mostly in English?”

A. “Ninety-nine percent English.”

Q. “Okay. And is that a conscious choice you made or just ... ? “

A. “It’s just easier for me.”

In the case of speaking, the participants generally tended to speak in their mother tongue outside of the workplace with family and friends. Overall in their day, they got the chance to practice their own language, whether that is spoken over the phone or spoken at the supermarket with the vendor.

Q. “Does it differ when you speak to your friends, and parents?”

A. “I most, I mostly use Arabic, unless I was spoken to in English.”

That makes the way the participants approached writing and speaking very different. For the first mode of communication, they diverged away from using their language, while with speaking they continued using their language. That can be justified, at least in the case for Arabic native speakers as writing and speaking in Arabic don’t follow the same grammar and vocabulary rules.

In the case of Arabic language, Modern Standard Arabic (MSA) is different from classical Arabic. MSA is generally used for speaking, while in writing the classical one is mostly used (“Quranic Arabic vs. Modern Standard Arabic | Arab Academy,” n.d.). Both versions use the same letters and alphabet, but the grammar and the vocabulary are different to an extent. In Arabic, each country has its own dialect, that is different to an extent from another Arabic dialect e.g. Egyptian Arabic vs. Qatari Arabic. Both are Arabic, and if an Egyptian person spoke in ‘Egyptian’ to a Qatari person they will understand each other, with the exception of possibly a few words. If the same two people were to write down what they want to express instead of speaking it, they will do it in the classical Arabic, which wouldn’t be close to what they spoke. They will have to use a more formal grammar and another set of vocabulary that is to an extent different from what they shared with each other when speaking. That might be another reason for not writing in one’s native language at least for Arabic speakers, as the written format of the language is harder than the spoken one as it is not practiced everyday or heard in conversations (expect on a formal news report for example), on the contrary of English where the spoken and the written forms are similar to each other.

A small illustration is given below to clarify the idea to the reader, especially if they did not have any interaction with Arabic speakers before or have never heard a conversation in Arabic. The answer to the question ‘How are you?’ is recorded in different Arabic dialects and compared to the classical or ‘written’ Arabic.

A. Good. What about you?

Egyptian: Koisa, w enta?

Qatari: Elhamdulelah, enta shlonak?

Lebanese: Ca Va, enta keefak?

Classical Arabic: Bekhair, matha aanka?

From this little sentence we can notice that when speaking, the three hypothetical Arabic speakers in the above example will respond using different words (one of them is even using French) and grammar (the position of the word 'you' in 'what about you' differed from the dialect format to the classical format).

Origins of the Divergence

After going through the interviews that were done with alumni working in the industry, a common theme emerged that majority of non-native English speakers practice writing solely in English but continue to speak in their native tongue besides English. This finding raises some concerns about the preservation of other languages and what actions participants might take to retain their fluency in languages besides English. Thus, the interview data from undergraduate students was analyzed in order to identify when this change started to happen. . Some of the questions that looking at undergraduate students' data helped answering were: Did this divergence only happen after the alumni join the industry? Or was it already happening during their time at university? And if the latter is true, did the university somehow helped in spreading that phenomena?

Majority of participants said that they approach writing and speaking exactly the same way as the alumni. They write in English only, but they still speak their own native language with their friends and family. They even still use their native tongue sometimes at the university to communicate orally with their colleagues who share the same background. One of the undergraduate students commented the following when asked about the language he used:

Q. "Okay, so you were kind of speaking Arabic and English at the same time?"

A. "Yeah. So English at school and out with friends and Arabic at home mostly. "

Q. “What about personal writing? Social media, texting ... ?”

A. “All English.”

Surprisingly, not writing in their native language wasn't only about writing done for academic purposes, because in that case it will be understandable as English is the official language for all classes, but they use English for personal writing too. English by time became easier for those students as a mean to find the right words that express their mind. When of the undergraduate Qatari student expressed the following:

Q. “So was your personal writing in English or in Arabic? “

A. “It used to be in Arabic, but then it changed to English because quite frankly, some ... I can't, sometimes I can't find the expression that I want to use in Arabic, but I could find it in English and just kind of weird.”

Communication in Governmental Agencies and Identity

As Arabic is the official language in Qatar (Sawe, 2017), the researcher expected that governmental agencies, being a representation of the country and a public domain, will use the country's official language in its communications. It was particularly surprising when it was mentioned by a native Arabic speaker working at a Qatari governmental institution that he uses English in all of his communication with the minister. Further research will need to be done to verify if that is the case in all of the other governmental agencies. It was assumed here that it is the case for other governmental entities, as if there was a law about having to use Arabic, we wouldn't have got this case at this particular ministry where the interview was done.

