



universität
wien

MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„Non-native speakers of English in English-medium
university education“

verfasst von / submitted by

Lejla Husic

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of
Master of Arts (MA)

Wien, 2016 / Vienna 2016

Studienkennzahl lt. Studienblatt /
degree programme code as it appears on
the student record sheet:

A 066 812

Studienrichtung lt. Studienblatt /
degree programme as it appears on
the student record sheet:

English Language and Linguistics

Betreut von / Supervisor:

Ao. Univ.-Prof. Mag. Dr. Ute Smit

Mitbetreut von / Co-Supervisor:

Table of contents

| | |
|--|----|
| 1. Introduction..... | 1 |
| 2. Englishisation..... | 3 |
| 2.1 English as a global language..... | 3 |
| 2.2 English as a lingua franca in tertiary education | 5 |
| 2.2.1 Criticism..... | 6 |
| 2.3 English-medium instruction (EMI) in Europe | 7 |
| 2.3.1 EMI: The whys and wherefores | 9 |
| 2.3.2 EMI: Implications | 11 |
| 2.3.3 EMI in Austria and Germany..... | 18 |
| 3. Individual differences | 21 |
| 3.1 Motivation..... | 24 |
| 3.1.1 Definition and scope | 24 |
| 3.1.2 Motivation research | 25 |
| 3.1.3 Motivation and ELF..... | 28 |
| 3.2 Language attitude..... | 29 |
| 3.2.1 Attitude definition and structure | 29 |
| 3.2.2 Language attitude and measurement..... | 31 |
| 3.2.3 Attitude vs. motivation, belief and opinion | 32 |
| 3.3 Foreign language anxiety | 33 |
| 4. Case study | 35 |
| 4.1 Higher education institutions in Austria | 36 |
| 4.1.1 EMI in Vienna..... | 37 |
| 4.2 Research outline..... | 39 |
| 4.2.1 Questionnaire | 40 |
| 4.2.2 Procedure | 45 |
| 4.2.3 Sample..... | 46 |
| 4.2.4 Data preparation and initial analysis..... | 49 |
| 5. Analysis and discussion | 50 |
| 5.1 Differences across classification variables | 51 |
| 5.2 Associations between attitudinal variables | 56 |
| 5.3 Domestic and foreign students' attitudes and motivation..... | 59 |
| 5.4 Differences across disciplines: English language vs. technical science | 62 |
| 6. Conclusion | 67 |
| 6.1 Suggestions | 68 |

| | |
|---------------------------------------|----|
| 6.2 Limitations | 69 |
| 6.3 Further research | 69 |
| 7. References | 71 |
| 8. Appendix | 81 |
| 8.1 Abstract (English) | 81 |
| 8.2 Zusammenfassung (German) | 82 |
| 8.3 Items in the questionnaire | 83 |
| 8.4 Overview of Facebook groups | 88 |
| 8.5 Non-parametric test results | 89 |
| 8.6 Correlations | 90 |

List of abbreviations

| | |
|-----|-------------------------------|
| EFL | English as a lingua franca |
| EMI | English-medium instruction |
| ESP | English for specific purposes |
| FLA | Foreign language anxiety |
| FLL | Foreign language learning |
| ID | Individual difference |
| L1 | First language |
| L2 | Second/foreign language |
| SLA | Second language acquisition |
| WTC | Willingness to communicate |

List of tables

| | |
|--|----|
| Table 1 Most language users in Internet communication | 5 |
| Table 2 EMI MA programmes in Europe (Hultgren, Jensen & Dimova 2015: 4) | 8 |
| Table 3 “Drivers of EMI at different levels” (Hultgren, Jensen & Dimova 2015: 6)..... | 9 |
| Table 4 Overview of higher education institutions in Vienna | 36 |
| Table 5 Public universities offering EMI programmes..... | 38 |
| Table 6 Overview of concepts before and after reliability analysis..... | 44 |
| Table 7 Distribution of variables age, number of languages, and number of semesters | 46 |
| Table 8 Higher education institutions and the corresponding numbers of participants..... | 47 |
| Table 9 Classification of programmes into fields of study | 47 |
| Table 10 Testing for normality of distribution | 49 |
| Table 11 Descriptive statistics of the categories based on students’ previous study experience in Austria..... | 59 |
| Table 12 Descriptive statistics of the categories based on students’ field of study..... | 62 |

List of figures

| | |
|--|----|
| Figure 1 Distribution of variables Interest in foreign language and Grading across the categories of gender | 52 |
| Figure 2 Distribution of variable Grading across the categories of Language | 53 |
| Figure 3 Distribution of variables Interest in foreign languages, English use anxiety, Receptive skills, and Change across the categories of Number of languages | 54 |
| Figure 4 Distribution of variables English use anxiety, Native vs. non-native speakers of English, Receptive skills, and Change across the categories of English speaking country experience | 55 |
| Figure 5 Distribution of variables Interest in foreign languages, English language history, Ideal L2 self, Linguistic self-confidence and Grading across the categories of Programme .. | 63 |

1. Introduction

When talking about language and language-related matters, it is rare to reach a consensual agreement. Indeed, discussions on this topic are heavily influenced by the point of view an individual adopts. However, there are some assertions that are typically accepted as correct, and are unlikely to change drastically in the foreseeable future: firstly, a majority of present-day societies are increasingly multicultural; the ‘close’ and ‘far away’ dichotomy when talking about the world we live in has become obsolete; and finally, the position of English worldwide is much stronger than that of any other language. Consequently, these factors have resulted in English becoming the lingua franca in both educational and professional environments, as demonstrated by studies in several countries (e.g. Björkman 2013, Cenoz 1998, Hoffman 1998, Dörnyei & Csizér 2002; Seidlhofer 2001, 2011; Van Parijs 2011). Thus, the English language, which used to be learned for touristic purposes and communication with native speakers of it, has become *the* language that connects individuals with different first languages worldwide. Moreover, for an increasing number of people, English is the language of both education and employment.

The predominance of English is growing in multicultural university settings around the world, including in Austria. This phenomenon is closely linked to internationalisation, which, in turn, is the main motive behind “using English as a medium of instruction across universities in Europe” (Smit & Dafouz 2012: 3). Nevertheless, the increase in the number of international students implies significant differences between them: they speak different L1s and come from different countries and sociocultural backgrounds. The English language is the common denominator between them, albeit with varying levels of proficiency. Furthermore, a wide range of diverse attitudes towards studying in it can be observed, as this study will attempt to demonstrate.

Although English is the most common language taught in Europe, students’ proficiencies differ substantially, thus affecting their chances of enrolling into postgraduate programmes taught in English or their career prospects. Indeed, due to the current position of English, it is often taken for granted that students are sufficiently proficient in it (Räsänen & Fortanet-Gómez 2008: 11-12). What is more, several studies have shown that fulfilling the official language proficiency prerequisites to study in English does not guarantee trouble-free participation in classes where

English is the medium of instruction (Björkman 2013; Hellekjær 2006; Knapp 2014; Knapp & Münch 2008).

In addition to students' proficiency, several other issues have been raised concerning English-medium instruction: lecturers' language proficiency, the influence of programmes in their current format on those who partake in them, and the potential for providing English language support to programme participants (Earls 2016: 200). Thus, there is an evident need to investigate all aspects and perspectives of English-medium instruction. Correspondingly, the present research sets out to analyse one particular perspective (that of students). In order to achieve this, this study gathers information on and explores the attitudes and motivation of non-native speakers of English in English-medium university environment with the aim of answering the following research questions:

1. In what way do attitudes towards and motivation for English-medium education of domestic students, who have previous experience with the Austrian education system, differ from those of international students who have come to Austria in order to further pursue their studies?
2. Are there significant differences in the attitudes towards and motivation for English-medium education between various fields of study and/or programmes?

In order to answer these questions, this thesis first looks into the existing research on both English-medium instruction and individual differences, including attitude and motivation. The first chapter opens with a discussion on the notion of Englishisation, i.e. the spread of English in various contexts worldwide. The following sub-chapter covers the ever-growing use of English as the main language of communication in higher education institutions, while the next sub-chapter provides a detailed overview of English-medium programmes in Europe, including the underlying reasons for their introduction, as well as various implications that occur during the process. The ultimate sub-section discusses the specificities of these programmes in Austria and Germany. The second chapter deals with the issue of individual differences amongst foreign language learners, such as this study's target group. Particular emphasis is put on the affective factors which influence language learning, rather than the cognitive ones. Within this chapter, the influences of motivation, attitude and anxiety are examined.

The second, empirical part of the study consists of a survey of the attitudes and motivations of post-graduate students who are currently studying or have recently finished their studies in

English at one of the higher education institutions in Vienna. For the purpose of this thesis, a questionnaire was elaborated, consisting of several concepts related to the research questions, such as linguistic self-confidence, anxiety caused by English use in class and everyday life, as well as the use of English and language support at university. Finally, even though the research entails a cross-sectional study, the questionnaire includes a temporal component dealing retrospectively with the participants' background and language experience concerning English.

2. Englishisation

2.1 English as a global language

In 1985, Kachru categorised users of English into three groups: those who speak English as their first language and come from the inner circle countries: the USA, the UK, Canada, Australia, New Zealand or Ireland; those who speak English as their second language and come from the outer circle countries such as India, Nigeria or the Philippines; and, lastly, those who speak English as a foreign language. The last group incorporates people from countries all around the world, such as China, Sweden or Austria, and these countries represent the expanding circle.

Recent developments stemming from globalisation have resulted in English becoming the global language of technology, science, and recently, business. Additionally, today English is the language of popular culture, even in the Eurovision song contest, performances in national languages are completely outnumbered by those in English (Motschenbacher 2013: 66). As a result of what Phillipson (2006a) describes as 'Englishisation', three decades later, this dynamic use of English can no longer accurately be covered by Kachru's model (Björkman 2013: 3-4).

Following this global trend, English has also become the head language of science and academia, including publications, symposia, and collaborations. Therefore, the working language of scientific programmes in the European Union is English, "from invitation to tender to completion" (Truchot 2002: 11). Additionally, one of the most pronounced signs of the Englishisation in science can be observed in scientific journals. Not only have journals that used to publish in a specific language, such as German or French, started publishing exclusively in English, but the actual names of such journals have also been translated in most cases. In that manner, *Die Heidelberger Beiträge zur Mineralogie und Petrographie* became

Contributions to Mineralogy and Petrology in 1966, *Annales de l'Institut Pasteur* became *Research in Immunology* in 1989 etc. (Gordin 2015: 299-300). It is worth mentioning that there are slight differences between various disciplines; while the language of publication in natural sciences is almost exclusively English, there are a noteworthy number of publications coming from the humanities and social sciences in French, German, Russian, Spanish, Chinese, Japanese etc. (Ammon 2012: 339). Scholars of the humanities publish in their own languages even more than those in the social sciences, due to their community-specific topics, in addition to “the enormous difficulty of meeting the stylistic standards of texts in the humanities in a foreign language” (Ibid.: 340).

Furthermore, to new generations around the world, English is more than a language in which they order food when abroad or make small talk with strangers: “[i]t is the language of which they have to demonstrate a degree of mastery so as to win a place in education and employment in their own contexts and abroad” (Kuo 2006: 219). That is one explanation behind the significant increase of the learning, as well as the position of English in the expanding circle countries (Räsänen & Fortanet-Gómez 2008: 11). As it happens, two decades ago, English was already practically a lingua franca in Northern Europe (Hoffman 1998: 145-146), and even in countries characterised by a decreasing interest in the study of foreign languages, the status of English was maintained at the same level, as shown by Dörnyei and Csizér (2002). According to the most recent special report by the European Commission (2012: 5-6) on the languages spoken in the European Union, English is the most widely spoken foreign language for 38% of EU citizens, as well as the most widely spoken foreign language in 19 member states, not including the countries in which it is an official language. Moreover, roughly one quarter of the European Union citizens consider themselves capable of understanding radio, television, and magazines in English, in addition to using English to communicate online.

Graddol (1997: 8) gives a summary of the following key domains in which there is a growing use of English as the working language:

1. International organizations and conferences
2. Scientific publication
3. International banking, economic affairs and trade
4. Advertising for global brands
5. Audio-visual cultural products, e.g. TV, popular music
6. International tourism
7. Tertiary education
8. International safety
9. International law

10. In interpretation and translation as a relay language
11. Technology transfer
12. Internet communication

An important aspect of this list is its incorporation of the eight domains (1, 2, 3, 7, 8, 9, 10, 11) that are seen as ‘élite’ (Björkman 2013: 6). As long as the English use in these domains is growing, the status of English as the most influential foreign language is certain.

Recently, however, there has been an increase in the use of languages other than English, especially in the domain of Internet communication:

Table 1 Most language users in Internet communication

| Language | Internet users by language | Users growth in Internet (2000 – 2016) | Internet users % of world total (participation) |
|-----------------------|----------------------------|--|---|
| English | 948,608,782 | 573.9% | 26.3% |
| Chinese | 751,985,224 | 2,227.9% | 20.8% |
| Top 10 languages | 2,814,329,132 | 848.4% | 77.9% |
| Rest of the languages | 797,046,681 | 1,141.0% | 22.1% |

The latest data (Internet World Stats: 2016), presented in Table 1, demonstrates that even though English is still the most used language online, with over a quarter of Internet users, it is Chinese that has had the greatest increase in the number of users in the last six years. Interestingly, over three quarters of Internet users communicate in only ten languages, while all the other languages comprise 22.1% of Internet users. However, the online proliferation of other languages is increasing at a greater rate than that of the top 10 languages.

2.2 English as a lingua franca in tertiary education

German is one of the languages that at one point in time stood as a lingua franca for science and technology. However, after World War I, the status of German started to deteriorate. It was even “banned from all international conferences”, and never recovered its former position (Ammon 2001: 345). Although there are still other lingua francas, such as Russian and Spanish, that are used in certain areas, the position of English is unprecedented due to a chain of historical events (Björkman 2013: 2). Moreover, Van Parijs (2011: 11) argues that “it is English and English alone that can reasonably claim to have become a global lingua franca”.

English as a lingua franca (ELF) can be defined as “any use of English among speakers of different first languages for whom English is the communicative medium of choice, and often the only option” (Seidlhofer 2011: 7). Consequently, this means that today EFL enables

communication between millions of people, such as entrepreneurs, academics, and students, in various situations and for a number of objectives (Björkman 2013: 2).

Although it might seem that the rise of English as a world language is a “wholly new phenomenon” (Coleman 2006: 1), this does not apply to academia, as universities have consistently been multilingual and international. It is because of globalisation that the position of English is now unprecedented; higher education institutions around the world have to collaborate, and in order for that to happen, there has to be a shared language (Björkman 2013: 16).

In addition to the position English has today as a global language, it is the Bologna declaration that has further effected the emergence of EFL in education (Cenoz2006: 282). The Bologna declaration has brought upon European countries “one of the most important changes in their educational systems” (Räsänen & Fortanet-Gómez 2008: 49), with the main objective being to create a system that ensures student mobility and qualifications’ recognition both within and outside of the European Union. Additionally, attracting foreign students, postgraduates in particular, has become a significant financial incentive (ibid.). Therefore, despite Englishisation not being specifically mentioned as an objective in universities’ agendas, their strategies for the future will ultimately further stimulate the process of Englishisation (Hultgren, Jensen & Dimova 2015: 7). Finally, it is ELF that enables easier exchanges of both staff and students and increases collaboration between universities, as well as creating job opportunities (Björkman 2010: 77). It is an absolute necessity for any university aspiring to reach the international market to recognise the importance of and the mechanisms behind international communication, specifically, communication between people coming from various first languages (Björkman 2013: 29).

2.2.1 Criticism

Although the internationalisation process in higher education shows no prospect of retracting, this prevalence of English as the lingua franca of academic research and teaching has been criticised by many researchers. Phillipson (2006b: 16), for instance, argues that in the Bologna process the notion of internationalisation actually denotes EMI, whereas other critics express their concern that “the use of a single language has inevitably limited access to knowledge and also hinders the pursuit of scholarship in other languages” (Altbach et al. 2009: 32). Countries which have initiated EMI programmes – Sweden, Denmark, Norway, and the Netherlands –

report that EMI in higher education presents a genuine threat to their national languages (Earls 2016: 96).

This claim has been disputed by other researchers, such as Söderlundh (2012), who has conducted an ethnographic study of EMI programmes in Swedish universities. She argues that in specific settings, such as higher education, EMI does not represent a threat to either Swedish or multilingualism; students and lecturers, despite using English as a lingua franca, use other languages too (2012: 87). The choice of the language depends on the situation, with students choosing the “path of least linguistic resistance” (ibid.: 105). Fishman (2000: 96-97) too argues that many factors, such as situation, group membership, topic, style etc., play a role in choosing a language of communication. Knapp (2014: 175-177) posits that several additional categories are applicable to university settings, Firstly, at universities communication usually includes “a complex interplay of a set of interrelated written texts and oral discourses” (ibid.: 175), including the standard communication in class, oral and written examinations, oral communication between lecturers and students, communication between students during group work as well as before and after class, taking notes, writing papers and essays, etc. Moreover, communication at the university is characterised by the specific sub-goals of its various actors, such as passing exams for students. Finally, university holds the authority to implement its own language regulations and policies for specific types of discourse, for instance, examinations and papers. There are also types of discourse in which students may freely choose which language they want to use for communication with their colleagues outside of class, for example, or in which language to take their notes. Therefore, students do not always use one language exclusively both in class and other communication typical of the university context. In short, apart from university language policies, other factors can influence students’ choice of language: whether language is used productively or receptively, which mode of communication is applied, discourse type, interlocutors, function, situation, and students’ level of proficiency.

2.3 English-medium instruction (EMI) in Europe

Over the past two decades, universities in Europe have drastically changed their policies regarding the languages used for teaching. Overall, English is increasingly used in tertiary education in Europe (Cenoz 1998, 2006), not only as the language of academia and research, but also the ultimate language of instruction and learning in general (Björkman 2010: 77; Ferguson 2007: 10; Knapp 2014: 166). Multilingual programmes are increasingly advertised

by universities (Ferguson 2007: 10), but even though there are other languages, such as German, Spanish, or French, which are spoken by a noteworthy percentage of people, it is English-medium instruction (EMI) programmes that have a higher chance of attracting students from other countries (Räisänen & Fortanet-Gómez 2008: 21).

EMI programmes are particularly common at postgraduate level (Räisänen & Fortanet-Gómez 2008: 22), as shown in the following table:

Table 2 EMI MA programmes in Europe (Hultgren, Jensen & Dimova 2015: 4)

| Country | MA programmes in English | Population | MA programmes in English per 100,000 inhabitants |
|---------|--------------------------|------------|--|
| Iceland | 29 | 321,857 | 9 |
| Sweden | 764 | 9,644,864 | 7.9 |
| Denmark | 363 | 5,627,235 | 6.5 |
| Finland | 296 | 5,454,444 | 5.4 |
| Norway | 206 | 5,136,700 | 4.0 |
| Estonia | 49 | 1,311,870 | 3.7 |
| Germany | 763 | 80,585,700 | 0.9 |
| Spain | 378 | 46,704,314 | 0.8 |
| Italy | 335 | 59,943,933 | 0.6 |
| Turkey | 164 | 76,667,864 | 0.2 |
| Croatia | 5 | 4,284,889 | 0.1 |

As Table 2 clearly shows, there is a discrepancy between the number of master's programmes taught in English in Northern and Southern Europe. A study conducted by Wachter and Maiworm (2014: 48) reports an 866% growth in the number of EMI programmes in the countries of South West Europe, and 516% in the Baltic States, while in the Nordic region and in Central West Europe the growth rates are slightly below the average. This can be explained by these countries' "leading role, where further growth becomes more and more difficult" (ibid.).

Undoubtedly, EMI is becoming a norm, especially in Scandinavia and northern Europe (Ferguson 2007: 10). The table above identifies Sweden as the country with the highest number of EMI master programmes at this point in time: 764. This is not a new phenomenon. In 2008, Shaw et al. (2008: 268-269) observed that in Sweden, even though the language of instruction in most courses up to the doctoral level is Swedish, English was the predominant language of textbooks, higher-level undergraduate assignments, as well as various courses taught entirely in English. At departments such as the English one, the only language of instruction was English, and at others, such as Business and Politics, a majority of courses could be taken in either of the languages, especially if the programmes were aimed at foreign students.