This finding can be justified from the perspective that the government is being practical about its choice of language. As English is increasingly used in different parts of the world, the government might have wanted to train everyone involved to produce documents and to clearly

communicate using English, so if at any moment they need to share documents with another country, or send employees abroad in a country representation mission, they will be prepared. Also, as governmental institutions are similar to some extent to a company, they have to use technical terms, and more of their employees are getting an education in English, so it is more convenient to use English.

Recently, a decision came out from the Qatari Amir to use Arabic as the main language of communication within governmental entities. The law's main purpose as titled by the government is to 'Protect Arabic Language' ("Amir Issues Law to Protect Arabic Language - Hukoomi - Qatar E-government," 2019). The measure will protect the language in terms of having all communication, written and spoken, done in Arabic. That won't only make sure that the language survives, but will make the people working at those institutions more aware of their choice of language, and keeping their native language skills proficient. Also, it will reflect an image to the rest of the public that Arabic matters. Similar measures around the country have been recently implemented. As of August of 2018, all of the colleges in Education City (Education complex in Qatar in which Texas A&M branch campus is located) have in front of them a sign written in both Arabic and English indicating their name.

Many other countries around the world has taken similar measures to protect their languages, and that didn't only include non-English speaking countries, but included the U.S. too ("Protecting Languages | Globalization101," 2017). Some of those measures included a law in the Germany in the constitution to make German 'The language of the state' . In France, the government rejected the use of some English trending words e.g hashtag and replaced them with the French equivalent, and in Canada's French speaking area, ("German Conservatives Want Linguistic Law to Protect Language | Germany| News and in-depth reporting from Berlin and

beyond | DW | 13.05.2006,” n.d.). Quebec, the government put a law that any public sign written in English should also include the same text in French. (“Protecting Languages | Globalization101,” 2017).

There is a little evidence on whether these measures are actually successful on promoting and protecting the language or not. Some researchers argue that putting a law in place doesn’t influence how people use language in their homes and daily life, and only affecting the use of language in the latter setting will yield to positive effects for these measures (Koenig, Guchteneire, & Unesco., 2007).

This whole research at its core is built upon the link between language and identity. Language is how we communicate, share ideas, express ourselves, and even practice power. Protecting our language is in part protecting our identity (Norton, 1997). By merely speaking the language we don’t directly protect our identity, but we protect the language, and that language carries a lot of ideas, meanings, and associations that define our culture and define us as individuals. That doesn’t imply that we shouldn’t use English and only allow people to use the country language to communicate, but it is important that us as individuals become aware of why and when we use a certain language, and that we use it out of our choice. Some of the engineers interviewed were in surprise when over the years they became more proficient in English than in their own language. One of the interviews expressed:

Q. “What language do you feel most comfortable in when you write?”

A. “*Surprisingly* enough, English. More than my own language.”

In another interview when the participants were asked about the use of language in Qatar in general, a response was:

“Living in Qatar, like for so long, I can say if you don’t know Arabic, it’s not a big issue... but if you don’t know English, it’s a big issue here in Qatar”

In the latter example we see the foreign language is considered more important than the official language of the country, not just for work, but for everyday life. We need to be aware that not practicing our native language in both oral and written form might affect our proficiency level, and from there we can make the decision whether we want to take measures on the individual level to keep our skill in that language intact.

Is it Enough to Speak a Language to Preserve it?

The main concern that arises after looking at the data that more people are writing less in their own native language. Even though in all of the cases the participants still speak in their native tongue, but that might not be enough to keep a language intact and pass it on to the coming generations. That signals danger on that language as this might be the first step towards losing it, as proper documentation of a language in a written form is an important step in preserving any language (Olaifa, 2014). Writing allows people to preserve important parts of oral traditions throughout history (Olson, 1977). Referring to the UNESCO research on endangered languages, one of their recommended actions on saving a language from disappearing is to create a ‘writing system’ (“Endangered languages | United Nations Educational, Scientific and Cultural Organization,” 2017).

Some researchers argue in opposition of that, the psychologist Steven Pinker in his book *The Language Instinct: How the Mind Creates Language* (Pinker, n.d.) argues that language is formed through speaking it, and writing is an ‘optional accessory’. Other linguistic scholars argue similarly that language proficiency is based on practice, and practice is not limited to the

written form, on the contrary in most cases it is oral practice in the form of speaking a language (Bucholtz & Hall, 2004).

Looking at the two sides of the debate the scholars proposed in the earlier paragraphs, this research is more supportive of the first opinion, that writing is a key in language preservation. The goal of this research is not to call for a policy that discourages the use of English or foreign languages, on the contrary the researcher understands the importance of having a common language by which it can communicate with the rest of the world. The goal here is to initiate an open dialogue about languages, where participants are aware of their choice of using one language over the other. Also, to make people aware of the consequences that might happen if they neglect their native language. It wasn't clear from the results whether or not the participants used their native language less by choice, or it just happened, and they are not aware of it. In the academic field one other way these findings can be used is in classrooms with a diverse body of students. Research showed that bringing the linguistic experiences of the students to the instructors helped the instructors to bring better strategies to address the bilingual students' capabilities (Brooks, 2017).

CHAPTER V

RECOMMENDATIONS

By this point in the project, language have been discussed from different points of view. A general observation has been concluded that people working or living in a culture different from their own tend to lose some of their native language skills, specially the writing skills as they don't regularly use it. The researcher would like to conclude this paper by suggesting some measures that can be applied by individuals, professors, or the university system to keep one's native language alive.

These measures are suggested to a general audience, and not only limited to engineering students, or students studying in Qatar. Some of the recommendations below, if not all, can still be applied in an international context different from that of the research e.g. U.S institutions with a large population of Hispanic students.

Individual Measures

From the researcher point of view, one has to start with one's self to start noticing a change in the larger system. Hence, these individual measures below. They can be applied all together, or only one at a time. Even though there is nothing that will preserve written form of a language more than writing in the language itself, but this might be very hard given people who are working at global companies where the main language used is English.

Writing in Native Language in Your Diary

One of the interviewees in this study mentioned that he journals in English even though he is not a native English speaker. This information wasn't tracked further with other participants, but a similar trend is expected as people in general expressed they can't easily

express themselves in writing in their native language. If you are someone who already keeps a diary or a journal, it is a good idea to try to switch to writing in it in your native language. A diary might be a good place to start, especially that it is usually not read by anyone else other than the writer, which makes it a good place to practice and provides a room for error.

Reading in Your Language

Reading is a practice that doesn't only add to our knowledge, but it also contributes to our knowledge of the language in which we read. It is common among people who are trying to learn a new language that they read in that language. Some scholars even consider reading a lot is a must to write well (Takeuchi, 2003). Reading teaches us good grammar and choices of vocabulary, which translates to a good writing. Given that the engineers in this research were mainly doing their writing in English at all times, because this is what their job nature dictates, the research is suggesting that people take reading in their own native language as a practice. It is believed that even if they won't end up writing in their native language, reading it will help keeping the language 'fresh' in their heads.

Texting in Your Language

Most of the participants in the study use texting in one form or the other. Mainly people expressed that they use texting to communicate with family members and friends. Texting is now more common between people more than calling (Dawson, 2017). Which indicates that writing in this informal setting is more common than speaking. Texting in one's language when communicating with people from the same background can be a good chance were people can integrate the use of their own language within their daily life without spending any extra time or effort.

Study Abroad in Your Language

Studying abroad in general is always recommended for language learners. As studying abroad at a country that speaks a certain language doesn't only give you a chance to practice it daily, but also immerses you in its culture. The same can be applied by students who are currently enrolled at a university where their native language is not the language used in the country or in the university.

Measures Universities Can Take

Student Events Celebrating Cultures and Diversity

Cultural events celebrating diversity has many advantages. It introduces other people to cultures they might not have come across before, and it increases the feel of pride for those whom culture is celebrated. As language makes a big part of a culture, language can be incorporated in such events by either the organisers or the students working on the event. Those events will also provide the setting and the opportunity to have an open dialogue about languages where people share elements of their native language and discuss it with other people (who are not necessarily native speakers of the same language). That can help with maintaining our skills in that language.

Measures Professors Can Take

Translingual Assignments

This suggestion was taken as a practice that was tried by my research supervisor in one of her classes. Translingual assignments can be done in many ways, but one way can be done through encouraging students to incorporate their native language or elements from their home culture in assignments. The students can be asked to translate an educational video or create an online platform to explain an engineering course in their own language. They can be asked to

write a reflection in English at the end, so the instructor can use it to grade them if he/she doesn't understand their mother tongue. The created content can serve the learners who study engineering in their native language and not in English.