Additionally, Shaw and his colleagues (2008: 169) pointed out the tendencies towards a further increase in EMI in Sweden, in particular at the postgraduate level, and the possible spread at the undergraduate level as well. A more recent study conducted by Salö and Josephson (2014, quoted in Airey et al. 2015: 8) demonstrates that EMI programmes comprise 28% of all programmes. Similarly to Shaw et al. (2008), they observe that EMI is still most used at master level, and notably less at the undergraduate level. Additionally, they note differences between various disciplines: EMI programmes are more common in computer science and physics, than in disciplines such as law and history (Salö & Josephson 2014, quoted in Airey et al. 2015: 8).

In Italy, similarly to Sweden, courses are often offered in two languages: Italian and English (Pulcini & Campagna 2015: 79). The same applies to universities in the Netherlands. There, English-medium instruction has become a standard in many newly formed master programmes, particularly the business related ones. Nonetheless, some courses in these programmes are also made available in Dutch, as well as other languages in case there is a significant number of students who request that, and the institution can provide the means (Räisänen & Fortanet-Gómez 2008: 22).

2.3.1 EMI: The whys and wherefores

Hultgren, Jensen and Dimova (2015: 6) have identified five levels at which specific “drivers of EMI” operate:

Table 3 “Drivers of EMI at different levels” (Hultgren, Jensen & Dimova 2015: 6)

| Level | Example |
|---------------|---|
| Global | General Agreement on Trade in Services |
| European | Bologna Declaration |
| National | Internationalization strategies |
| Institutional | Targets to recruit international staff and students |
| Classroom | Presence of non-local language speakers |

As shown above, from 1995 onwards, the General Agreement on Trade in Services has impacted the free trade of commodities worldwide, which higher education is considered to be, and resulted in universities working hard on attracting international students (Hultgren, Jensen & Dimova 2015: 5-6). The latter has resulted in certain countries considering a change in their regulations so as to further encourage this trend (Kruseman 2003: 7).

The implementation of the Bologna Declaration has influenced numerous universities in a similar manner, and it can be seen as one of the two main drivers of EMI in Europe, in addition to the worldwide position of English as a lingua franca (Cenoz 2006: 282). After all, it is due

to the need for staff and student mobility, which is strongly encouraged by the Bologna process, that specific language prerequisites need to be fulfilled (Knapp 2014: 166). Hence, another reason behind the rise of EMI lies in student exchange programmes, primarily at the master's level, where universities offer programmes taught exclusively in English in order to allow for student mobility (Björkman 2013: 14).

At national and institutional levels, EMI programmes are generally created with the aim to reinforce internationalisation. In Sweden, for example, Shaw et al. (2008: 269) observe that these programmes are the product of university policies “because they attract overseas (Asian) students”, who, despite not paying tuition fees, help create an international university setting, and concurrently, attract more funding for the university. Similar programmes are also being developed in continental Europe as a method of attracting students from various countries (Björkman 2010: 77), and improving universities' competitiveness in the education market (Björkman 2013: 15). Thus, luring in international students has become a significant financial objective in an increasingly competitive market. Furthermore, today's job-market, in which English proficiency is a prerequisite, also influences higher education aims and their eventual reform, as well as encourages the introduction of EMI programmes.

On the other hand, Wächter and Maiworm (2014: 52-53) offer a list of six main reasons for the introduction of EMI programmes at the institutional level:

1. Sharpening of the international profile of the institution
2. Abolition of language obstacles for the enrolment of foreign students
3. Improvement of international competences of domestic students
4. Compensation of shortages of the institution
5. Brain gain (recruitment of international academic staff and talented students),
6. Altruistic motive (to contribute to the development of the 'Third World' by providing high level education for students from respective countries)

All of the reasons listed above are strong drivers of EMI programmes introduction, depending on the region in which the higher education institution is located. While, for instance, attracting foreign students as future workforce is a significant motive for the Nordic region countries, in south European countries, improving domestic students' international competences is stated as the main reason for introducing EMI programmes. (Wächter & Maiworm 2014: 55)

As Wilkinson (2013: 8-9) frames it, the motives behind the EMI programmes introduction can be categorised into five groups: practical, survival, financial, idealistic, and educational. These motives are dynamic and contingent on the phase in which the programmes are, with the financial and survival motives having increasingly more influence on the establishment of EMI

programmes (ibid.: 10). Conversely, idealistic reasons, often play only a minor role in the process.

2.3.2 EMI: Implications

Despite English being the main language of publication for decades, if not centuries, it is only when it became a dominant language in education that issues started to be raised (Björkman 2013: 17). EMI, as both “a product of, and catalyst to, the forces of internationalisation and globalisation”, is leading to the restructuring of universities around the world, while simultaneously giving rise to “complex linguistic and intercultural realities, which educators, students and administrators must negotiate” (Earls 2016: 2).

Björkman (2013: 17) identifies two major concerns relating to English being used in instruction: the threat to the local language(s), and possible negative effects on students learning in a foreign language, as opposed to their first language. Although the first issue has been investigated more thoroughly (cf. Björkman 2013 for an overview), it is the latter that is of interest for the present study. First of all, in comparison to the other matter, this one has been less researched (e.g. Hyland 2016, Phillipson 2006a, 2006b, 2015; Söderlundh 2012). Moreover, research indicates that there can be detrimental consequences to converting to EMI from a national language (Gerber et al. 2005; Klaassen 2001; Vinke 1995, quoted in Björkman 2013: 22). However, there are also studies such as Klaassen’s longitudinal study which observes the disappearance of the unwanted effects during the course of the year (Klaassen 2001). The phenomenon can be explained by students’ getting more familiar with the discipline-specific vocabulary and their improved proficiency (Dafouz & Camacho-Miñano 2016: 59). Similarly, the significance of “the learning of fundamental terms and concepts [...] in the early stages of developing disciplinary knowledge” has been confirmed by Basturkmen and Shackleford (2015: 94). Given that most university programmes last more than two years, this discovery is most certainly an important one (Björkman 2013: 22), especially when taken into account that Klaassen’s study is up to this date the most comprehensive of its type (Dafouz & Camacho-Miñano 2016: 59; Airey 2015: 159).

Another example of in-depth research of English-medium higher education settings which takes into account the time factor is Smit’s ethnographic longitudinal study (2010). She (2010: 34) draws attention to the differences between university education and previous educational stages. First of all, at the moment, higher education is still available to a relatively small number

of adults, unlike primary and secondary education. Moreover, students are in charge of their own education: they opt for studying. She (2010: 35) follows Smith's (2004: 78-87) viewpoint on the interrelationship between socio-cultural and linguistic factors, as well as their significance in a multilingual classroom. Smith advocates that students' sociolinguistic background can be used to separate them into five basic categories: immigrant students, students with ethnolinguistic minority backgrounds, students in modern languages programmes, multilingual students in student exchange programmes, and students who opt for studying abroad (either in programmes taught in the language of the country, or programmes that are taught in English and specifically developed with the global market in mind). In such programmes, specific language-related issues need to be envisaged with regards to the programmes' specific student-body composition, that is, various L1s and the use of ELF.

Specifically, various studies at European universities have revealed that a significant number of non-native speakers of English who study in English have sporadic or recurrent language-related problems when it comes to following lectures in English (Airey 2011; Björkman 2013; Hellekjaer 2010; Knapp & Münch 2008; Vinke et al. 1998, quoted in Knapp 2014: 170). Furthermore, these studies have shown that some students have difficulties with activities involving simultaneous listening and note-taking (Airey 2011; Knapp & Münch 2008), and that these students are less active in asking questions during English-medium class (Airey 2011; Björkman 2013).

The results of a study conducted in Norway show it is expected of both students and lecturers to be able to partake in various communicative events in class with negligible difficulties; however, "a lack of awareness of the practical and pedagogical implications of using a foreign language, English, for instruction" has had a negative impact on EMI courses (Hellekjær 2010: 233-234). The results further show that nearly 42 per cent of students find EMI courses more difficult than courses in their first language (Hellekjær 2010: 246). As Norwegians have the reputation of being rather proficient in English, the problems they encounter in English-medium instruction are also applicable to other countries that use English as a language of instruction (Hellekjær 2010: 235). Another country with similar reputation is Sweden. In a study carried out amongst students of physics studying either in English, English and Swedish, or Swedish, Airey (2015: 164) concludes that studying in English requires a certain amount of adaptation from students: they speak more slowly, ask and answer fewer questions, have

problems following lectures and taking notes at the same time, and, unconsciously adjust their study habits to EMI lectures' demands.

On the other hand, it is worth mentioning that some studies, such as the one conducted amongst 383 students of economics and business by Dafouz and Camacho-Miñano (2016), report no differences in students' academic achievement, but rather that both the students who study in English and those who study in Spanish perform at the same level (*ibid.*: 65). According to them, EMI students are also “developing the specific disciplinary literacy in English to study and communicate in this language and eventually be able to study and/or work in an international context” (*ibid.*).

It is important to mention that it is often difficult to compare the results of research done in different contexts due to the difference in methods used to analyse EMI. Recently, Dafouz and Smit (2014: 411) have suggested a “theoretically grounded and holistic framework, with which research may describe, analyse and compare EMEMUS¹ within and across contexts”. The framework, which has been named ROAD-MAPPING, comprises six components or dimensions: Roles of English, Academic Disciplines, (language) Management, Agents, Practices and Processes, Internationalization and Glocalization, through which EMI can be described and compared in different contexts (*ibid.*: 403). Even though the framework and its applicability is yet to be tested, its goal is to provide “a blueprint for outlining an ‘object of analysis’ that is intrinsically dynamic and potentially elusive” (*ibid.*: 412).

2.3.2.1 EMI: Language proficiency

Many researchers underline the importance of language proficiency in courses which are taught in English. This is the reason why universities request of their potential students that they submit a proof of language proficiency, typically in the form of one of the standardised language tests. In English-speaking countries, for example, universities prescribe minimum scores on proficiency tests such as TOEFL and IELTS. Students whose first language is not English need to attain minimum scores of 6.5 on IELTS in order to enrol in most of undergraduate programme in Australia, and even higher scores in case of postgraduate programmes. In New Zealand, on the other hand, the language proficiency requirement is a

¹ Dafouz and Smit (2014: 398-399) suggest using the term EMEMUS to represent the notion of English-medium education in multilingual university settings. However, due to the well-established use of the term EMI in research so far, the present thesis uses the term simultaneously with EMI.

minimum of 6.0 for undergraduate programmes, and 6.5 for postgraduate ones. (Read 2015: 5-6)

Similar practices have been adopted in non-English speaking countries in Europe. Björkman (2013: 186-188) describes the situation in Sweden, where, in order to study in English, both foreign and local students need to prove their English proficiency. The first group does that by taking one of the internationally recognised tests such as TOEFL and IELTS, while domestic students who want to study in EMI programmes also need to present a proof of their proficiency, this time equivalent to English studies at high school/upper secondary level in Sweden, also referred to as English Course B or English 6.

Somewhat different results have been yielded by Unterberger (2012) in Austria, in her study on the EMI programmes at business faculties among seven universities. She reports a lack of homogeneous admission policy for EMI programmes (Unterberger 2012: 87). Furthermore, for most of the courses both foreign and local students need to provide a proof of proficiency. However, in 11% of courses a proof of proficiency in English is required only for students who come from countries that are not a part of the European Economic Area (ibid.: 88), while it is assumed that students from Austria and other EU and/or European Economic Area countries are sufficiently proficient to participate in EMI programmes (Räsänen & Fortanet-Gómez 2008: 43).

A study conducted in Italy (Costabello 2013, quoted in Pulcini & Campagna 2015: 79) discovered that lecturers deem that at least one third of students are not sufficiently proficient to study in English. Moreover, one study that took place at a German university found that almost 15% of students of social and economic sciences felt poorly prepared or completely unprepared for English-medium education, with another 25% of students feeling hardly adequately prepared (Knapp & Münch 2008). The problems students deal with involve both comprehensive and productive skills, and several students proposed that additional language courses should be offered by universities as preparation for English-medium education. A different study conducted at three universities in Germany found that the English language proficiency of international students was disturbing: regarding the receptive skills, 93% of students were under the B2 level of the Common European Framework of Reference for Languages in German, as well as 25,5% in English, while in speaking 61% of students were under the B2 level in English (Fandrych & Sedlaczek 2012: 23ff.). Another study at German universities, which investigated lecturers' attitudes towards EMI, found that the main problem

for the lecturers was the “inadequate student foreign language proficiency, with two derived effects: the increased student workload and the unwanted interference of language proficiency on examination results” (Gürtler & Kronewald 2015: 112).

Research done in other European universities has yielded similar results. Hellekjær (2006: 44), when considering the state of affairs in Norway, questions the widely spread and officially recognised presumption among university authorities that “uppersecondary English as a foreign language [...] develops the academic English proficiency required for higher education”. Moreover, international students face even bigger challenges, because they have to use both English as a foreign language and the language of the country in which they are studying.

Therefore, one can argue that an English language proficiency test should be required for both local and foreign students because of varying standards between countries and regions. Nonetheless, tests such as IELTS and TOEFL were designed for English-speaking countries, and “it is not certain that they are appropriate for EMI programmes in a non-English-speaking environment” (Wilkinson 2008: 174). Likewise, Björkman (2013: 186-188) argues that although these tests provide adequate information about students’ proficiency, they do not allow for a deeper insight into students’ speaking skills. She elaborates that this is due to the type of tasks they are asked to complete; the speaking part consists predominantly of monologues, and it does not replicate correctly the communicative situations of using ELF in EMI education. In order to prepare adequately for EMI, Björkman (2013: 186-188) suggests training for all students so as to acquire necessary skills: “the explicit strategies that aid comprehensibility”, “pragmatic strategies that are invaluable in increasing the effectiveness of communication”, and “general spoken skills with clear articulation and intonation”.

In conclusion, the various language prerequisites across European universities do not suffice when it comes to assessing students’ academic readiness for studying in English. The common supposition is that any student fulfilling official requirements for a certain university programme is sufficiently proficient in English to participate equally without any difficulties. Nonetheless, research has shown that a great majority of students do not possess adequate proficiency or academic literacy in English (Knapp 2014: 169). Therefore, it is of utmost importance for both foreign and local students in English-medium education to undergo proper training so as to gain appropriate academic skills.

2.3.2.1 EMI: Support

The implementation of English-medium instruction has not gone without problems everywhere: several researchers and lecturers from Italy pressed charges against their university for introducing English as a compulsory language of instruction, as they saw that their “freedom in teaching” was violated (Hultgren, Jensen & Dimova 2015: 2). However, it is not just lecturers who have protested against the usage of English. Ljosland (2008, quoted in Hellekjær 2010: 234) mentions an instance of student protest at the Norwegian University of Science and Technology, against mandatory English use in exams. The reason behind the protest lies in students’ concerns with their language skills and grades.

Therefore, providing support is of great significance (Shaw et al. 2008: 269). Some universities already have a rather developed system of providing language support to their lecturers (Klaassen 2006), while others, as reported by Gürtler & Kronewald (2015: 112) on the situation in Germany, seldom receive any support from the institutions. Undoubtedly, additional support to both lecturers and students is often a complex issue when it comes to EMI programmes, due to their various L1s (Smit 2010: 40).

When it comes to one of the most common methods used in higher education, lecturing, Airey (2009: 84) holds the view that “changing the lecturing language [may simply accentuate] communication problems that are already present in first language lectures”. Thus, it is imperative for lecturers to understand the implications of teaching in a second language. Along those lines, Björkman (2010: 78-85) draws attention to the challenges that lectures, as a “monologic genre”, can bring to both lecturers and students coming from various L1s in EMI courses. While dialogic speech allows for “the negotiation of meaning”, monologic speech used in lectures entails students focusing for a prolonged time with no chance to negotiate meaning and/or to assess one’s understanding. This becomes even more crucial when English is used as a medium of instruction in an ELF setting. Consequently, this can result in the misconstruction of meaning and extensive comprehension problems. However, appropriate visual aids, improved pronunciation, as well as fitting speech rate can make lectures more accessible. Hellekjær proposes that helping lecturers improve their pronunciation would have a significant impact on their students’ lecture understanding (2010: 248). Furthermore, he too draws attention to the importance of an appropriately structured lecture, as well as visual aids (2010: 249).

Furthermore, studies have shown that high proficiency in English, in both lecturers and students, does not guarantee effective communication in ELF settings such as the one in EMI classrooms (Hellekjær 2010, Klaassen 2001), but that a “frequent use of communication-enhancing pragmatic strategies” can improve students’ understanding of lectures in English-medium instruction (Björkman 2010: 87). Thus, as Björkman puts it, “[i]n settings where English is used as a lingua franca, communicative effectiveness takes precedence over language complexity” (2010: 88). Given that the results of several studies have identified the significance of pragmatic strategies (Airey 2009; Björkman 2010; Hellekjær 2010; Mauranen 2006), Björkman (2010: 77) deduces that speakers’ pragmatic ability may play a bigger role in their efficiency in partaking in academic English as a lingua franca context than their proficiency (Björkman 2010: 77).

Shaw et al. (2008) investigate higher education institutions in Stockholm, in particular special position-specific courses that have been organised for university employees with the aim of improving communication effectiveness. While the courses for administrators, for example, focus on precise communicative events and how to come up with suitable language, Shaw et al. (2008: 267) posit that teaching in English as a lingua franca is more strategic from a pedagogical point of view than teaching in a first language. They further assert that it is more effective to offer courses where the focus is on pedagogy rather than proficiency, especially given the time restrictions. Moreover, even though the language proficiency of both students and staff has been satisfactory due to a large number of them working in bilingual, Swedish and English, settings, many lecturers observe their problem “as linguistic rather than pedagogic” (ibid.). Therefore, one of the factors that need to be foregrounded are the linguistic features of English-medium courses. As a potential solution, Hellekjær (2010: 249) suggests incorporating language learning goals into English-medium courses as a reminder, not only for lecturers, but students too, “of the extra value of learning content through an L2, as well as the need to take language issues into consideration when teaching and designing courses”.

Another important issue has been raised by Björkman (2013: 185-188), who warns of the importance of raising awareness for target use of English. The results of her study show “that the target usage that is expected of students or what students expect from their lecturers does not need to be a native variety but effective usage of the language that allows for optimal information transfer” (Björkman 2013: 188). She argues that raising awareness on the preferred use of English in ELF environment at both macro and micro levels increases the efficiency of

lectures in EMI courses. The first can be achieved by precise language policies on student and teacher training, whereas the latter involves “in-house training and courses” for both students and teachers. What she proposes is workshops and courses for lecturers that would provide them with necessary skills for increasing the efficiency of communication with students coming from various first languages, as well as varying levels of English proficiency. Björkman (2013: 185) also warns of the possible problems that might occur due to some lecturers’ reluctance to participate in these classes. Though not a straightforward task, this issue could be resolved on the macro level by including these courses in lecturers’ schedules as professional improvement.

2.3.3 EMI in Austria and Germany

As mentioned above, the German language once served as a lingua franca of science. However, in the 1990s, authorities in Austria and Germany became aware of the fact that “‘German only’ is no longer a realistic option” (de Cillia & Schweiger 2001: 381). Therefore, in Germany, EMI programmes were introduced since 1996, and after a comprehensive assessment, the programmes became a constant in 2002 (Earls 2016: 3). Nonetheless, the initiative was not accepted without some criticism at the beginning of the century (Ammon and McConnell 2002: 5). Consequently, the establishment of EMI programmes may potentially influence not only Germany’s higher education system but also its society (Earls 2016: 3). In Austria, English has been in use as a language of instruction since 1990s, whereas the first private institution campus with English as the main language, the Danube University Krems, was established in 1994 (Smit 2010: 1). The first courses taught in English at public universities originate from the same period (Stegu & Seidlhofer 2003: 142).

Today, when it comes to the number of EMI courses offered by higher education institutions, Austria and Germany, similarly to the other countries in Central Western Europe, are at an intermediate stage of development compared to Northern Europe (Wächter & Maiworm 2014: 39-40). Even though the number of EMI programmes has risen at a great rate in Germany, from 65 in 2001, to 214 in 2007, to 927 with English as the main language of instruction in 2014, Germany still has a much lower proportion of EMI programmes to German-taught programmes than the Northern Europe countries (Gürtler & Kronewald 2015: 90).

Ammon and McConnell (2002: 173) argue that the reason behind this issue might be “concerns about undermining the international standing of their language”. They further state that

the big-language countries, especially those with their own scientific tradition such as France and Germany, have been more reluctant and slower to introduce English into university teaching than the small-language countries.

However, Earls (2016: 191-192) argues that the position of English and the ability of programmes in English to attract students from other countries simultaneously boosts German learning amongst them, thus creating more German language learners. In that manner, EMI programmes have a significantly positive impact on the popularity of German; international students in these programmes often learn it as a foreign language, as well as gaining a positive attitude towards it.

Earls (2016: 190-191) also posits that for a large number of German students EMI programmes constitute the first step towards relocation abroad after finalising their studies. Therefore, the concerns that EMI might cause a ‘brain drain’ of local students by equipping them with necessary skills to study and/or work abroad might be an additional motive for the gradual introduction of EMI programmes in Austria and Germany. On the other hand, he notes that there is also potential for a ‘brain gain’ by retaining foreign students who come to study in Germany, and/or German students who might return to Germany after studying abroad. Thus, upcoming policies regarding English-medium instruction programmes should consider “the interaction between language, educational and economic agendas” (Earls 2016: 190).

When it comes to research into the implementation of English-medium instruction at university level, several studies have been conducted in Austria, including Vienna. In 2011, Tatzl carried out a questionnaire study on the attitudes and challenges in EMI programmes of students and lecturers at the FH JOANNEUM University of Applied Sciences in Graz, Austria. The results revealed that EMI programmes at the postgraduate level are generally favoured by students and lecturers alike, and that there is a need for additional support, albeit “lower than expected” (Tatzl 2011: 252). Furthermore, the study identified that an increase in students’ workload, varying levels of their language proficiency, and the reduced content covered in class, are the main domains of concern. Finally, it emphasises the importance of English for Specific Purposes instruction for students, as well as “the provision of accompanying measures and resources fostering teacher development based on voluntary participation and reward schemes” (ibid.).

In 2012, Unterberger investigated the implementation of the EMI programmes at Austrian business faculties, with a special focus on Vienna University of Economics and Business (WU).

The main findings of her study are the absence of both undergraduate programmes taught in English and a homogenous admission policy. She too highlights the significance of English for Specific Purposes instruction in EMI business education, and the current lack of awareness of the latter (Unterberger 2012: 80). Furthermore, her study shows that a significant number of the EMI classes explicitly mention language learning aims, including an improvement in students' academic writing and reading, discussion, negotiation and presentation skills (ibid.: 93). Lastly, the lecturers at the Vienna University of Economics and Business disclose that, due to the literature relevant to their fields of interest being mostly in English, teaching in English requires less effort compared to teaching in German (ibid.: 94).

At the Faculty of Chemistry at the University of Vienna, Vogler (2014) examined both students and lecturers' attitudes towards the use of English as the language of instruction. Similarly to Tatzl (2011) and Unterberger (2012), he too states that most students are strongly "in favour of using more English in their study programmes both in form of English-medium teaching and extra language courses" (Vogler 2014: 83). The reasons for this lie in an increase of students' awareness concerning the role of high proficiency in English throughout their future careers. Ultimately, EMI programmes at the Faculty of Chemistry seem to be introduced in a rather unplanned manner, and as a response to international trends (ibid.: 85).

Most recently, Dolmanitz (2015) analysed the opinions and beliefs of lecturers at the FH Campus Wien, an Austrian university of applied sciences, regarding the internationalisation of higher education, specifically, EMI programmes. The analysis discovered that lecturers share a variety of beliefs related to internationalisation and its implementation, as well as experiences with EMI courses (Dolmanitz 2015: 107). Although all lecturers acknowledge the need for teaching in English so as to prepare students for their careers, some of them question "all-encompassing internationalisation efforts and English teaching", as many students are not interested in having an international career (ibid.). Additionally, teaching in English is challenging for lecturers, mostly due to concerns regarding their teaching students with varying levels of proficiency in English (ibid.).

This chapter gives an overview of the process of Englishisation, specifically in European higher education where English is increasingly used as the medium of instruction. Consequently, the research on this topic has yielded somewhat divergent results depending on the context, meaning one cannot generalise and transfer conclusions from one setting onto another. Thus, it is of great significance to analyse each subject separately. The present thesis aims to

investigate EMI programmes in Vienna, as the capital and the most populated city in Austria which attracts the largest number of international students, particularly because of higher education institutions offering programmes taught entirely in English.

The following chapter presents the area of individual differences, which have been identified as one of the main predictors of language learners' success. The focus of the next section is on affective factors, in particular motivation, attitude and anxiety.

3. Individual differences

Undeniably, individual differences are the fundamental component of the L2 learning process. This chapter introduces their nature and most significant characteristics, with a particular focus on three affective factors: motivation, attitude, and anxiety. The aim of this literature review on individual differences, as well as the topic of Englishisation discussed in the previous chapter, is to present elementary information on select research in these fields, as it is unfeasible for the present thesis to account for all research on individual differences or Englishisation. The examples deemed most representative have been selected for the purpose of the review, and as the basis for the empirical part of the study.

“Every man is in certain respects: a. like all other men, b. like some other men, c. like no other man” (Kluckhohn & Murray 1948: 35). Dörnyei and Ryan (2015: 1) open their overview of individual differences (IDs) with a discussion on Kluckhohn and Murray's quote and its everlasting significance. They observe that, indeed, the idea that people are at once different and similar to one another is not new, but rather apparent to both laypeople and researchers studying these phenomena. The latter – usually coming from a sub-field of psychology referred to as differential psychology, or lately, individual difference research – have been striving to understand the features that make people differ from one another, and to uncover the reasons behind these differences. This issue is connected to one of the central concerns in psychology: the struggle “to understand the *uniqueness* of the individual mind and to explore the *general* principles of the human mind” (Ibid.). Therefore, ID researchers deal with variation between individuals, and IDs can be defined as “characteristics or traits in which individuals may be shown to differ from each other” (Dörnyei & Ryan 2015: 2).

Even though these differences may be troublesome for researchers trying to devise rules applicable to all cases with no exceptions, their existence cannot be ignored. Firstly, it is

important to differentiate between IDs and someone's preferences, such as for clothes or ice-cream flavour, because "all scientific definitions of IDs assume the relevance of *stability*" (Dörnyei & Ryan 2015: 2). Thus, variation between individuals can only be acknowledged if it occurs consistently over time. Furthermore, these variations need to be both pertinent to everyone and differentiating among individuals (Snow, Corno & Jackson 1996, quoted in Dörnyei & Ryan 2015: 3). Eye colour, for instance, varies among people, yet it is not relevant "as [a determinant] of behavior [...], whereas personality appears to play a major role in influencing our behaviour" (Eysenck 1994: 1). Consequently, IDs incorporate those persistent traits that can be applied to everyone, and that are at the same time slightly different in everyone (Dörnyei & Ryan 2015: 3).

Accordingly, this understanding of ID applies to foreign language learners² as well, and the variation among them regarding their accomplishments in learning foreign languages has been a topic of interest for academics dealing with second language acquisition (SLA) (cf. Dörnyei & Ryan 2015). Their inquiry resulted in stressing the importance of IDs, and a widely accepted belief that these elements have a significant influence on the potential outcome of language acquisition (Dörnyei & Ryan 2015: 4-5).

Gardner and MacIntyre (1992: 212) state that "there are probably as many factors that might account for individual differences in achievement in a second language as there are individuals". Nonetheless, several factors have been identified as having major influence on L2 learning: personality, language aptitude, motivation, learning styles and cognitive styles, learning strategies and self-regulation, as well as other determinants such as anxiety, willingness to communicate, learner beliefs, self-esteem, and creativity (cf. Dörnyei & Ryan 2015). Robinson (2002: 2), on the other hand, classifies person variables into cognitive attributes (such as intelligence, language learning aptitude, language learning strategies, or working memory capacity and speed), and affective or conative factors (such as anxiety, attitudes, motivation, self-confidence, and emotion). Language learning aptitude, for instance, is portrayed as the most influential factor in learning a foreign language (Dörnyei & Ryan 2015: 35). However, affective variables, including attitude, motivation, and anxiety, have the same significance as language aptitude in terms of estimating achievement in language learning

² The results of the present study, in particular the analysis of variable Change (cf. section 5.2), show that most participants believe their proficiency in English has improved during the course of their respective programmes. Thus, despite language learning not always being explicitly stated as an EMI objective (cf. chapters 5 and 6 for a detailed discussion), this study perceives non-native speakers of English who participate in EMI classes as both foreign language users and learners (cf. Cook 2002: 1-4).

(Noels et al. 2000: 35). Consequently, learners' attitudes and "other motivational dispositions" can be seen as a "crucial determinant of successful language learning" (Dörnyei & Ryan 2015: 74).

These different factors have been considered within the classic ID model which is based on four postulates: IDs are clearly identifiable psychological concepts; they are rather constant traits; various IDs construct unitary constituents related to various behavioural traits, hence, they are only somewhat connected to one another; and finally, they are intrinsic, and to a certain extent separated from contextual influences. However, recently these postulates have been questioned, and it has been argued (Dörnyei & Ryan 2015: 6) that

individual learner characteristics are not stable but show salient temporal and situational variation, and neither are they distinct and monolithic but involve, instead, complex constellations made up of different parts that interact with each other and the environment synchronically and diachronically.

Indeed, a significant reconceptualization of affective factors has taken place (Robinson 2002: 7). While cognitive attributes, such as intelligence and language learning aptitude of a learner, are generally considered to be fixed, the affective attributes are increasingly being assessed as the subject of change (Robinson 2002: 7-8). Moreover, recent advances in applied linguistics have led to the study of various concepts "as interrelated and interconnected parts of complex dynamic systems" (Piniel & Csizér 2014: 164). Van Geert (1994: 50) defines dynamic systems as "a set of variables that mutually affect each other's changes over time". Following this, the study of ID variables in language learning has shifted towards a dynamic systems perspective, with a focus on the evolution and transformation of variables rather than their individual characteristics (Piniel & Csizér 2014: 165).

Dörnyei and Ryan (2015: 10) argue for the categorisation of mental functions into cognition, motivation, and affect. They claim that it is easy to distinguish between cognition and motivation based on how differently they appear: cognition is characterised by not being gradable with regard to strength, either positively or negatively; motivation, on the other hand, can be graded with regard to intensity. Similarly, emotions can also be graded, but at the same time they are clearly distinguishable from motivation. Correspondingly, Parrott (2004:7) labels these three categories "the reasoning part", "the appetitive part", and "the spirited part", but this division dates even further back and builds upon Greek philosophy, more specifically the "trilogy of the mind" (Dörnyei & Ryan 2015: 10). The classic ID model does not, however, take into account the role emotions play in human behaviour and beliefs. Affect was, indeed,

considered “at best, a poor relation to rational thinking”, meaning that there was no room for unstable and changeable emotions in research (ibid.: 9). Nevertheless, emotions, whether they are negative, such as anxiety, or positive, such as excitement, influence the L2 learning process significantly, and it is essential to acknowledge their impact on language learners (ibid.: 10).

This shift from the classic ID paradigm to complex dynamic systems offers a potential solution to the shortcomings of the former. The most important impact of a complex dynamic systems point of view could be its proposition that attitudes change. In that manner, a language learner is conceptualised as ever-changing and growing “within a synergetic relationship of agent and its context”, rather than static. (Dörnyei & Ryan 2015: 11)

Each of the abovementioned individual differences has been central to SLA research for more than half a century. Accordingly, recent advances point towards an interrelationship amongst them, which will be discussed in the following section. As Robinson (2002: 55) points out, it is unfeasible to take account of all pertinent variables in one model. This study is no exception to this principle. Since the topic group of the present research is comprised of postgraduate students, i.e. individuals who have already successfully taken part in and completed higher education programmes, it can be implied that they possess adequate cognitive factors (language learning strategies, intelligence, working memory capacity etc.). Thus, in the present thesis, the selection includes three affective/conative factors which have particular influence on the target group: motivation, attitude, and anxiety.

3.1 Motivation

Whenever IDs amongst language learners are discussed, motivation is promptly introduced as one of the most influential variables (MacIntyre 2002: 45). The word originates from Latin *movere*, ‘to move’ (Dörnyei & Ushioda 2011: 3), and indeed, motivation can be seen as the force that moves an individual to advance towards a specific objective.

3.1.1 Definition and scope

Despite the fact that motivation has lain at the centre of academic disputes for over two centuries, there is no clear-cut definition of this concept. Dörnyei and Ottó (1998: 65), for instance, offer a definition of motivation as “the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritised, operationalised

and (successfully or unsuccessfully) acted out”. However, so far “no existing motivation theory [...] has managed – or even attempted – to offer a comprehensive and integrative account of all the main types of possible motives”, and in all probability, “devising an integrative ‘supertheory’ of motivation will always remain an unrealistic desire” (Dörnyei & Ushioda 2011: 4). This is due to the use of the term both in everyday life, and in various scientific fields, such as psychology, applied linguistics, and educational studies. Thus, defining ‘motivation’ should “explain nothing less than the reasons for human behaviour” (Dörnyei, Csizér & Németh 2006: 9).

An individual possesses many motives: we are motivated to work, learn, play games, eat, socialise, etc. What is even more important than the number of motives is that they can all be more or less present simultaneously in a person (MacIntyre 2002: 46). Those individual motives grow and decline with time and, correspondingly, motivation theory can be conceptualised as an effort to interpret that which “gives behaviour its energy and direction” (Reeve 1992: 3, quoted in MacIntyre 2002: 46). That is to say, motivation theory is trying to answer two questions: “(1) why is behavior directed toward a specific goal, and (2) what determines the intensity or effort invested in pursuing the goal” (ibid.). A third issue stems from the first two: why are there individual differences between people regarding the strength and direction of their motivated behaviour? Indeed, one feature researchers agree on is that these different levels of motivation yield significantly different results as well as feelings of the subjects (Masgoret & Gardner 2003: 128). Therefore, when it comes to defining motivation and its scope, it is generally accepted that motivation comprises the magnitude and direction of one’s behaviour, “that is: the choice of a particular action, the persistence with it, [and] the effort expended on it” (Dörnyei & Ushioda 2011: 4).

3.1.2 Motivation research

Throughout the history of L2 learning motivation research, different approaches and interpretations were offered by researchers trying to shed light on various motivation related issues. Four distinct phases can be identified with regards to the research of L2 motivation (Ushioda & Dörnyei 2012: 396):

1. The social-psychological period (1959-1990) – characterised by the work of Gardner and his students and associates in Canada.
2. The cognitive-situated period (during the 1990s) – characterised by work drawing on cognitive theories in educational psychology.
3. The process-oriented period (the turn of the century) – characterised by an interest in motivational change.

4. The socio-dynamic period (current) - characterised by a concern with dynamic systems and contextual interactions.³

L2 motivation theory stems from the work of Gardner and Lambert (1985), whose study on motivation and language-learning attitudes shaped the field of motivation research for over twenty years. They advocate that motivation is a crucial element of SLA, independent of learners' cognitive attributes. Moreover, they claim that motivation in SLA differs from motivation to learn other subjects, due to the learners' having to, not only learn the language, but also acquire speech behaviour specific to the target language community. Additionally, Gardner and his associates argue that learners' resulting attitudes towards the target language community, i.e. integrativeness, have a significant impact on the language learning process (Ushioda & Dörnyei 2012: 396). Gardner (1985) has developed a measurement tool, Attitude/Motivation Test Battery, which assesses the main attitudinal-motivational components of his theory, as well as FLA. It is composed of various multiple item scales: multiple choice, Likert, and semantic differential. The scales yield combined indices of motivational and attitudinal variables, for example integrative orientation or interest in foreign languages (Ushioda & Dörnyei 2012: 401).

In his model of motivation, Gardner (1985) distinguishes between attitudes towards language learning situation, integrativeness, and instrumental motivation. The first concept involves learners' "reactions to formal instruction" (Gardner & MacIntyre 1993: 159). It includes attitudes towards lecturers, courses, or any other elements of a given language learning situation (*ibid.*). The second construct, integrativeness, is "defined by attitudes reflecting a genuine desire to meet, communicate with, take on characteristics of, and possibly identify with another group" (Gardner & Lambert 1972, quoted in MacIntyre, Mackinnon & Clément 2009: 44). Finally, instrumentality denotes "the perceived pragmatic benefits of L2 proficiency and reflects the recognition that for many language learners it is the usefulness of L2 proficiency that provides the greatest driving force to learn the language" (Dörnyei, Csizér & Németh 2006: 12). Therefore, instrumentality comprises aims such as career success and the prospect of a better job as a result of mastering the language (*ibid.*). Gardner's model has been the foundation of most SLA research into motivation and attitudes. This model has nevertheless been criticised due to "its popularity [leading] to its unhealthy dominance among language researchers and educators, preventing the exploration of other motivational frameworks"

³ Dörnyei (2005: chapter 4) provides a detailed overview of developments in motivation theory.

(MacIntyre 2002: 45). However, the reason behind the success of this model might be in its potential to address all three issues mentioned in the previous section (MacIntyre 2002: 46).

The latest approach to L2 motivation, the L2 Motivational Self System, has been proposed by Dörnyei (2005), and it draws heavily on the work of Robert Gardner and his assessment methods (Dörnyei, Csizér & Németh 2006: 9). It incorporates several dominant L2 concepts “with findings of self research in psychology” (Dörnyei, Csizér & Németh 2006: 15), and consists of three dimensions. The main dimension of this approach is the Ideal L2 Self, which denotes one’s ‘ideal self’ with regards to the L2, i.e. the rendition of all the characteristics a learner aspires to have (ibid.) It is paired with Gardner’s concept of integrativeness, and it shows “the extent to which students can imagine themselves as highly proficient users of the given foreign language” (Pinel & Csizér 2014: 166). The second dimension, the Ought-to L2 Self, comprises the extrinsic instrumental motives, features such as responsibilities and duties learners think they ought to have. Thus, this dimension may not correspond to one’s wishes. Finally, the third dimension, L2 Learning Experience, refers to those motives associated with learning experience and classroom processes (Dörnyei, Csizér & Németh 2006: 16). The fundamental position of the L2 Motivational Self System is that being proficient in a language is essential “to one’s ideal or ought-to self, this will serve as a powerful motivator to learn the language because of our psychological desire to reduce the discrepancy between current and future self states” (Ushioda & Dörnyei 2012: 400-401). This model is in line with the dynamic systems perspective, as it deals with the development of such self images and their evolution through the process of learning, which is represented in the L2 Learning Experience component (Ushioda & Dörnyei 2012: 401).

Former models in motivation research have been criticised due to their neglect of the dynamic nature and flow of motivation, while the main characteristic of the L2 Motivational Self System is its focus on the temporal component in L2 motivation (cf. Ushioda & Dörnyei 397). Primarily, when analysing motivation from a temporal perspective, it is necessary “to clarify the conceptual distinction between motivation to engage in L2 learning (choices, reasons, goals, decisions)”, namely instrumentality, and motivation during engagement (how one feels, behaves, and responds during the process of learning)” (Ushioda & Dörnyei 2012: 397-398). Thus, Dörnyei and his associates incorporate to their study the most commonly studied motivational and attitudinal variables in L2 motivation research: integrativeness,

instrumentality, linguistic self-confidence, attitudes towards the L2 speakers/community, cultural interest, and vitality of the L2 community (Dörnyei, Csizér & Németh 2006: 10).

3.1.3 Motivation and ELF

The role of English worldwide as a global language as well as the lingua franca of education and research might generate presumptions that student motivation is unproblematic due to the necessity of learning English (Ushioda 2013: 2). Facts, on the other hand, point towards varying levels of motivation in students, which is why this field is of interest to many researchers from various disciplines.