Investigating the Use of Language at the Workplace

This is a topic that can be researched rather than a direct suggestion. It will be helpful if professors, for example technical writing professors, take on the task of researching how language is being used at the workplace, especially in a place like Qatar. Such a research can then be translated into practices that can get incorporated in courses.

FUTURE RESEARCH

To build upon this research project, the first step will be collecting more data. The new set of data will focus more on language in written and oral communication. As when the data used for this research was collected, communication skills in general was the target, and not only languages. Therefore, a new survey will be made with questions targeted at understanding when and how often the participants use one language over the other, and if language preservation something that is important to them. Also, to have more focused findings, the new set of data will only look at Arabic-native speakers.

From the next research project, the researcher is hoping to produce a memo with a list of actions or ideas that the university can implement and share that with the university officials. Also, more time will be put into the cultural practices at international workplaces, and whether the companies do any sort of activity that celebrates their employees' diversity.

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APPENDIX

Interview Questions for Alumni

Optional follow-up questions in *italics*

- What is your country of birth, and what is your country of citizenship? *And where are your parents from? How long did you live there? When did you come to [country]?*
- What is your job title now, and how long have you been working at this job?
- Before you took your current job, what were you doing? Where have you been employed?
- Did you pursue any other degrees after you left TAMUQ?

Daily Writing

- What kind of writing are you doing for your job right now? *Who is the audience for this writing? How much writing do you do for oral presentation purposes?*
- Can you walk me through the process, from beginning to end, of how you completed X? *When you sat down at your laptop to write X, did you start typing at the beginning of the document? How did you decide to (repeat interviewee's process)?*
- Have you been asked to do this kind of writing before? *Did you write X when you were in undergraduate or graduate school? Did you do any writing in your science or engineering classes? Where did you receive training on how to do this kind of writing?*
- What about writing that you don't do for your job, like texting or social media or personal writing?
- Did you expect coming in to this profession that you would be doing this amount of writing?
- How much time (percentage) do you spend writing every day?
- How much of your writing for your job is written by groups of people? Do you enjoy these types of projects? *Why or why not? How many people contribute to the final form of this document?*

Communication

- What language(s) do you write in and speak in? *Do you speak any other languages besides (the languages you mentioned earlier)? Do you use these languages often when you are working?*

- What language(s) do you feel most comfortable in when you write? When you speak? *Have you always felt that way, or were you more comfortable in X when you were younger?*

Open-ended Questions about Writing on the Job

- Can you think of an example of when your writing was particularly effective or ineffective?
- What kind of training on writing did you receive as part of your formal education (secondary school and/or university and or postsecondary)? How did it help you or not help you?
- What kind of support do you receive for your own writing now that you're out of [institution]?
- What writing habits should our engineering students develop now that will help them in their future profession? What advice would you offer to them with regards to writing? What can [institution] do to better support these kinds of writing experiences?

Interview Questions for Students

Optional follow-up questions in *italics*

- What is your country of birth, and what is your country of citizenship? *And where are your parents from? How long did you live there? When did you come to [country]?*

Daily Writing

- What kind of writing are you doing for your classes right now? *What about writing that you don't do for school, like texting or social media or personal writing?*
- Can you walk me through the process, from beginning to end, of how you completed (choose one of the assignments)? *When you sat down at your laptop to write X, did you start typing the introduction? How did you decide to (repeat interviewee's process)?*
- How much of your writing for class is written by groups of people? Do you enjoy these types of projects? *Why or why not?*
- Have you been asked to do this kind of writing before? *Did you write X when you were in secondary school? Did you do any writing in your science classes?*
- What kinds do you think you will have to do in the future? How much time do you think you will spend on writing when you are on the job? *Who have you talked to about your future career? How do you know you will do X kind/amount of writing?*

Communication

- What language(s) do you write in and speak in? *Do you speak any other languages besides (the languages you mentioned earlier)?*
- What language(s) do you feel most comfortable in when you write? When you speak? *Have you always felt that way, or were you more comfortable in X when you were younger?*
- How has your ability to communicate in multiple languages helped you when you write in groups?

Open-ended Questions about Student Writing and Engineering

- Is writing important to you?
- What kind of training on writing did you receive as part of your formal education in secondary school? How did it help you or not help you? Was the transition to [institution] an easy one or a hard one, in terms of your writing?
- Do you get writing support from people at [institution] – your instructors, your friends, your family?
- What advice would you offer to first-year students?