The aforementioned shift in the research of ID variables from a dynamic systems perspective has had an influence on L2 motivation theory, with “a focus on the situated complexity of the L2 motivation process and its organic development in interaction with a multiplicity of internal, social, and contextual factors” (Ushioda & Dörnyei 2012: 398). The main feature of this approach to L2 motivation is its view of motivation within the intricacies of language use and learning in the globalised world (*ibid.*).

First of all, Gardner’s claim (1985: 168) that L2 motivation “always has an integrativeness component, as there is always “some level of willingness to interact with other communities” has been confirmed by many studies. Indeed, specific attitudinal-motivational variables, namely, positive attitudes and motivation combined with integrative orientation, reflect integrative motivation (Ushioda & Dörnyei 2012: 399). However, globalisation has a strong impact on social lives of people, resulting in an increase of contact between different cultures. This has a considerable impact on various issues, “including interethnic attitudes and L2 motivation” (Dörnyei, Csizér & Németh 2006: 16).

Consequently, nowadays the concept of integrativeness, cannot be applied to English learning any more, at least not in its original conceptualisation. Integrativeness, as Gardner (1985) introduced it, stands for a positive attitude to the L2 and the target language community, meaning that those learners who score high on this variable show tendencies towards integrating into the L2 community (Dörnyei, Csizér & Németh 2006: 10). However, when it comes to English and the role it plays as a lingua franca in numerous domains, there is a “need to reappraise Gardner’s concept [...] to fit a perception of English as an international language” (McClelland 2000: 109). The new definition should focus on “integration with the global community rather than assimilation with native speakers” (*ibid.*).

Therefore, when English is the target language, given its role as a lingua franca and a necessary academic skill, there would be no gain in discussing integrative motivation (Ushioda & Dörnyei 2012: 400). English language speakers have become a global community, and Ushioda (2006: 150) posits that L2 motivation for learning the English language can be conceptualised “as part of one’s internal representation of oneself as a de facto member of that global community”. Therefore, the current approach to this matter, the L2 Motivational Self System, might offer a necessary reconceptualization (Dörnyei, Csizér & Németh 2006: 12), as its focus is on “the internal domain of self and identity” rather than “an external reference group” (Ushioda & Dörnyei 2012: 400).

3.2 Language attitude

As stated by Garrett (2010: 2), “some words are expensive”. Undeniably, the power of words is immense: what we say can bring us problems or prosperity. However, it is not only which words we use that has an influence on how we are perceived by other people – it is all levels of a language that people unconsciously hold attitudes to: spelling, punctuation, pronunciation, words, accents, grammar, dialects, and, finally, languages themselves (ibid.). Cargile (1994: 211) posits that our language performance can indeed shape various significant decisions that dominate our social wellbeing and success. Academic quality of school assignments, for instance, may not be the only determinant of grades, but also other language behaviour related qualities, such as dialect, accent, or lexical diversity. Thus, hearers act upon both linguistic and paralinguistic information in communication, and this affects language both on an everyday social interaction level, and the macrosociological one when it comes to deciding on the prestige of a language variant. The study of language attitudes is based on attempts to comprehend this process as well as the various types of “evaluative profiles that arise from such language variation in different social contexts and cultures” (ibid.).

In order to conceptualise the notion of language attitude, the following sections give a brief overview of research done into the field of attitudes in general, including various definitions. This part concludes with a comparative discussion of attitude and similar terms.

3.2.1 Attitude definition and structure

Similarly to motivation, there are various definitions of the concept. Starting with the earlier ones, Allport (1954: 45), for example, defines an attitude as “a mental and neural state of readiness, organized through experience exerting a directive or dynamic influence upon the

individual's response towards all subjects and situations with which it is related". Ajzen (2005:3), on the other hand, describes it as "disposition to respond favourably or unfavourably to an object, person, institution or event", similarly to Taylor, Cooper-Thomas and Peterson who claim that "[a]ttitudes are psychological dispositions held towards an object, based on an individual's evaluation of that object" (Taylor, Cooper-Thomas & Peterson 2015: 46). Simply put, attitude can be seen as "a summary evaluation of an object or thought" (Bohner & Wanke 2002: 5).

There is no doubt that there is a strong link between a person's behaviour and attitudes, and the link is strongest when the two share the same content and specificity (Taylor, Cooper-Thomas & Peterson 2015: 46). Within the field of social psychology, two main distinct perspectives of attitudes exist: the mentalist and the behaviourist. The first believe that attitudes are mental states, and that they can somewhat predict behaviour (Ferguson 2015: 14). Moreover, the mentalists propose the most widespread classification of attitudes, which originates in Plato's work, and it comprises three categories of responses: cognition, affect and conation (Ajzen 2005: 4). Many researchers believe that these responses correspond to the components of attitude: cognitive (knowledge), affective (feeling) and behavioural or conative (action) (cf. Ajzen 2005 for a brief overview).

Baker (1992: 12-13) argues that the relationship between these three constituents may be affected by various factors. One's beliefs about the significance of learning a language, for example, may not be represented in behaviour – a person may consider learning a language as very important, although that person may not like the process of learning. Indeed, the relationship between the three components is rather complex and irregular, with some cases in which there is a disparity between an individual's emotions or beliefs and their behaviour, due to a specific context (Ferguson 2015: 14).

The other group of researchers see attitudes as aspects of behaviourism, and they believe that attitude measurement is possible through the observation of the individual's overt behaviour. (Eagly & Chaiken 1993: 3). However, this implies that attitudes cannot be used to forecast behaviour. Regarding the attitude structure, behaviourists perceive attitudes as single units, and as responses to external stimuli, rather than consisting of multiple components (Fasold 1984: 147).

The mentalist perspective to attitudes is the most widespread one, as most of the research so far indicates that “the correlations among measures of the three components, although leaving room for some unique variance, are typically of considerable magnitude” (Ajzen 2005: 21).

3.2.2 Language attitude and measurement

One of the reasons attitude research is such a well-established practice in social sciences is that attitudes are often perceived as reliable indicators of other “more objective outcomes such as applied effort, academic performance, and retention” (Taylor, Cooper-Thomas & Peterson 2015: 46). ‘Language attitude’ is a hypernym which includes the following major areas (Baker 1992: 29-30):

- attitude to language variation, dialect and speech style
- attitude to learning a new language
- attitude to a specific minority language (e.g. Irish)
- attitude to language groups, communities and minorities
- attitude to language lessons
- attitude to the uses of a specific language
- attitude of parents (together with other relatives as well as an individual’s social environment) to language learning
- attitude to language preference

When it comes to attitudes towards languages, Bartram (2010: 76) warns that it is essential to keep in mind that they “may be influenced by perceptions of a much wider target-language community”. Moreover, within every social situation, various cultural factors affect language attitude. Cargile et al. (1994: 226) describe these factors as “the political, historical, economic and linguistic realities that exert a large influence over the process of language attitude formation”. Furthermore, specific types of attitudes, such as attitudes towards English and other global languages, have a tendency to be intense. They are also “characterised by well-learned association between the language and the evaluation” (Perloff 2003: 68). However, the relationship between an individual’s attitude and their behaviour depends on the “complexity of domains in which language is used” (Garrett 2010: 28).

Regarding methodology, Garrett (2010: 162) states that it is a widespread practice in language attitude research to first identify frequent themes, and then use quantitative methods, such as attitude scales, to investigate how different subgroups respond to them. The subgroups can be defined on the basis of respondents’ age, socio-economic position, foreign language proficiency, etc., and this approach has been adopted by various studies which have investigated attitudes in educational environments, including language classrooms.

Firstly, as stated in the previous section, there are many levels at which attitudes can be held – “towards a specific action, subtask, idea, group or environment as a whole” (Taylor, Cooper-Thomas & Peterson 2015: 46). Additionally, not only can attitudes have various foci, there can also be various types of respondents (Ferguson 2015: 14-15). Therefore, it is necessary to determine the level(s) of a language attitude which are to be measured, as well as the respondent type. For instance, as argued by Ferguson (2015: 15), attitudes can be held towards the use of EMI in higher education, with a focus on young people in education. He (ibid.) asserts that:

[t]his makes sense not only because education is a key domain for language policy and a site of English language learning but also because these young people are often those in most direct contact with English and are at the forefront of change. Some of them are also the teachers, managers and policy-makers of the future.

Thus, one of the foci of the present study is to determine students’ attitudes towards the use of English as a medium of instruction, and to compare responses from different subgroups of respondents, i.e. post-graduate students from different countries and areas of study.

3.2.3 Attitude vs. motivation, belief and opinion

The majority of research within the field has mainly dealt with the theme of motivation in modern FLL, and there is a consensus that attitudes are a key component of “the motivational process” (Bartram 2010: 37). Nevertheless, these two terms are often used interchangeably, almost synonymously, as there are no clear-cut differences between them. Schiefele (1963: 66), for instance, posits that motivation is a composite of attitudes and motives. In his motivational model, attitudes are stable and individualised, while motives are immediate, and in control of one’s behaviour in a certain situation. Baker (1992:14) too makes the same distinction between motives and attitudes, and argues that while motives are oriented towards goals, “attitudes are object specific”. Therefore, the focus is on the relationship between attitude and its corresponding objects. Ultimately, the difference between the affective and cognitive constituents on the one hand, and the conative one on the other is underlined once again.

Similarly, the most striking dissimilarity between attitudes and beliefs is that the nature of beliefs is primarily cognitive, i.e. they do not include feelings and emotions, unlike attitudes. However, beliefs may both initiate or be initiated by severe affective responses (Garrett, Coupland & Williams 2003:10). Baker (1992:14), contrastingly, claims that opinions are much more difficult to distinguish from attitudes, since these two terms are often used interchangeably both by lay people and many researchers. Nevertheless, the main distinction lays in the fact that, similarly to beliefs, opinions are cognitive, and without any affective

constituent. In addition, he claims that “opinions are verbalisable, while attitudes may be latent, conveyed by non-verbal and verbal processes”. Thus, attitudes are more difficult to put into words, and need to be approached both directly and indirectly, whereas opinions can be seen as “a more discursive [...] entity” (Garrett, Coupland & Williams 2003:10). Furthermore, many researchers advocate the view that attitudes are unconscious and dormant, while opinions are conscious and perceptible (McGuire 1985: 241). What is more, attitudes often stem from emotions, and opinions are related to facts (ibid.).

3.3 Foreign language anxiety

Gray (1982: 5) states that “[w]hatever else anxiety is, it is undoubtedly an emotion; sometimes, reading the work of psychologists, one is tempted to think that it is the only emotion”. Anxiety, consequently, has a strong impact on learners’ performance. Arnold and Brown (1999: 8), for instance, conclude that “anxiety is quite possibly the affective factor that most pervasively obstructs the learning process”. This has also been confirmed by many studies (cf. Dewaele & MacIntyre 2014 for a review), as underlined by MacIntyre and Gregersen (2012: 103): “[o]ne of the most consistent findings in the SLA literature is that higher levels of language anxiety are associated with lower levels of language achievement”.

Three decades ago, Horwitz, Horwitz and Cope (1986) were the first to identify and define ‘foreign language anxiety’ (FLA), concluding that it is rooted in “the inherent linguistic deficit of L2 learners” (Dörnyei & Ryan 2015: 177). In a language classroom, anxiety can be identified “in many forms of fear – a fear of speaking; a fear of misunderstanding others, and a fear of being misunderstood; a fear of being laughed at” (Dörnyei & Ryan 2015: 176). More broadly, it involves “the worry and negative emotional reaction aroused when learning or using a second language” (MacIntyre 1999: 27), i.e. it can cause self-consciousness, embarrassment, or other detrimental emotions. Ever since the concept has been introduced, FLA has been seen as an influential ID (Horwitz 2010).

In addition to defining the term, Horwitz, Horwitz and Cope (1986) also developed an instrument for foreign language anxiety measurement, the 33-item Foreign Language Classroom Anxiety Scale (FLCAS). The results of their research indicate that FLA does not correlate significantly with general anxiety, meaning that it is rather independent (Horwitz 2001). Recently, it has been discovered that multilingualism correlates negatively with FLA (Dewaele 2007) due to “multilinguals [having] a heightened sense of metalinguistic awareness,

which could arguably decrease their language learning anxiety” (Thompson & Lee 2013: 732). Therefore, FLA is also linked to the number of languages an individual knows. In summary, FLA can be defined as “situation-specific anxiety, [...] repeated momentary experiences of anxiety [...] linked to the context of language learning in particular” (Piniel & Csizér 2014: 166).

Additionally, a concept that is strongly related to anxiety, linguistic self-confidence, was introduced into L2 motivation theory by Richard Clément (1980). It encompasses a self-assured and serene belief in one’s L2 knowledge, as well as “the individual’s perceptions of his or her abilities to reach goals successfully or to finish tasks, and it usually concerns a generalised appraisal of one’s coping potential, relevant to a range of tasks and subject domains” (Dörnyei, Csizér & Németh 2006: 14). Clément (1980) posits that linguistic self-confidence has a crucial impact on learners’ later language learning motivation and attitudes, and that it stems from the type and amount of prior contact with the target language community (Dörnyei, Csizér & Németh 2006: 14).

Nevertheless, the interrelationship of motivation, attitudes, and anxiety was found to be one of the best prognosticators of grades in language classes, especially with older students (Gardner et al. 1976). One explanation for this phenomenon might be that adult learners have more advanced thoughts, but lack adequate language to express themselves, which consequently creates anxiety when using the language (Horwitz et al. 1986). Given all the potential harmful effects of anxiety, many researchers have made it their enquiry matter, albeit with limited success. An initial problem occurs at the level of basic conceptualisation: “is it a motivational component? A personality trait? Or an emotion?” (Dörnyei & Ryan 2015: 176). Pavlenko (2005: 34) argues that, despite the extensive research, FLA is seen as merely a part of the ‘affective factors’ paradigm, and in consequence, emotions are often reduced “to a laundry list of decontextualized and oftentimes poorly defined sociopsychological constructs, such as attitudes, motivation, anxiety, self-esteem, empathy, risk-taking, and tolerance of ambiguity”. Yet, anxiety can be “both a cause and effect, part of a non-linear, ongoing learning and performance process” (MacIntyre & Gregersen 2012: 106).

Following the recent movement to “rethink and open up conceptualizations of the affective dimension to language learning”, due to the continuous interest in FLA research and its influence, Dörnyei and Ryan (2015: 180) underline the importance of investigating language anxiety as a dynamic construct, one that changes and adapts depending on the situation. The

present thesis follows their viewpoint, and it aims at investigating how anxiety correlates with other affective factors, namely motivation and attitude, when it comes to non-native speakers of English in EMI programmes in Vienna.

This section concludes the first part of the thesis which has provided an overview of the literature pertaining to the research questions raised in the introductory part. First, the notion of Englishisation has been investigated, i.e. the spread of English in various domains, education in particular. Moreover, this chapter has offered a detailed summary of the use of English as a medium of instruction in tertiary education. The third chapter has focused on the field of individual differences, with an emphasis on three affective factors: motivation, attitude and anxiety. The second part of the study covers more empirical concerns, starting with the forthcoming chapter in which the setting, methods and materials used, as well as the initial analysis of the gathered data, are analysed.

4. Case study

Research into relevant fields – EMI, motivation and attitudes – reveals substantial differences among different settings, and various studies have yielded differing results. The present thesis analyses EMI in Austria, with the goal of gathering information on and exploring the attitudes and motivation of non-native speakers of English in English-medium university education. The empirical research aims to answer two research questions:

1. In what way do attitudes towards and motivation for English-medium education of domestic students, who have previous experience with the Austrian education system, differ from those of international students who have come to Austria in order to further pursue their studies?
2. Are there significant differences in the attitudes towards and motivation for English-medium education between various fields of study and/or programmes?

Therefore, this study attempts to analyse non-native English-speaking students' attitude towards and motivation in EMI programmes in order to investigate whether there are (and if so, to what extent) statistically significant differences between: 1. domestic and/or students who have extensive experience with the Austrian educational system, and international students; 2. students from different fields of study. This chapter opens with a report of the current situation in Vienna with regards to the use of English as a medium of instruction. The

forthcoming section first describes the setting in which the study is conducted, before outlining the methodology used in the case study, including the instrument and its administration, participants, and initial data analysis.

4.1 Higher education institutions in Austria

Tertiary education institutions in Austria, Vienna included, can be categorised into three main groups: public universities (Universitäten), universities of applied sciences (Fachhochschulen), and private universities (Privatuniversitäten). Additionally, there are also university colleges of teacher education (pädagogische Hochschulen), and universities of arts. Overall, according to the latest report from the Federal Ministry of Science, Research and Economy (2014), there are 22 public universities, 21 universities of applied sciences, and 12 private universities. At the beginning of 2015, a total of 304,160 students were enrolled in programmes at public universities, while 45,660 were studying at universities of applied sciences (ibid.).

Furthermore, the most recent report by the Austrian Agency for International Cooperation in Education and Research (OeAD – Austrian Agency for International Cooperation in Education and Research 2015) for the academic year 2013/14 displayed a significant percentage of international students: out of 350,059 regular students (ordentliche Studierende), 23 percent were international students. The highest percentage of international students was in Universities of the Arts (46%), whereas only 6 percent of all students in University Colleges of Teacher Education were international.

In Vienna, there are 20 tertiary education institutions (OeAD – Austrian Agency for International Cooperation in Education and Research 2014: 2-3):

Table 4 Overview of higher education institutions in Vienna

| | |
|----------------------------------|--|
| Public universities | <ol style="list-style-type: none"> 1. University of Vienna 2. Medical University of Vienna 3. Vienna University of Technology (TU) 4. University of Natural Resources and Life Sciences, Vienna (BOKU) 5. University of Veterinary Medicine, Vienna 6. Vienna University of Economics and Business (WU) 7. University of Applied Arts Vienna 8. University of Music and Performing Arts Vienna 9. Academy of Fine Arts Vienna |
| Private universities | <ol style="list-style-type: none"> 10. Konservatorium Wien University (Musik und Kunst) 11. MODUL University Vienna 12. Sigmund Freud University 13. Webster University Vienna |
| Universities of applied sciences | <ol style="list-style-type: none"> 14. University of Applied Sciences of WKW (FHWien) 15. University of Applied Sciences Technikum Wien 16. University of Applied Sciences bfi Vienna |

| | |
|--|---|
| | 17. FH Campus Vienna – University of Applied Sciences |
| University colleges of teacher education | 18. University of Teacher Education Vienna |
| | 19. University College for Agrarian and Environmental Pedagogy Vienna |
| | 20. University College of Teacher Education Vienna/Krems |

Public universities, as Table 4 shows, are the most common higher education institutions in Vienna. In total, there are nine universities, including three universities of arts. Other types of institutions are fewer in numbers: four private universities and universities of applied sciences, and three university colleges of teacher education.

4.1.1 EMI in Vienna

Regarding the number of EMI programmes, private universities undoubtedly lead. At MODUL University Vienna (2016) and Webster University Vienna (2016), all classes are taught in English. Furthermore, no proficiency in German whatsoever is required in order to enrol into either undergraduate or postgraduate programmes at these two universities. MODUL University Vienna (2016) offers three bachelor and four master programmes, in addition to PhD studies. Webster, on the other hand, offers six bachelor and ten master programmes (Webster University Vienna 2016). Sigmund Freud University (2015) uses both German and English as mediums of instruction at all levels of education, i.e. from bachelor to PhD. Finally, German is the only language of instruction in just one of the four private universities, Musik und Kunst University (2016). The three university colleges of teacher education in Vienna have yet not implemented English as the language of instruction in their programmes. This can be explained by the almost exclusively domestic participants of these programmes.

When it comes to the universities of applied sciences in Vienna, they too recognise the significance of using English as the language of instruction, albeit to a different extent. At FH Wien University of Applied Sciences of WKW, for instance, German is officially the language of instruction (FHWien der WKW 2016a). However, they provide elective language courses for their students (FHWien der WKW 2016b). Other institutions of this type offer programmes entirely in English: University of Applied Sciences Technikum Wien offers two distance study bachelor's programmes, and a total of five full-time, part-time or distance study master's degree programmes (OeAD – Austrian Agency for International Cooperation in Education and Research 2014: 83); in addition to several EMI courses in German-taught programmes, University of Applied Sciences Bfi Vienna offers one bachelor, and three out of their six master programmes in English (ibid.: 84); finally, FH Campus Vienna University of Applied Sciences, even though they offer only one master programme taught exclusively in English and one in

both German and English, have developed three bachelor programmes solely for foreign students (FH Campus Wien 2016).

Lastly, public universities in Vienna are the place of tertiary education with the highest number of students. The table below displays the programmes offered by public universities according to their languages of instructions:

Table 5 Public universities offering EMI programmes

| University | Undergraduate programmes | Postgraduate programmes |
|---|--|---|
| University of Vienna (University of Vienna 2016) | 81 German taught BA programmes | 17 EMI MA programmes 117 German taught MA programmes Doctoral programmes |
| Vienna University of Technology – TU (TU Wien 2016) | 18 German taught BA programmes | 5 EMI MA programmes 27 German taught MA programmes 3 Doctoral programmes |
| University of Natural Resources and Life Sciences, Vienna – BOKU (BOKU 2016) | 8 German taught BA programmes | 3 EMI MA programmes 7 German and English taught MA programmes 16 German taught MA programmes 4 Doctoral programmes |
| University of Veterinary Medicine Vienna (Vetmeduni Vienna 2016) | 2 German taught BA programmes 1 Diploma programme | 3 EMI MA programmes 2 German taught MA programme 2 Doctoral programmes |
| Vienna University of Economics and Business – WU (Wirtschaftsuniversität Wien 2016) | 4 German taught BA programmes | 7 EMI MA programmes 7 German taught MA programmes 4 Doctoral programmes |

The table includes five public universities in which English is used as the language of instruction in specific programmes. What can be observed from the table, apart from the exclusive use of German in their undergraduate programmes, is the differing numbers of EMI programmes between the universities. While at the University of Vienna and the Vienna University of Technology EMI programmes comprise roughly 15 percent of their programmes at the master's level, the University of Veterinary Medicine Vienna and Vienna University of Economics and Business use EMI in at least half of their master's level programmes. The number of University of Natural Resources and Life Sciences EMI programmes, compared to the total, is only around 11 percent; however, over a quarter of their MA programmes are taught in both English and German.

At the University of Music and Performing Arts Vienna all courses are taught in German (Universität für Musik und darstellende Kunst Wien 2016), as well as at the Medical University of Vienna (OeAD – Austrian Agency for International Cooperation in Education and Research 2014: 12). Furthermore, the University of Applied Arts Vienna does not require the German language as a precondition for admission, and even though some programmes are advertised

as having English as the language of instruction, students are instructed to “gain knowledge of German up to the end of the second semester (dieAngewandte 2016). At the Academy of Fine Arts Vienna, on the other hand, both German and English are mandatory for specific programmes, whereas only the doctoral programme is taught exclusively in English (Akademie der bildenden Künste Wien 2016).

4.2 Research outline

Dörnyei (1994: 519) emphasises that it is because of the multifaceted nature of language that “the motivational background of L2 learning involves a unique and necessarily eclectic construct where „motivational“ and „attitudinal“ approaches *should* meet”. One of the reasons why attitudes may be seen as complex phenomena is their many “facets and manifestations” (Garrett, Coupland & Williams 2003:7). For instance, when researching students’ attitudes towards EMI education, the relevant facets of those attitudes need to be identified, that is: what EMI education means to its participants, as well as different constituents of communicative events, such as lecturers, fellow students, course materials etc. (ibid.).

A language attitude can be determined directly by simply asking individuals about their attitudes regarding specific language behaviours. This can be achieved through interviews or questionnaires, and it is possible not only to measure attitudes towards more than one language, but also towards different dialects or variants. (Cargile 1994: 212) Undoubtedly, motivation and attitude are intertwined and should be examined jointly. In order to measure attitudes, this study uses the direct approach, i.e. elicitation. The participants are asked direct questions about their language preferences, evaluation, etc., through a questionnaire. By using the direct approach, the participants themselves come to infer attitudes from their previously observed behaviours (Knops & van Hout 1998:7).

The following sections provide a detailed report on the methodology and research design. Firstly, a description of the questionnaire, including the incentive for choosing this data-gathering instrument, relevant concepts, and their layout, will be provided. This will be followed by an account of the survey piloting and administration, as well as the sample. The section will end with a review of the data matrix creation, composition and initial analysis.

4.2.1 Questionnaire

Questionnaires can be defined as “any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers” (Brown 2001:6). They can be used to gather three types of data through the use of the corresponding three types of questions: factual, behavioural and attitudinal. Factual questions, also referred to as classification questions, are used to obtain data on participants’ age, gender, residence, socioeconomic status, education, profession, language learning history, or any other characteristic that might be relevant for the survey. Next, behavioural questions investigate participants’ “actions, life-styles, habits, and personal history”. Lastly, attitudinal questions cover a wide range of concepts which are often not clearly discerned, including “attitudes, opinions, beliefs, interests, and values”. (Dörnyei 2003: 8)

As the main aim of this study is to gather students’ attitude towards and motivation for studying in English, the main component of the instrument used to gather data employs attitudinal questions. Nevertheless, in order to get information on how often students use English in their everyday lives, some concepts include behavioural questions. Finally, in order to get an accurate representation of the respondents and to classify them, the last section of the questionnaire involves factual questions.

Undeniably, the primary appeal of questionnaires lies in their effectiveness to produce a vast amount of data in a short period of time, thus saving researchers’ time, effort and financial resources. Furthermore, modern software programmes for statistical analysis allow for a quick and rather effortless review of the data (Dörnyei 2003: 9). On the other hand, using questionnaires has its disadvantages as well, according to Dörnyei (2003: 10-14). Firstly, questions and statements need to be adequately formulated in order to be properly interpreted by participants, which limits the complexity of statements. Similarly, the questionnaire designer has to keep in mind participants’ motivation, as the time most people will put in is relatively short, which also sets restrictions. If a questionnaire is too lengthy or tedious, the answers may be inaccurate due to participants’ weariness and the so-called fatigue effect. Moreover, the mistakes participants make cannot be corrected subsequently. Finally, it can occur that participants provide false information, i.e. instead of disclosing their actual feelings, beliefs or attitudes, “the results represent what the respondents *report* to feel or believe” [original emphasis] (Dörnyei 2003: 12). The most common reason for this is social desirability,

also referred to as prestige bias. Therefore, in order to avoid these limitations, special attention was put into the construction of each of the 83 questionnaire items.

The first phase of designing the instrument used in the present thesis focused on operationalising the research questions and identifying those concepts that needed to be included. This step involved consulting the relevant literature with the aim of identifying those pertinent issues and points that remain questionable in spite of extensive research. The observed issues are discussed in detail in chapters two and three of the thesis, while the Vienna-specific ones are introduced in the section on EMI in Vienna.

The following stage involved choosing an instrument to measure students' attitude and motivation. As there still are many questions that need to be answered, a questionnaire established itself as the ideal choice, as it allows for asking a variety of questions. However, when questionnaires are designed so that each of the questions measures a specific concept, this often results in "erratic items [...] which often produce responses which are inconsistent with the informant's answers to the other items" (McKenzie 2010: 42). Therefore, for the purpose of this study, an attitude multi-item scale was chosen instead, where the total of several responses stands for one concept/attitude, and erratic items can be removed upon identification. Multi-item scales "refer to a cluster of several differently worded items that focus on the same target" (Dörnyei 2003: 33), for example, five positively and negatively worded items related to one's Ideal L2 self. The scores for these five items are summarised, yielding a single total score. This way, "no individual item carries an excessive load, and an inconsistent response to one item would cause limited damage" (Skehan 1989: 11). A full list of concepts can be found in the section on the questionnaire layout and concepts.

Furthermore, as closed-ended questions are the most frequent in quantitative, statistical analyses due to their main advantage of being straightforward to code and tabulate (Dörnyei 2003: 35), all 83 items in the questionnaire were designed as such. The exceptions include factual questions about the participant, in addition to the final question which is fully open-ended, and, should the respondents want to, allows them to comment on the questionnaire. This raised the issue of response rating and the choice of a rating scale for the purpose of the questionnaire. In the end, the Likert scale was chosen, where participants need to mark "the extent to which they agree or disagree with [...] items by marking one of the responses ranging from 'strongly agree' to 'strongly disagree'" (ibid.: 37). Initially, the rating scale comprised four possible answers: strongly agree, agree, disagree, and strongly disagree. However, after

the piloting phase, participants' suggestions were taken into consideration, and two additional options were added: mildly agree, and mildly disagree. The values are later assigned numbers for scoring, and for the negatively worded items, the scores are reversed (ibid.).

It is important to mention that the use of Likert scales in attitude measurement has been criticised in literature (Kind & Barmby 2015: 119). Aikenhead and Ryan (1992: 478), for example, claim that "[questionnaires] have, by and large, been used with the erroneous assumption that students perceive and interpret the test statements in the same way as researchers do". That is to say, a questionnaire gathers data showing the participants' evaluation of the researchers' attitudes, instead of the participants' genuine attitudes (Kind & Barmby 2015: 120). However, in this case, the present study has been designed by a non-native speaker of English who partakes in EMI postgraduate programme, thus a person that shares the same concerns and basic characteristics as the participants. Even though this does not remove the bias in its entirety, it ensures that the perspective is that of an insider. Finally, research has proven that relevant scales can be formed by using the Likert-scale statements (ibid.: 134). Ultimately, to completely oppose their use would be "to throw out a very important baby with the bath water; this is a baby that is expected to make a change to future attitude research" (ibid.: 136).

4.2.1.1 Internet-based research

Nowadays, it is common to use Internet-based surveys for various scientific purposes. This is not surprising when all the advantages of Internet-based questionnaires, compared to other research methods, are taken into account. Firstly, they reduce both the costs and the time necessary to administer, collect and process data. Moreover, their main advantage might be in their ability to anonymously access a higher number of participants who can decide to fill in the questionnaire at a time and place which are convenient for them. Also, because of the participation on a volunteer basis, the survey can gather more authentic data, while simultaneously benefiting from a diversified Internet community. Finally, due to the nature of web-based surveys, human error can be significantly decreased. (Cohen, Manion & Lawrence 2011: 279-280)

In their overview of internet research surveys, Fricker and Schonlau (2002: 352, quoted in Cohen, Manion & Lawrence 2011: 277) conclude that with a specialised sample, such as the one here: non-native speakers of English who are postgraduate students enrolled in EMI

programmes, web-based surveys yield a higher number of participants than any other type of survey. For these reasons, I opted for an Internet-based questionnaire rather than a paper-based one to gather data.

Furthermore, as Dillman, Smyth and Christian (2014: 110) argue, in self-administered surveys, such as this one, closed-ended questions are more preferred than the open-ended ones. This is due to open-ended questions often being skipped as they require more time and effort than answering closed-ended questions, which increases the item nonresponse bias. Also, closed-ended questions are much easier to answer for those participants who use mobile devices, due to typing inconveniences. This was an additional reason for using closed-ended questions and a Likert-type rating scale, as the respondents can simply click on their preferred answer, thus reducing the time and effort necessary for successfully filling in the questionnaire, and, consequently, the dropout rate of the respondents.

4.2.1.2 Questionnaire layout and concepts

The present thesis uses a questionnaire for gathering data on students' attitude towards and motivation for studying in English in one of the EMI programmes at Viennese higher education institutions. In order to investigate these, relevant research has been considered, and several items or whole concepts that are relevant to the topic of this study have been taken over in their original or slightly altered form from other studies: 'Interest in foreign languages' from Gardner (1985); 'Anxiety in class' and 'English use anxiety' from Clement and Baker (2001); 'Ideal L2 Self', 'Instrumentality', 'Linguistic self-confidence' and 'English anxiety' from Dörnyei and Taguchi (2010). Nonetheless, as the present study comprises several research interests – EMI, motivation, attitude – most of the items and concepts used have been devised for the purpose of this quantitative study. An overview of all items in their original and modified form can be found in the appendix (section 8.3, 'Items in the questionnaire').

The questionnaire used in this study consists of two parts. The first part comprises three sub-sections, which deal with behavioural and attitudinal questions. In the second part, the participants are required to answer factual questions about themselves, such as their age, gender and academic area of study, as well as the number of languages they speak at any level, i.e. from beginner to proficient. The central part of the questionnaire comprises three sub-sections: background and interest, perception and anxiety, and English use at university. The first segment incorporates four concepts related to one's language background, including experience with learning English as a foreign language, and attitude towards learning and using

other foreign languages. Moreover, this sub-section includes questions about the situations in which participants currently use English, together with their perceptions of the future use of English in professional environment. The second segment encompasses five concepts dealing with one's perception of self as an English speaker. This sub-section, therefore, deals with English use anxiety, both in EMI class and in general, and participants' attitude towards communicating with native/non-native speakers of English. Furthermore, it contains concepts which measure participants' linguistic self-confidence, and one's 'ideal self' regarding English, as introduced by Dörnyei (2005). The last sub-section is composed of five concepts that deal with English use in EMI class, including institutional language support, and students' attitude towards grading. Finally, this segment involves questions about participants' productive and receptive performance in EMI class, and eventual progress in their proficiency. A full overview of the items included in the questionnaire can be found in the appendix (section 9.3), while the following table shows the concepts:

Table 6 Overview of concepts before and after reliability analysis

| | Concept | Number of items before | Cronbach Alpha after | Numbers of items after |
|-------|--|------------------------|----------------------|------------------------|
| 1. | Background and interest | 25 | | 25 |
| 1.1 | Interest in foreign languages | 7 | .813 | 7 |
| 1.2 | Frequency of English use | 9 | .426 | 9 |
| 1.3 | Instrumentality (professional environment) | 5 | .491 | 5 |
| 1.4 | English learning history | 4 | .660 | 4 |
| 2. | Perception and anxiety | 31 | | 29 |
| 2.1 | Overall English use anxiety | 5 | .860 | 5 |
| 2.2 | Anxiety in English-medium class | 6 | .833 | 6 |
| 2.3 | Native vs. non-native speakers of English | 5 | .846 | 5 |
| 2.4 | Ideal L2 self | 7 | .702 | 6 |
| 2.5 | Linguistic self-confidence | 8 | .742 | 7 |
| 3. | English use at university | 27 | | 25 |
| 3.1 | Support | 6 | .722 | 5 |
| 3.2 | Grading | 5 | .715 | 5 |
| 3.3 | Production | 5 | .815 | 5 |
| 3.4 | Receptive skills | 5 | .775 | 5 |
| 3.5 | Change | 6 | .837 | 5 |
| Total | | 83 | | 79 |

Table 4 presents an overview of concepts in the questionnaire. As the questionnaire consists of multi-item scales, the table also shows the complete number of constituent items before and after measuring the internal consistency of each scale. Therefore, after choosing and calculating the Cronbach Alpha internal consistency reliability coefficient, the following four items have

been removed from the questionnaire in order to raise the coefficient, and increase the reliability of the instrument used to measure participants' motivation and attitudes:

1. Ideal L2 self – I think if a person speaks English well, they have to sound like a native speaker.
2. Linguistic self-confidence – I'm afraid of making mistakes in foreign languages.
3. Support – If you're studying in English, it's necessary to use English fluently.
4. Change – In retrospective, I wish I had been better prepared for studying in English.

According to Field (2009: 648), Cronbach's Alpha "generally accepted value of .8 is appropriate for cognitive tests, for ability tests a cut-off point of .7 is more suitable". Out of fourteen scales, eleven of them have a coefficient higher than the threshold value of .7. However, Field (ibid.) further states that "when dealing with psychological constructs values below .7 can, realistically, be expected because of the diversity of the constructs being measured". Thus, the scale with .660 coefficient, namely 'English learning history', shows significant internal consistency as well, especially when taken into account that it includes only four items.

The two scales with low Cronbach Alpha coefficients, 'Frequency of English use' and 'Instrumentality (professional environment)', on the other hand, do not show the necessary internal consistency, and instead, individual items have been analysed. Dörnyei (2003: 39) posits that not all Likert scales can be "summative in the psychometric sense". He references research conducted by Oxford (1990) where frequency of use of various learning strategies was measured. However, with these strategies "it is the *quality* rather than the quantity of the strategies a person utilises that matters" (Dörnyei 2003: 39), and the multi-item scale score for these items "is not related linearly to the underlying trait (ibid.). Thus, in the case of the 'Frequency of English use' concept, an inconsistent joint score can be accepted as such.

4.2.2 Procedure

After constructing the questionnaire, it was piloted among six respondents, all postgraduate students at one of the higher education institutions in Vienna. In addition to the rephrasing of several items with the aim of clarifying them, two additional steps, 'Mildly agree' and 'Mildly disagree' were added to the Likert rating scale.

The survey took place in July 2016, slightly after the summer semester of 2016 had ended. The questionnaire was uploaded into the Google Forms platform, as it allows a direct extraction of data, and consequently, facilitates data matrix creation and analysis. Moreover, the Google

Forms platform enables the respondent to maintain complete anonymity, thus reducing potential bias. In order to avoid missing values, an option was included which prevents the respondent from moving forward in case one of the questions was left unanswered. The predicted time to fill out the questionnaire was between 10-15 minutes.

The final step in the administration process included sending out invitations to potential respondents to participate in the survey. This was done through a social network, namely Facebook. In order to simplify communication between study colleagues, many departments and programmes have their own official Facebook groups. The invitation to participate was posted on two separate occasions, July 11th and July 18th, in 15 Facebook groups (check appendix 8.4 ‘Overview of Facebook groups’ for a complete list). After the second round, a total of 113 participants responded.

4.2.3 Sample

Although there are 113 respondents, the study involves 100 participants, as 13 of them do not correspond to the participation requirements. Indeed, those responses from undergraduate students and students from other countries, i.e. participants who do not fit into the sample group due to studying at an undergraduate level or studying outside of Austria, have been removed from the data matrix. The participants are all non-native speakers of English, and have the status of postgraduate students from different areas of study. Moreover, they all take part in one of the EMI programmes. Out of 100 respondents, there are:

- 63 female and 37 male;
- 41 speaking German as their first language, and 59 coming from languages other than German;
- 52 with previous studying experience in Austria, and 48 foreign students who, prior to the EMI programme they are enrolled in, have not studied in Austria;
- 23 with previous experience with English as the medium of instruction in primary or secondary school, and 77 with no previous experience;
- 25 who have at one point of their life lived and/or spent a prolonged period of time in an English-speaking country, and 75 who have not.

Moreover, the following table shows the distribution of the age, number of languages and semesters of the participants:

Table 7 Distribution of variables age, number of languages⁴, and number of semesters

| | Mean | Median | Minimum | Maximum |
|--|------|--------|---------|---------|
|--|------|--------|---------|---------|

⁴ The participants were asked to enter the number of languages they speak, without inquiring about the level of proficiency they have in either of those languages.

| | | | | |
|---------------------|-------|-------|----|----|
| Age | 27.43 | 26.50 | 22 | 56 |
| Number of languages | 3.69 | 3 | 2 | 9 |
| Number of semesters | 5.43 | 5 | 1 | 17 |

Table 7 shows that the average (median) age of the respondents is 26.5 years, with a rather large range – 34 years – between the youngest and the oldest participants. Furthermore, although some students are polyglots and speak more than five languages at some level of proficiency, the average number of languages in the sample is 3, usually English, German and the participant's first language. The average number of semesters students have spent studying in Vienna is five, even though some of the students have only begun with their programmes, while others have been studying for a significant period of time.

Regarding the higher education institutions at which participants are studying, the representation is portrayed below:

Table 8 Higher education institutions and the corresponding numbers of participants

| Higher education institution | Abbreviation | Number |
|---|--------------|--------|
| University of Vienna | UniWien | 44 |
| Vienna University of Technology | TU | 25 |
| University of Natural Resources and Life Sciences | BOKU | 13 |
| Vienna University of Economics and Business | WU | 5 |
| University of Applied Sciences Technikum Wien | UAS | 5 |
| University of Applied Sciences BFI Vienna | BFI | 2 |
| University of Applied Arts | MAK | 2 |
| Sigmund Freud University Vienna | SFU | 2 |
| Modul University Vienna | MODUL | 2 |

Given that the University of Vienna is the institution with the highest number of students, it is not surprising that nearly half of the respondents, 44, are studying at one of its EMI programmes. Vienna University of Technology and University of Natural Resources and Life Sciences follow with 25 and 13 respondents respectively, whereas five of the respondents are studying at Vienna University of Economics and Business and University of Applied Sciences Technikum Wien. Finally, there are eight respondents coming from the other four higher education institutions.

Furthermore, the respondents come from various programmes and fields of study. The programmes were categorised into six groups:

Table 9 Classification of programmes into fields of study

| Field of study | Programmes | Respondents |
|----------------|--|-------------|
| Language | English language and linguistics Anglophone literatures Teaching programme (English and another subject) | 26 |

| | | |
|------------------------|---|-----------|
| | CREOLE: Cultural differences and transnational processes Transcultural communication | |
| Technical sciences | Business informatics Biomedical engineering Engineering sciences Logic and computation Computational intelligence Media informatics Building science and technology | 26 |
| Economics | Supply chain management Marketing International tourism management Economics – QEM Export management Strategic human resources management Entrepreneurship Business administration Strategy, innovation and management control | 13 |
| Arts | Architecture | 2 |
| Life sciences | Tissue engineering and regenerative medicine Molecular biology Microbiology Pharmacy Psychotherapy Cognitive science Biology Cognitive biology | 20 |
| Environmental sciences | Applied limnology Natural resources Mountain forestry | 13 |

The table above shows that over a quarter of the respondents study either within a language-related or a technical field of study. Furthermore, 20 respondents are enrolled in one of the life science programmes, whereas there are 13 respondents who study economics or environmental science. Lastly, only two of the respondents study arts.

It is important to mention that although the sampling method can be considered random, the sample in this study which includes 100 respondents is not representative of the population, i.e. all students partaking in EMI programmes at higher education institutions in Austria. A much larger sample comprising students from several programmes would be required. Furthermore, Dörnyei (2003: 75) warns of the “problem of participant self-selection”, that is the issues that might occur when the sample depends on the participants’ willingness to partake. This means that volunteers might differ from non-volunteers in a certain manner, which, consequently, may affect the representativeness of the sample. Accordingly, this implies that the conclusions of this study and its generalisability are limited for other settings, whether they be of a geographic nature (different country) or pertain to the academic level of participants.

4.2.4 Data preparation and initial analysis

Before an in-depth analysis of the data, the raw data was first routinely checked for eventual missing responses from the participants. However, as Google Forms provides the possibility to mark questions as mandatory, meaning that participants cannot continue with the survey if they do not answer all the questions, there were no missing values. Moreover, the items in multi-item scales were examined for internal consistency by calculating Cronbach Alpha reliability coefficients, as explained in the ‘Questionnaire layout and concepts’ section in more detail. While some of the scales had to be adapted in order to achieve higher internal consistency, most of them exhibited rather high coefficients, and required no adaptation. Therefore, it was possible to reduce the number of variables in order to facilitate analysis. This was done by summing up the items in the multi-item scales, and calculating the mean scores for each concept, as suggested by Dörnyei (2007: 206).

The dataset was split into two subsets based on the independent variable ‘Previous study experience in Austria’: the students who have studied in Austria before the programme they are currently enrolled in, and the students who have no previous experience with studying in Austria. The two groups were tested for normality of distribution, both visually through histograms, and with a normality of distribution test, namely the Shapiro-Wilk test. The test compares “the scores in the sample to a normally distributed set of scores with the same mean and standard deviation” (Field 2009: 144). A non-significant difference ($p > .05$) indicates that the distribution of the sample does not differ significantly from a normal distribution, whereas a significant difference ($p < .05$) implies a distribution that is significantly different from a normal one (ibid.). The Shapiro-Wilk test is often preferred over the Kolmogorov-Smirnov test due to it being more accurate than the latter, which can only provide an approximate significance values (ibid.: 546). The results of the Shapiro-Wilk test are displayed in the following table:

Table 10 Testing for normality of distribution

| Concepts | Shapiro-Wilk test – Significance Students with previous study experience in Austria | Shapiro-Wilk test – Significance Students with no previous study experience in Austria |
|--|---|--|
| Interest in foreign languages | .000 | .015 |
| English learning history | .352 | .450 |
| Frequency of English use | .005 | .015 |
| Instrumentality (professional environment) | .197 | .305 |
| Overall English use anxiety | .253 | .000 |

| | | |
|---|------|------|
| Anxiety in English-medium class | .038 | .011 |
| Native vs. non-native speakers of English | .243 | .041 |
| Ideal L2 self | .120 | .262 |
| Linguistic self-confidence | .271 | .007 |
| Support | .354 | .726 |
| Grading | .577 | .090 |
| Production | .194 | .544 |
| Receptive skills | .298 | .480 |
| Change | .552 | .039 |

The significance values displayed in table 10 indicate that, in the first category (students with previous study experience in Austria), twelve out of fourteen variables are normally distributed, whereas in the second category (students without previous study experience in Austria), eight variables show normal distribution. However, it is worth mentioning that the normality of distribution tests have certain limitations, and “a significant test doesn’t necessarily tell us whether the deviation from normality is enough to bias any statistical procedures that we apply to the data” (Field 2009: 144). Moreover, the Shapiro-Wilk test can be “affected by large samples in which small deviations from normality yield significant results” (Field 2009: 793). Nonetheless, even when testing the complete dataset for normality of distribution by using the Kolmogorov-Smirnov test, the results showed abnormal distribution of all but two variables. Therefore, in order to maintain the homogeneity of statistical procedures, I have decided to use non-parametric tests in the analysis.

This chapter has introduced the specifics of the setting in which this case study is conducted, as well as select studies on this topic. Additionally, it has described in detail the development of the instrument used to gather data on attitudes and motivation of non-native speakers of English studying at one of the EMI programmes in Vienna, Austria. The characteristics of the sample and initial data analysis have been introduced in the last two sub-sections. These steps precede a statistical analysis of the obtained data, which is presented in the following chapter.

5. Analysis and discussion

The following chapter reports the results of various statistical procedures used to analyse the dataset and its subsequent categories. As stated before, the two main research questions to which the present thesis is seeking answers are:

1. In what way do attitudes towards and motivation for English-medium education of domestic students, who have previous experience with the Austrian education system,

differ from those of international students who have come to Austria in order to further pursue their studies?

2. Are there significant differences in the attitudes towards and motivation for English-medium education between various fields of study and/or programmes?

The first section of this chapter discusses the differences between participants based on their age, gender, and number of languages. These differences are calculated by using a correlation test, namely Spearman's correlation coefficient, or Spearman's rho, which is "a non-parametric statistic and can therefore be used when the data have violated parametric assumptions such as nonnormally distributed data" (Field 2009: 179). Additionally, the significant correlations are reviewed and compared with similar studies. Then, the results of the analysis of variables directly pertaining to the two research questions are reported. Finally, the chapter concludes with a summary of the findings.

5.1 Differences across classification variables

The questionnaire used to gather data for the present research includes a significant number of classification questions which enable a deeper insight into the sample. The following section reports the results of data analysis with regard to these differences: gender, language, number of languages, English speaking country experience, age, English language experience, CLIL experience, and number of semesters.

It is generally accepted in the L2 literature that "when it comes to foreign language learning, boys and girls behave in a strikingly different way" (Dörnyei, Csizér & Németh 2006: 55), and numerous quantitative studies have reached this conclusion (Henry 2009, Ryan 2009), including the present research which investigates adults. The analysis shows a statistically significant correlation between gender and variables Interest in foreign languages, and Grading (see appendix 8.6: 'Correlations'). Firstly, even though interest in learning foreign languages is rather high among both genders, female students in general report a much higher interest in learning foreign languages than the male ones, as illustrated in the following figure:

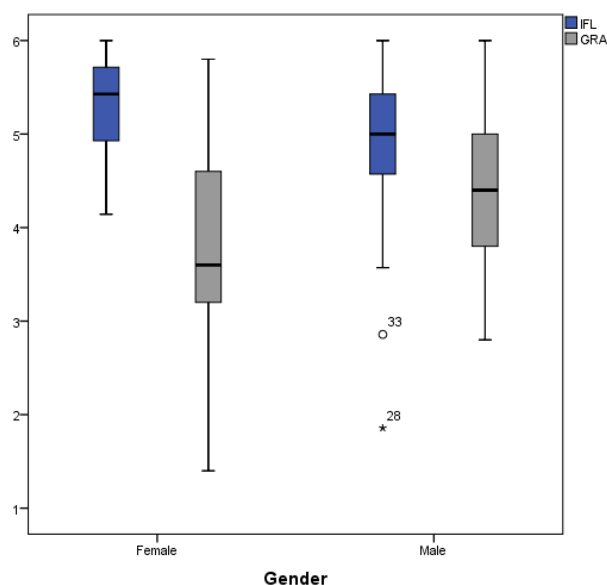


Figure 1 Distribution of variables Interest in foreign language and Grading across the categories of gender

The boxplots in figure 1 show that not only is the mean value higher in the category of female students, but the range of answers is also smaller than in the other category. Furthermore, the figure displays the other statistically significant difference between the two categories, namely Grading. The mean value of the answers provided by the male participants is higher than that of female participants, which means that male students find being highly proficient in English to be extremely influential on their grades in EMI classes. The range of the answers given by female participants is much wider, with a significantly lower mean value.

Lasagabaster (2016: 318-319) gives an overview of a substantial number of studies that have dealt with differences between female and male students in EFL and EMI contexts. While “the importance of including gender as a key variable in future attitudinal research conducted within the motivational self-concept paradigm” has been recognised (Henry 2009: 189), the findings of studies conducted thus far are not homogenous. In a large scale study conducted in Japan with a sample of 2397 student participants at various levels, Ryan (2009) investigated students’ ideal L2 self and integrativeness, among other variables. He concluded that there are significant differences in the motivation of female students compared to male students, especially at tertiary level of education, with female students being significantly more motivated. Conversely, the results of Lasagabaster’s study (2016: 315) on 189 students show that even though there are some differences, these are not significant. It appears that in EMI settings, “the use of the language to learn content is equally prone to motivate male and females students” (ibid.: 328). Thus, even though the results of the study show two statistically significant differences between female and male students, there are no differences between

them with regard to their perceptions of themselves as foreign language speakers in an EMI setting, i.e. there are no differences between genders in the Perception and anxiety group which comprises five concepts.

A similar statistically significant difference and correlation with regard to the variable Grading can be observed between categories of Language as well. Here the participants are categorised based on their ability to speak German:

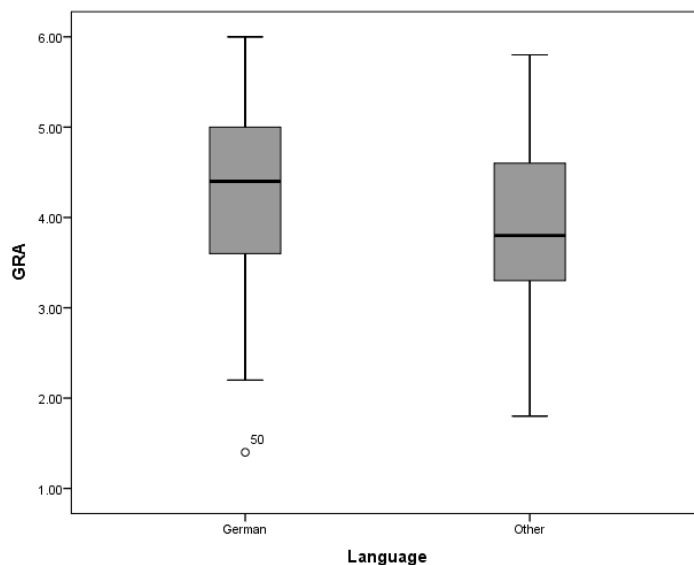


Figure 2 Distribution of variable Grading across the categories of Language

This figure compares the distributions of the variable Grading for the group of students who speak German and the group of students who do not. Here, the first group consider high English proficiency more influential on their grades than the latter. The lack of significant differences between the categories of motivation-related variables in this sample is consistent with Lasagabaster's findings (2016: 315), in which participants' first language has no major influence on students' anticipated learning determination (ibid.).

Regarding the number of languages participants speak, several statistically significant differences are revealed by the Mann-Whitney U test (see Appendix 8.5: 'Non-parametric test results'). These differences are visually represented in the figure below:

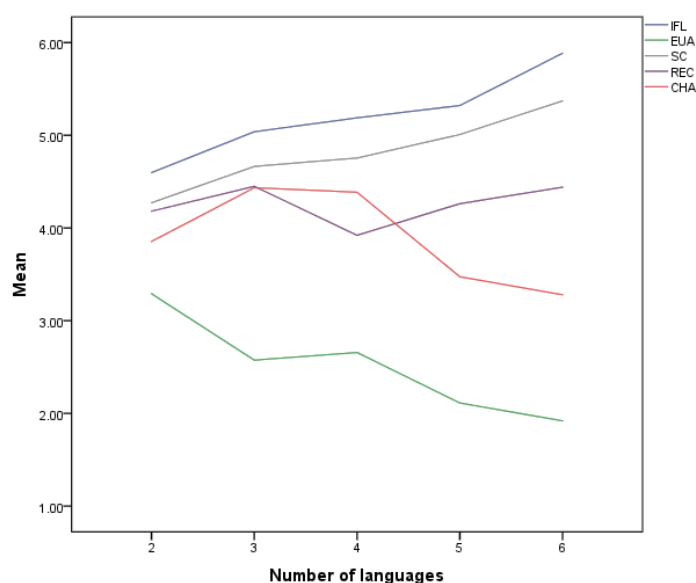


Figure 3 Distribution of variables Interest in foreign languages, English use anxiety, Receptive skills, and Change across the categories of Number of languages

The participants are categorised in five groups based on how many languages they speak, with the last group including those who speak five or more languages. Figure 3 shows that the more languages students speak, the lower their overall anxiety regarding English use is. Concurrently, their rather high interest in learning foreign languages and linguistic self-confidence increase even more with each additional language. Interestingly, the distribution of the variable Change indicates that students who speak three or four languages believe their English proficiency has improved during the course of the programme more than those who speak five or more languages. Finally, students' perception of their receptive skills in EMI class differs depending on the number of languages they speak. As the figure above shows, even though students deem their receptive skills as somewhat satisfactory, it is those students who speak four languages that have slightly more problems with understanding academic English vocabulary in their study materials and lectures.

Another variable that shows statistically significant differences and correlations (see Appendix) is English speaking country experience. Across the two categories within this variable, students who have and who have not lived in an English speaking country, several statistically significant differences can be observed, as shown in Figure 4:

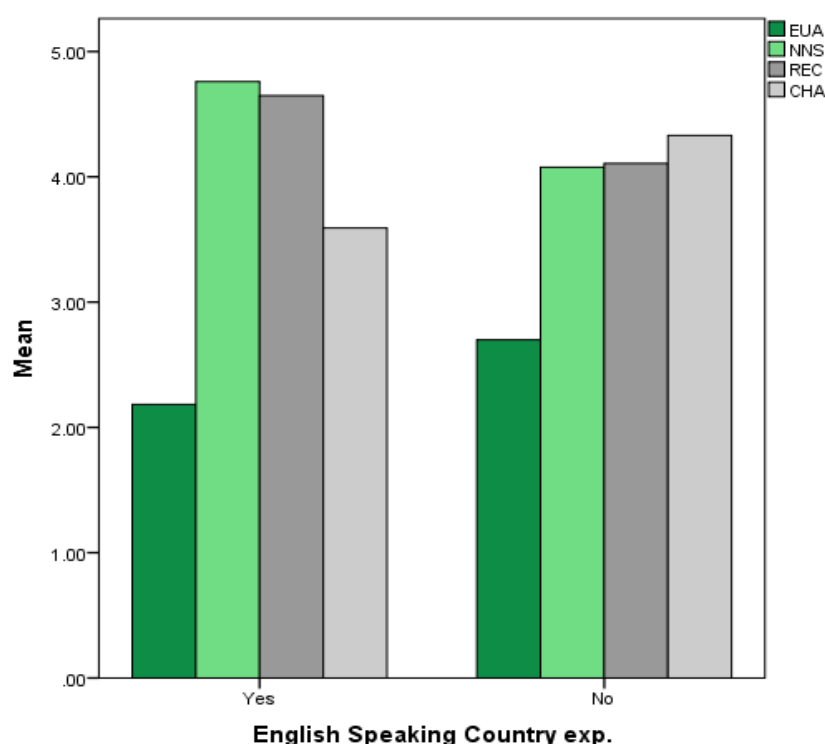


Figure 4 Distribution of variables English use anxiety, Native vs. non-native speakers of English, Receptive skills, and Change across the categories of English speaking country experience

The figure shows that students who have lived in an English-speaking country have several advantages over those who have not. First of all, their levels of anxiety related to English use are lower. Also, they find it easier to understand lectures and study materials, and they feel more comfortable communicating with native speakers of English, whereas students who have not lived in an English-speaking country prefer non-native speakers. However, the latter group are more inclined to consider their English as having improved during the course of their EMI programme.

It is important at this stage to mention that several other variables have not displayed statistically significant differences among their categories. The Mann-Whitney U test shows no difference among students based on their age, time period of English learning, and their experience with learning in English during primary and secondary education. This could be due to the specific characteristics of the sample: adult learners/users of English. However, further research may explain the lack of differences. Interestingly, the number of semesters that students have spent studying has been reported as an influential factor in an EMI class by many studies, such as the one conducted by Kim (2015) on over 600 students and 20 lecturers. He suggests that students' academic year correlates with both their academic knowledge and proficiency in English, and that consequently EMI should not be introduced right at the

beginning of a programme, but from the second or third year, when students' language proficiency has improved. Klaassen (2001) too, in her study involving Dutch engineering students, observes significant improvement with time concerning students' self-reported adaptation to instruction in English.

Nevertheless, data-analysis in the present study has established no significant correlation between the number of semesters and students' motivation, anxiety, and perception of EMI. These results are consistent with Hellekjær's (2010: 244-246). Contrary to his own hypothesis, he did not find statistically significant correlations between students' study experience and their language scores.

Even though a much larger sample would be necessary to draw more conclusive results, the findings of the study so far correspond to those of previous studies. The situations in which the findings differ from other studies, such as Kim (2015) and Klaassen (2001), can be explained by different practices regarding EMI resulting in setting-specific results. Thus, it appears that in the Austrian EMI setting, certain factors, such as gender, students experience with living in an English-speaking country, and number of languages, play a significant role in students' perception of the English language in general, its use in EMI classes, and EMI.

5.2 Associations between attitudinal variables

Multiple statistically significant correlations manifest themselves among the fourteen variables which correspond to the motivational and attitudinal concepts discussed in Chapter 4 (see Appendix 8.6, 'Correlations', for all correlations). Furthermore, the correlations can be found both between variables from different groups of concepts, and between variables in the same group.

Firstly, the test shows a statistically significant positive correlation between students' overall anxiety related to speaking English, and their anxiety in EMI class, meaning that students who have high levels of anxiety when speaking English in general, also have high levels of anxiety when speaking English in class. Furthermore, both variables, Overall English use anxiety and Anxiety in English-medium class, correlate significantly with the same variables. Particularly, the students who scored high in two anxiety concepts are more in favour of additional university-provided support with the aim of advancing their English language proficiency. Also, anxiety correlates negatively with students' experience in learning English (English language history). This indicates that students who had a more positive experience with

learning English during their previous education, show lower levels of anxiety. On the other hand, both anxiety variables correlate negatively with students' Ideal L2 self and Linguistic self-confidence. This implies that anxiety plays a strong role in the way students perceive themselves as foreign language speakers. Additionally, those students with higher level of anxiety are less inclined to communicate with native speakers of English, especially if the person in question is a stranger. Finally, Receptive skills correlates negatively with students' anxiety, i.e. students who have more problems with understanding English in their study materials and during lectures, show higher levels of anxiety both in EMI class and in general. These results correspond to the findings of a study conducted by Liu and Huang (2011) on 980 undergraduate students at Chinese universities. Their findings indicate that there is a significant negative correlation between motivation to learn English and foreign language anxiety. Therefore, they recommend that in order to improve students' performance in an EMI class, anxiety levels need to be reduced, as anxiety can be seen as "the most powerful and negative predictor for the students' performance in English" (ibid.: 1).

Secondly, the Ideal L2 self variable correlates positively with several others, such as Interest in foreign languages, and Linguistic self-confidence. Moreover, both the Ideal L2 self and Linguistic self-confidence correlate positively with Receptive skills. Therefore, students whose understanding during lectures and of their study materials is higher, show higher levels of linguistic self-confidence, as well as the Ideal L2 Self. In addition, students' positive experience with learning English influences their linguistic self-confidence too. Lastly, when it comes to Grading, the higher students' self-confidence is, the less they deem their English proficiency as affecting their grades. Undeniably, Ideal L2 self plays an important role in predicting students' anticipated learning determination (Lasagabaster 2016: 315). Furthermore, Lasagabaster affirms that "in EMI contexts motivation is generated by self-identification processes, specifically by students' aspiration toward an imagined L2 future self, as well as by the EMI learning experience itself" (ibid.: 327).

Lastly, in addition to these correlations, several variables from the group of concepts English use at university correlate significantly with either one another or one of the variables from other groups. First of all, the variable Support correlates negatively with students' attitude towards communication with native speakers of English, i.e. those students who find it easy to communicate with them are less in favour of additional language support. Moreover, this variable also correlates negatively with students' understanding of English in class, meaning

that students who report more difficulties with the latter believe that more language support should be provided. As stated by one participant,

I really think that classes should be in English. But I also think that more support is necessary (grammar). I am 99% certain that you get better grades for neatly written papers. (English linguistics student from Austria, 20th July 2016)

This statement indicates that even though students are in favour of EMI, additional language support is needed; a fact recognised even by participants who are at a rather high level of proficiency. It also confirms that some students believe their proficiency in English affects their grades significantly. Furthermore, students' productive skills show a significant positive connection with how often they use English. Differences among students from different fields of study will be discussed in the following section.

Finally, there is an interesting negative correlation between Receptive skills and Change, specifically, those students who deem their receptive skills to be low, believe that their English language proficiency is improving the most. However, it is worth mentioning that not all participants feel the same way about the direction their proficiency is heading. One of the participants in the survey commented that

[i]t seems like [it is] assumed people's English will improve while in Vienna, but have you also considered that someone's English may have *worsened* during the course of their studies in Vienna due to the English competency of professors and peers? I would say that is my case. (Biology student from Spain, 20th July 2016)

It would undoubtedly be of interest to investigate this phenomenon in the future in order to see whether low English proficiency of the EMI participants might have a negative influence on students' proficiency. Finally, another significant issue was mentioned in the comments

For me it was not hard to study in English, but I think many of my colleagues had major problems. Depending on school education, English levels vary strongly. Some former colleagues even quit the bachelor/master studies because of language problems. (Tissue engineering and regenerative medicine student from Austria, 11th July 2016)

Students too are aware of varying levels of English language proficiency among their peers, and limitations one's restricted proficiency represents. The most distinct findings of this study confirm the hindering effects of both anxiety in general and in an EMI class on students' motivation, as well as the existence of a negative association between linguistic self-confidence and anxiety. Also, students with a lower understanding of academic English are the ones who have higher levels of anxiety, and who deem additional language support necessary to improve their language proficiency. This further emphasises the importance of researching EMI in

various settings so as to alleviate the problems both students and lecturers encounter in an EMI class, and facilitate the learning process.

5.3 Domestic and foreign students' attitudes and motivation

As a reminder, one of the research questions asked: In what way do attitudes towards and motivation for English-medium education of domestic students, who have previous experience with the Austrian education system, differ from those of international students who have come to Austria in order to further pursue their studies? In order to answer this question, the first step of the analysis involved splitting the dataset with regard to the variable "Previous study in Austria", with the aim of investigating and comparing the two categories. The total number of students who have studied in Austria prior to the study programme in which they were enrolled during the survey is 52, whereas 48 of the participants are foreign students who are studying in Austria for the first time. The comparative descriptive values of the answers given by these two categories are reported below:

Table 11 Descriptive statistics of the categories based on students' previous study experience in Austria

| | Previous study experience in Austria (N=52) | | | | No previous study experience in Austria (N=48) | | | |
|---|--|------|------|--------|---|------|------|--------|
| | Range | Min. | Max. | Mean | Range | Min. | Max. | Mean |
| Background and interest | | | | | | | | |
| Interest in foreign languages | 4.14 | 1.86 | 6.00 | 5.0357 | 2.43 | 3.57 | 6.00 | 5.2113 |
| Frequency of English use | 2.56 | 2.44 | 5.00 | 3.6923 | 1.89 | 2.56 | 4.44 | 3.5509 |
| Instrumentality (professional environment) | 2.00 | 4.00 | 6.00 | 5.2231 | 2.00 | 4.00 | 6.00 | 5.2125 |
| English learning history | 4.00 | 2.00 | 6.00 | 3.8654 | 4.25 | 1.75 | 6.00 | 3.8698 |
| Perception and anxiety | | | | | | | | |
| Overall English use anxiety | 4.40 | 1.00 | 5.40 | 2.6423 | 5.00 | 1.00 | 6.00 | 2.4917 |
| Anxiety in English-medium class | 4.17 | 1.00 | 5.17 | 2.5641 | 4.83 | 1.17 | 6.00 | 2.8958 |
| Native vs. non-native speakers of English | 4.20 | 1.80 | 6.00 | 4.2962 | 4.00 | 2.00 | 6.00 | 4.1958 |
| Ideal L2 self | 3.17 | 2.83 | 6.00 | 4.7019 | 2.67 | 3.33 | 6.00 | 4.7743 |
| Linguistic self-confidence | 2.86 | 3.14 | 6.00 | 4.7473 | 3.14 | 2.57 | 5.71 | 4.7262 |
| English use at university | | | | | | | | |
| Support | 3.60 | 2.20 | 5.80 | 3.7538 | 4.40 | 1.60 | 6.00 | 3.7208 |
| Grading | 4.60 | 1.40 | 6.00 | 4.0769 | 3.60 | 1.80 | 5.40 | 3.9958 |
| Production | 4.40 | 1.60 | 6.00 | 3.7154 | 4.60 | 1.40 | 6.00 | 3.7208 |
| Receptive skills | 3.60 | 2.40 | 6.00 | 4.3654 | 4.00 | 2.00 | 6.00 | 4.1083 |
| Change | 4.00 | 2.00 | 6.00 | 4.1808 | 5.00 | 1.00 | 6.00 | 4.1083 |

The data shown in table 11 indicates that, within the Background and interest group, the second category has higher interest in foreign languages, when taken into consideration the range and

the mean value calculated from their responses. Regarding the other three variables in this group, the answers from both categories are comparable in terms of range and mean value.

The second group of variables, Perception and anxiety, displays a wide range of attitudes and motivation. Firstly, the range of answers given by both students with previous experience with studying in Austria and the ones who are new to it within three of the variables – Overall English use anxiety, Anxiety in English-medium class, and Native vs. non-native speakers of English – suggests that the levels of respective anxiety (either in an EMI class, when talking to native speakers of English, or in general) are outstandingly diverse within both categories of students. Nevertheless, the range and the mean values of the other two variables – Ideal L2 self and Linguistic self-confidence – are similar between the two categories. Finally, the mean values and the range of answers within the third group of variables, English use at university, are somewhat homogeneous.

The next step of the analysis included testing whether the two groups differed significantly. As the distribution in these groups was relatively abnormal, a non-parametric test – the Mann-Whitney U test – was chosen. First, a null hypothesis was devised as “there is no significant difference between the two categories”. However, when the null hypothesis was tested (with the significance level of .05), within the groups of concepts “Background and interest”, “Perception and anxiety”, and “English use at university”, the Mann-Whitney U test showed no statistically significant differences between the groups.

Interestingly, insufficient language proficiency has been recognised as the fundamental obstacle in EMI classes by most research on this matter (Gürtler & Kronewald 2015: 112). In particular, it is foreign students whose inadequate proficiency is often seen as a hindrance. Costabello (2013: 83), for instance, notes that at Italian universities, poor language proficiency of foreign exchange students was stated as the main difficulty in English-medium instruction courses. Poor language proficiency of domestic students is also specified as problematic, albeit in much smaller percentage compared to the one of foreign students. A different study conducted at universities in Norway by Hellekjær (2009) observes that lecturers in English-medium education hold the view that students from Norway do not have problems with studying in English, but that it is mostly exchange students who have difficulties with comprehension. However, the results of Hellekjær’s study refute these assumptions as there is no statistically significant correlation between these variables, which is parallel to the findings of the present study.

Along those lines, a participant from the Vienna University of Technology commented

I am a person who studied in both German and English at the university and I want to say I dont [sic] feel the same about the two languages. If the survey was about German, my answers would have been totally different. (TU student from Bulgaria, 13th July 2016)

Even though both German and English are foreign languages for this student, there seem to be apparent differences between studying in these two languages. Thus, it can only be expected that when it comes to studying in one's first language vs. English, these differences are even more pronounced. Hellekjær (2010) carried out a study on a sample of 391 respondents from three Norwegian universities, in which he examined and compared lecture comprehension in English-medium courses to that in L1 courses. The results show that there is a difference in comprehension scores, albeit a slight one. However, compared to the L1 courses, more students had lower comprehension scores in English-medium lectures.

This study was replicated in Austria by Čiča (2012) at the Faculty of Business, Economics and Statistics, of the University of Vienna, with the aim of exploring and comparing students' difficulties with lectures in English and German. She suggests that the problems students encounter in EMI lectures, compared to the ones in their first language, result from "unclear pronunciation of words and expressions, unfamiliar words and expressions, and lecturer's speaking speed" (ibid.: 107). Comparing her results to the findings of Hellekjær (2010), she (2012: 108) discovered that Austrian students experience more difficulties in both EMI and L1 instruction lectures than Norwegian students, but fewer difficulties than German students. Additionally, the lecture comprehension scores in EMI for German respondents who participated in the research with different L1s and those with German as their L1 did not differ. This implies that "students have similar difficulties (and to the same extent) with EM instruction, regardless of their L1" (ibid.: 109).

Nonetheless, Dafouz et al. (2013) compared the academic performance of students who share a first language – Spanish – and attend the same courses taught in English and Spanish. The results revealed that both groups received matching marks and coursework assessments, thus concluding that "the use of English as language of instruction does not seem to have a negative effect on students' academic performance" (ibid.: 232). However, certain differences were found among different disciplines, with students enrolled in an economic history class scoring somewhat higher than those enrolled in accounting and finance classes (Dafouz, Camacho-Miñano & Urquía 2014: 223). Their finding that EMI does not affect students' final academic

outcomes negatively can be of relevance to various EMI settings as well (Dafouz & Camacho-Miñano 2016: 57).

The abovementioned studies confirm that when it comes to students' academic performance and lecture understanding, there are no significant differences between students in EMI classes and those who attend courses in their L1s. The present study further supports the idea that the two groups do not differ significantly, as it appears that students' first languages and individual differences do not play a significant role in postgraduate EMI courses, with regards to students' motivation, anxiety, and perception of EMI and English use at university.

5.4 Differences across disciplines: English language vs. technical science

The last research question revolves around differences between various study programmes. Given the limited sample size, two groups of students are chosen: students who study English language related programmes (n=26), and those who study technical science (n=26). The comparative descriptives of the answers given by these two groups are reported below:

Table 12 Descriptive statistics of the categories based on students' field of study

| | Language (N=26) | | | | Technical (N=26) | | | |
|--|-----------------|------|------|--------|------------------|------|------|--------|
| | Range | Min. | Max. | Mean | Range | Min. | Max. | Mean |
| Background and interest | | | | | | | | |
| Interest in foreign languages | 2.43 | 3.57 | 6.00 | 5.3681 | 2.86 | 2.86 | 5.71 | 4.9451 |
| Frequency of English use | 2.22 | 2.67 | 4.89 | 3.6923 | 2.56 | 2.44 | 5.00 | 3.6325 |
| Instrumentality (professional environment) | 1.60 | 4.40 | 6.00 | 5.3077 | 2.00 | 4.00 | 6.00 | 5.2077 |
| English learning history | 2.75 | 2.75 | 5.50 | 4.1346 | 3.25 | 1.75 | 5.00 | 3.4904 |
| Perception and anxiety | | | | | | | | |
| Overall English use anxiety | 4.40 | 1.00 | 5.40 | 2.5692 | 4.80 | 1.20 | 6.00 | 2.9769 |
| Anxiety in English-medium class | 4.17 | 1.00 | 5.17 | 2.8013 | 4.17 | 1.17 | 5.33 | 3.0449 |
| Native vs. non-native speakers of English | 3.80 | 2.20 | 6.00 | 4.2692 | 4.00 | 1.80 | 5.80 | 3.9385 |
| Ideal L2 self | 3.17 | 2.83 | 6.00 | 5.0577 | 2.50 | 3.33 | 5.83 | 4.5321 |
| Linguistic self-confidence | 2.57 | 3.43 | 6.00 | 5.0879 | 2.86 | 2.57 | 5.43 | 4.3352 |
| English use at university | | | | | | | | |
| Support | 4.00 | 1.60 | 5.60 | 3.7385 | 3.80 | 2.20 | 6.00 | 3.7846 |
| Grading | 4.00 | 1.40 | 5.40 | 3.2231 | 2.80 | 3.00 | 5.80 | 4.5462 |
| Production | 3.80 | 2.20 | 6.00 | 4.0923 | 4.20 | 1.40 | 5.60 | 3.7308 |
| Receptive skills | 3.60 | 2.40 | 6.00 | 4.4308 | 3.20 | 2.60 | 5.80 | 4.0462 |
| Change | 4.60 | 1.40 | 6.00 | 4.2769 | 3.80 | 2.00 | 5.80 | 3.8538 |

The data shown above reveals that within all the variables in the Background and interest group, the descriptive values for the language group are higher than in the technical group. Regarding

the second group of variables, Perception and anxiety, the technical group's anxiety both in class and overall is higher than the language group's. However, it is the language group whose scores are higher in three other variables: Native vs. non-native speakers of English, Ideal L2 self and Linguistic self-confidence. Lastly, with the exception of Grading in which the technical group's mean value is much higher compared to the language group, the values of Production, Receptive skills and Change variables within the English use at university group are slightly higher in the group of language students.

As was the case for the previous research question, a null hypothesis was devised as follows: “there is no significant difference between the two categories”. Given that some assumptions have been violated, non-parametric statistic was chosen to test the hypothesis. With the significance level .05, within the three groups of concepts shown in table 12, several statistically significant differences between the groups are discovered. These can be seen in the following figure:

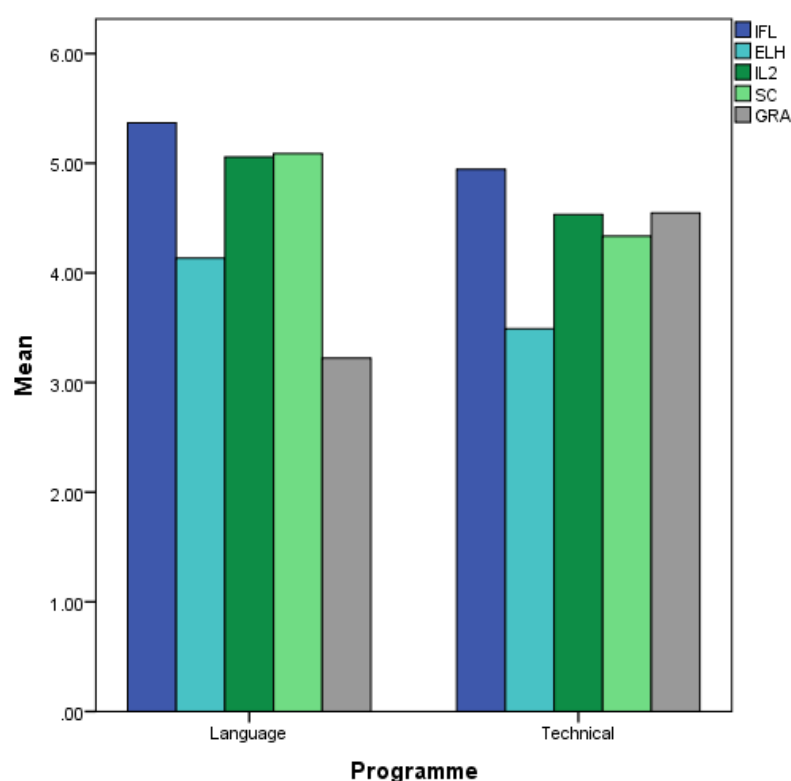


Figure 5 Distribution of variables Interest in foreign languages, English language history, Ideal L2 self, Linguistic self-confidence and Grading across the categories of Programme

First, it can be observed from the figure that students who are enrolled in one of the language related programmes are slightly more interested in learning foreign languages than the other group. Furthermore, they perceive their experience with learning English in primary and

secondary school more positively than the students who study technical sciences. Additionally, technical science students have significantly lower linguistic self-confidence and Ideal L2 self-perception (.01 level of significance) than the students of English language. This may be a result of the distinctly varying levels of proficiency between these two groups, as the enrolment requirements are quite different with regard to students' English language proficiency, but the same expectations when it comes to using academic English. Moreover, students of English language have arguably been exposed to studying in English longer than the other group due to their undergraduate studies being in English as well, whereas most other undergraduate programmes are either in German for domestic students or in their first language for foreign students. Lastly, although there are some differences between the values reported in table 12, the results of the Mann-Whitney U test indicate only one statistically significant difference within the third group of concepts, English use at university: Grading (.01 level of significance). The analysis shows that students coming from technical studies find their English language proficiency as having a crucial effect on their grades, compared to language students who, with the exception of a few outliers, in general deem their proficiency in English less influential on their grades.

The research on this topic confirms the idea that there are discipline-specific differences. Airey (2015: 172) argues that disciplinary literacy differs for every discipline because "becoming disciplinarily literate involves learning how to communicate about the discipline in research circles, in the world of work and in society at large". This implies that the demands which are placed on one's language proficiency also differ. Moreover, these differences in how English is used across various disciplines might be "a product of the different knowledge-making practices of the disciplines" (Kuteeva & Airey 2014: 547). Therefore, when implementing language policies for higher education, certain adjustments should be devised for specific disciplines, especially when dealing with a heterogeneous student body (*ibid.*). For instance, Dafouz and Camacho-Miñano (2016: 63) address the discipline issue in their study on students of accounting, where students mostly deal with quantitative data, and subsequently conclude that in the case of accounting students, more emphasis is put on students' receptive skills than their productive skills.

Several studies have researched EMI perceptions and implementation at engineering and technical universities. In Korea, Kim, Kweon and Kim (2016: 1) examined over 500 undergraduate engineering students' perceptions of EMI classes with the aim of providing

recommendations for improving EMI at Korean engineering schools. The results show that not only do most of the Korean students prefer instruction in their first language, but also more students believe that their English proficiency did not improve, leading to a conclusion that “from the student’s perspective, the schools have failed to achieve the main goal for EMI, which is to advance students’ English ability” (ibid.: 9). Furthermore, they display low linguistic self-confidence regarding their use of English, and feel inadequately prepared for EMI. Even though the present study does not investigate students’ preference for the language of instruction, and thus does not provide the information regarding the latter, the findings of this study, that students of technical sciences have lower linguistic self-confidence and perception of themselves as foreign language speakers, correspond to their findings.

Nevertheless, as discussed earlier, EMI is perceived differently in different countries. In a study conducted in Austria at the Vienna University of Technology, Londo (2011: 100) argues that even though there is an assumption that language teaching is the reason for EMI, it is in fact not the case. At this university, lecturers’ focus lies entirely on teaching the content, with no defined language goals. Also, apart from language materials being in English, there is no difference with courses taught in German, which “may result in wasting the language development potential of EMI” (ibid.). He too suggests that if an effective teaching model is to be achieved, language objectives need to be clearly formulated.

A similar study at the Vienna University of Economics and Business undertaken by Unterberger (2012) voices the same concerns. Her findings indicate that a relatively high level of students’ language proficiency is assumed on enrolment. Additionally, although around one third of classes mention language learning objectives in their course descriptions, there is a lack of awareness of them. This seems to be a complex issue in Austria, as Baker and Hüttner (2016) point out when comparing EMI programmes in Austria, Thailand and the UK. The official documents of higher education institutions which participated in the research did not state English language learning goals, and the main reasons stated for participants’ choosing an EMI programme were their interest in the programme, and aspirations for the future, followed by their interest in English (ibid.: 6). Among the three countries, there was disparity between considering learning English as a target or using English as a tool, with data from Austria reporting that

English was approached as a tool and this may have been related to the already high level of proficiency as reflected by the entry requirements and reported by

the students themselves, which meant there was little overtly felt need to improve English. (ibid: 8-9)

Therefore, Baker and Hüttner (2016: 13) posit that, while in the Thai setting learning English is perceived as an additional goal of EMI, there seems to be a general agreement that content learning is the only objective at Austrian higher-education institutions (ibid.: 13). It appears that (ibid.: 6)

data from the Austrian site followed the expected role of English in EMI, that is, that it was not the subject of study, and that if students wanted to learn English they were, as the student in extract 4 reports, on the ‘wrong master’ programme.

ATSI: and I remember the kick off the wo- the first two days of the programme they told us: if YOU decided to take not the German but the English speaking masters so that you would excel your English language knowledge that's the wrong master

Thus, EMI in Austria can be characterised by an increased focus on content learning of discipline-specific knowledge, and it does not discriminate in any way between students coming from different L1s or fields of study. Nevertheless, even when English language learning is not implicitly mentioned as one of the objectives accompanying content learning, incidental language learning occurs. However, one participant of the present study noted that

[i]mproving one's English skills during studies depends very much on the fact whether [sic] or not your lecturers are native/excellent English speakers or not! As mine aren't there's not much to pick up, on the contrary, you have to watch out not to adopt their mistakes! In the feedback given about my master's program, some students always request native English speakers as lecturers... (which I also find an inadequate request, as they are excellent scientists and teachers despite their imperfect English). (Applied limnology student from Austria, 16th July 2016)

It appears that in addition to content learning, students are aware of implicit language learning that occurs in EMI classes. Moreover, there is a wide range of attitudes towards mistakes made by their lecturers who are not native speakers of English. While some students disapprove of non-native speakers of English as lecturers, others, such as the student quoted above, believe it is the lecturer's competence in their field that matters more than their English language proficiency.

Yet, even though there are differences among students, Dafouz, Hüttner and Smit (2016: 141) argue that they also share “the ‘similarity’ endpoint” which stands for “the belief that all students go through a process of acculturation [...] into academia in general and, more particularly, into one discipline”. This implies that regardless of differences among students concerning their L1s or fields of study, they all have to adapt to the academic setting, especially

international students. Lastly, their findings show that EMI undoubtedly requires adjusting practices such as class preparation and participation, explaining, grading, or speaking (ibid.).

This chapter has inquired into the analysis of differences among students with regard to several classifications. The findings point towards a strong influence of certain factors on students' perception and use of English in EMI, as well as their anxiety and motivation. Whether students have lived in an English-speaking country, how many languages they speak, how anxious they are when they speak English either in class or in everyday life, in particular, have proven to be strongly linked to students' actual use of English at university, whereas students' L1s are not. On the other hand, the findings point towards differences across disciplines, in this case, between students of the English language and technical studies. This further highlights the need for discipline-specific approach to EMI.

6. Conclusion

The aim of this quantitative study conducted with participants from various higher-education institutions in Vienna has been to investigate differences and similarities between postgraduate students regarding their motivation for and attitude towards the use of English as a medium of instruction, in particular between domestic and foreign students, as well as students who study English language and those who are enrolled in technical studies. The literature review gives an overview of the research conducted so far in two relevant fields. The second chapter introduces the notion of Englishisation, i.e. the spread of English in numerous domains. This section further gives an outline of issues stemming from the latter, namely the use of English as a lingua franca in tertiary education and as a medium of instruction. The third chapter presents three individual differences which have a substantial influence on students, motivation, attitude, and anxiety. The fourth chapter describes the current situation in Vienna regarding EMI, and the methodology used in the case study, while the fifth chapter reports on the in-depth analysis of the data.

The data analysis of the survey conducted on a sample of one hundred students has uncovered a wide range of attitudes towards EMI, as well as students' perceptions of themselves as foreign language speakers. Furthermore, the findings indicate that certain factors are strong predictors of students' motivation and anxiety, in addition to being directly linked to students' attitude towards English use at university. Yet, the findings show that when it comes to students' background and interest in foreign languages, perception of themselves as foreign language

speakers and anxiety, and use of English at university, there are no differences among domestic and international students. The last finding is related to students' fields of study. The analysis confirms prior studies' findings that there is a need for discipline-specific approach to EMI due to students' varying levels of proficiency, motivation and attitudes towards the use of English as a medium of instruction.

6.1 Suggestions

In Austria, lecturers have expressed some negative views concerning the hasty introduction of EMI courses and programmes as a part of internationalisation measures' implementation (Dolmanitz 2015: 89). In addition to this main concern, increased student workload, varying levels of language proficiency and a cutback in the extent of content covered, have also been identified as problematic issues (Tatzl 2011). A suggestion offered by Unterberger (2012: 96) states that a course which was designed by specialist language teachers and content experts at the Vienna University of Economics and Business should be taken as a model for future EMI courses. This is corroborated by Tatzl (2011: 252), whose findings confirm that English for Specific Purposes instruction plays an important role in providing complementary support to all agents in EMI classes. That would imply English for Specific Purposes training for teachers and students which would, through ELF research, allow for the prioritisation, as well as de-prioritisation of matter; higher level language policies which would benefit from additional information on these issues and create a better learning environment for students, lecturers, and other university staff (Björkman 2013: 29). Also, incorporating discipline-specific English language exams may help improve students' academic literacy (Dafouz, Camacho-Miñano & Urquía 2014: 232), thus further increasing their motivation and academic achievement.

Another essential measure is to alleviate anxiety levels, as recommended by Liu and Huang (2011: 6), in order to improve students' performance. This is especially important at institutions where it is expected of students to be highly proficient in English (*ibid.*), such as the postgraduate EMI programmes of higher-education institutions analysed here. The present analysis of higher institutions' official documents and websites indicates that students' competence in academic English is often assumed based on enrolment requirements, and in some cases, specific groups do not have to provide a proof of their English language proficiency. Yet, it seems "that many university students do not have sufficient language skills for EMI courses" (Doiz, Lasagabaster & Sierra 2013: 216). What is more, the findings show that students' anxiety is directly associated with their proficiency in English, especially their

receptive skills, i.e. how good their understanding of academic English is. However, it appears that these shortcomings caused by insufficient language skills “can be overcome with additional motivation on both the students’ and teachers’ part, and the implementation of adequate pedagogical strategies” (Doiz, Lasagabaster & Sierra 2013: 216).

6.2 Limitations

It is worth mentioning that this study has certain limitations. First of all, the participants are self-selected, which entails the possibility of them being more interested in the subject matter, and more motivated than the average student. Still, as Dafouz, Hüttner and Smit (2016: 141) point out, although study findings on this matter often cannot and should not be generalised, they are still beneficial. After all, each and every context has specific characteristics, and it is an absolute necessity to explore each of them. Therefore, it is advisable for every higher-education institution to conduct its own research with the goal of devising the best-fitting language policy for its own setting (Doiz, Lasagabaster & Sierra 2013: 219).

Furthermore, two variables, Frequency of English use and Instrumentality (professional environment), show somewhat lower Cronbach’s alpha values. Thus, these two variables and subsequent analyses including them are to be considered with a certain amount of caution. Last but not least, the study would benefit from a much larger sample size.

6.3 Further research

Lasagabaster (2016: 315) emphasises that “research on motivation in traditional English as a foreign language contexts is abundant but it is remarkably scant in EMI settings”, i.e. most research in this field focuses on EFL settings, with a few exceptions of studies on motivation in an EMI classroom. This matter is definitely a relevant one, and it requires exploring various settings with students coming from different backgrounds so as to comprehend how motivation, anxiety, perception and performance affect one another in EMI (Liu & Huang 2011: 6).

A validation or a follow-up study in which not only English language proficiency tests but also qualitative data are included, would be immensely valuable for gaining a deeper understanding of these issues within this specific setting. Additionally, it would be advisable to include students at different levels, undergraduate and graduate, as well as other European countries, in order to examine differences and similarities among them. Also, even though attitudinal studies, such as this one, are the favoured method of investigating EMI, there is a need for a

wider range of methodological approaches, in particular observational and ethnographic studies (Dimova, Hultgren & Jensen 2015: 317-318). Moreover, as Baker and Hüttner (2016: 4) assert, differing findings from various studies might be a result of differing methodological approaches, which could be resolved “by applying one analytical framework to a range of different contexts”, such as Dafouz and Smit’s (2014) ROAD-MAPPING framework, which was discussed in the second chapter. EMI is a convergence point for various disciplines, such as applied linguistics, education, ELT, sociolinguistics, language policy etc., thus, it is necessary to approach EMI at a cross-disciplinary and cross-national level, as well as from the bottom-up perspective (Dimova, Hultgren & Jensen 2015: 319-320). Finally, longitudinal research in which students’ improvement is monitored would be of immense value when exploring the effect that EMI may have on their proficiency (Dafouz, Camacho-Miñano & Urquía 2014: 232).

7. References

- Aikenhead, Glen; Ryan, Alan G. 1992. "The development of a new instrument: Views on science-technology-society (VOSTS)". *Science Education* 76, 477-491.
- Airey, John. 2015. "From stimulated recall to disciplinary literacy: Summarizing ten years of research into teaching and learning in English". In Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 157-176.
- Airey, John. 2011. "The relationship between teaching language and student learning in Swedish university physics". In Preisler, Bent; Klitgard, Ida; Fabricius, Anne H. (eds.). *Language and learning in the international university. From English uniformity to diversity and hybridity*. Bristol, UK: Multilingual Matters, 3-18.
- Airey, John. 2009. "Science, language and literacy. Case studies of learning in Swedish university physics". PhD thesis, University of Uppsala.
- Airey, John; Lauridsen, Karen M.; Räsänen, Anne; Salö, Linus; Schwach, Vera. 2015. "The expansion of English-medium instruction in the Nordic countries. Can top-down university language policies encourage bottom-up disciplinary literacy goals?". *The International Journal of Higher Education* [0018-1560], 1-16.
- Ajzen, Icek. 2005. *Attitudes, personality and behaviour*. (2nd edition) Berkshire: Open University Press.
- Akademie der bildenden Künste Wien. 2016. "Language competency". https://www.akbild.ac.at/portal_en/studies/studieninfos_en/language-competency/language-competency?set_language=en&cl=en (20 Aug. 2016).
- Allport, Gordon W. 1954. *The Nature of Prejudice*. London: Addison-Wesley.
- Altbach, Philip G.; Reisberg, Liz; Rumbley, Laura E. 2009. "Trends in global higher education. Report prepared for the UNESCO 2009 World Congress on Higher Education". Paris: UNESCO.
- Ammon, Ulrich. 2012. "Linguistic inequality and its effects on participation in scientific discourse and on global knowledge accumulation – With a closer look at the problems of the second-rank countries". *Applied Linguistics Review* 3(2), 333-355.
- Ammon, Ulrich. 2001. "English as a future language of teaching at German universities? A question of difficult consequences, posed by the decline of German as a language of science". In Ammon, Ulrich (ed.). *The dominance of English as a language of science: Effects on other languages and language communities*. Berlin & New York: Walter de Gruyter, 343-361.
- Ammon, Ulrich; McConnell, Grant D. 2002. *English as an academic language in Europe: A survey of its use in teaching*. Frankfurt am Main, New York: P. Lang.
- Arnold, Jane; Brown, Douglas H. 1999. "A map of the terrain". In Arnold, Jane (ed.). *Affect in language learning*. Cambridge: Cambridge University Press, 1-24.
- Baker, Colin. 1992. *Attitudes and languages*. Clevedon: Multilingual Matters.
- Baker, Will; Hüttner, Julia. 2016. "English and more: A multisite study of roles and conceptualisations of language in English medium multilingual universities from Europe to Asia". *Journal of Multilingual and Multicultural Development*, 1-16.
- Bartram, Bernard. 2010. *Attitudes to modern foreign language learning: Insights from comparative education*. New York: Continuum.

- Basturkmen, Helen; Shackleford, Nick. 2015. "How content lecturers help students with language: An observational study of language-related episodes in interaction in first year accounting classrooms". *English for Specific Purposes* 37, 87-97.
- Björkman, Beyza. 2013. *English as an academic lingua franca*. Berlin etc.: De Gruyter Mouton.
- Björkman, Beyza. 2010. "So you think you can ELF: English as a lingua franca as the medium of instruction". *Hermes – Journal of Language and Communication Studies* 45, 77-96.
- Bohner, Gerd; Wanke, Michaela. 2002. *Attitudes and attitude change*. Hove: Psychology Press.
- BOKU. 2016. "Facts & Figures". <https://www.boku.ac.at/en/fos/themen/facts-figures/> (10 Aug. 2016).
- Brown, James D. 2001. *Using surveys in language programs*. Cambridge, UK: Cambridge University Press.
- Cargile, Aaron; Giles, Howard; Ryan, Ellen B.; Bradac, James J. 1994. "Language attitudes as a social process. A conceptual model and new directions". *Language & communication* 12(3), 211-236.
- Cenoz, Jasone. 2006. "Across the assessment gap: Challenges for practice and research". In Wilkinson, Robert; Zegers, Vera (eds.). *Bridging the assessment gap in English-medium higher education*. Nijmegen: AKS-Verlag Bochum, 281-291.
- Cenoz, Jasone. 1998. "Multilingual education in the Basque country". In Cenoz, Jasone; Genesee, Fred (eds.). *Beyond bilingualism. Multilingualism and multilingual education*. Clevedon: Multilingual Matters Ltd, 175-91.
- Clément, Richard. 1980. "Ethnicity, contact and communicative competence in a second language". In Giles, Howard; Robinson, Peter; Smith, Philip M. (eds.). *Language: Social Psychological Perspectives*. Oxford: Pergamon, 147-154.
- Clément, Richard; Baker, Susan C. 2001. "Measuring social aspects of L2 acquisition and use: Scale characteristics and administration". Technical Report. Ottawa: School of Psychology, University of Ottawa.
- Cohen, Louis; Manion, Lawrence; Morrison, Keith. 2011. *Research methods in education*. (7th edition). London: Routledge.
- Coleman, James A. 2006. "English-medium teaching in European higher education". *Language Teaching* 39(1), 1-14.
- Cook, Vivian. 2002. "Background to the L2 user". In Cook, Vivian (ed.). *Portraits of the L2 user*. Clevedon: Multilingual Matters Ltd, 1-28.
- Costabello, Barbara. 2013. "English as a medium of instruction: The case study of the Politecnico di Torino". Unpublished MA thesis. University of Torino.
- Čiča, Milena. 2012. "Content and language integrated learning in higher education: Lecture comprehension at the Faculty of Business, Economics and Statistics, of the University of Vienna". Diploma thesis, University of Vienna.
- Dafouz, Emma; Camacho-Miñano, Mar M. 2016. "Exploring the impact of English-medium instruction on university student academic achievement: The case of accounting". *English for Specific Purposes* 44, 57-67.
- Dafouz, Emma; Camacho-Miñano, Mar M.; Urquía, Elena. 2014. "Surely they can't do as well': A comparison of business students' academic performance in English-medium

- and Spanish-as-first-language-medium programmes". *Language and Education* 28(3), 223-236.
- Dafouz, Emma; Hüttner, Julia; Smit, Ute. 2016. "University teachers' beliefs of language and content integration in English-medium education in multilingual university settings". In Nikula, Tarja; Dafouz, Emma; Moore, Pat; Smit, Ute (eds.). *Conceptualising integration in CLIL and multilingual education*. Bristol, UK: Multilingual Matters, 123-144.
- Dafouz Emma; Smit, Ute. 2014. "Towards a dynamic conceptual framework for English-medium education in multilingual university settings". *Applied Linguistics* 37(3), 397-415.
- de Cillia, Rudolf; Schweiger, Teresa. 2001. "English as a language of instruction at Austrian universities". In Ulrich Ammon (ed.). *The dominance of English as a language of science. Effects on other languages and language communities*. Berlin, New York: Mouton de Gruyter, 363-387.
- Dewaele, Jean-Marc. 2007. "The effect of multilingualism, sociobiographical, and situational factors on communicative anxiety and foreign language anxiety of mature language learners". *The International Journal of Bilingualism* 11, 391-409.
- Dewaele, Jean-Marc; MacIntyre, Peter D. 2014. "The two faces of Janus? Anxiety and enjoyment in the foreign language classroom". *Studies in Second Language Learning and Teaching* 4(2), 237-274.
- dieAngewandte. 2016. "Service für BewerberInnen". <http://www.dieangewandte.at/jart/prj3/angewandte-2016/main.jart?content-id=1452272611314&rel=en> (20 Aug. 2016).
- Dillman, Don A.; Smyth, Jolene D.; Christian, Leah Melani. 2014. *Internet, phone, mail, and mixed-mode surveys: The tailored design method*. (4th edition). New Jersey: John Wiley & Sons, Inc.
- Dimova, Slobodanka; Hultgren, Anna Kristina; Jensen, Christian. 2015. "English-medium instruction in European higher education: Review and future research". In Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 317-324.
- Doiz, Aintzane; Lasagabaster, David; Sierra, Juan Manuel. 2013. "Future challenges for English-medium instruction at the tertiary level". In Doiz, Aintzane; Lasagabaster, David; Sierra, Juan Manuel (eds.). *English-medium instruction at universities: Global challenges*. Bristol: Multilingual Matters, 213-221.
- Dolmanitz, Kathrin. 2015. "Internationalisation and English-medium instruction (EMI) in tertiary education: Lecturers' beliefs at the FH Campus Wien". MA thesis, University of Vienna.
- Dörnyei, Zoltán. 2007. *Research methods in applied linguistics. Quantitative, qualitative, and mixed methodologies*. Oxford: Oxford Univ. Press.
- Dörnyei, Zoltán. 2005. *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum.
- Dörnyei, Zoltán. 2003. *Questionnaires in second language research. Construction, administration, and processing*. London: Lawrence Erlbaum Associates.
- Dörnyei, Zoltán. 1994. "Understanding L2 Motivation: On with the Challenge!" *The Modern Language Journal* 78(4), 515-527.

- Dörnyei, Zoltán; Csizér, Kata. 2002. "Some dynamics of language attitudes and motivation. Results of a longitudinal nationwide study". *Applied Linguistics* 23(4), 421-62.
- Dörnyei, Zoltán; Csizér, Kata; Németh, Nóra. 2006. *Motivation, language attitudes and globalisation. A Hungarian perspective*. Bristol: Multilingual Matters.
- Dörnyei, Zoltán; Ottó, István. 1998. "Motivation in action: A process model of L2 motivation". *Working Papers in Applied Linguistics. Vol. 4*. London: Thames Valley University, 43-69.
- Dörnyei, Zoltán; Ryan, Stephen. 2015. *The psychology of the language learner revisited*. New York & London: Routledge.
- Dörnyei, Zoltán; Taguchi, Tatsuya. 2010. *Questionnaires in second language research. Construction, administration, and processing*. (2nd edition). New York, NY and Oxon: Routledge.
- Dörnyei, Zoltán; Ushioda, Ema. 2011. *Teaching and researching motivation*. (2nd edition). Harlow: Longman.
- Eagly, Alice H.; Chaiken, Shelly. 1993. *The psychology of attitudes*. Fort Worth, Texas: Harcourt Brace Jovanovich.
- Earls, Clive W. 2016. *Evolving agendas in European English-medium higher education. Interculturality, multilingualism and language policy*. Basingstoke & New York: Palgrave Macmillan.
- European Commission. 2012. *Europeans and their languages: Report*. http://ec.europa.eu/public_opinion/archives/ebs/ebs_386_en.pdf (29 July 2016).
- Eysenck, Michael. 1994. *Individual differences: Normal and abnormal*. Hove, England: Lawrence Erlbaum Associates.
- Fasold, Ralph. 1984. *Sociolinguistics of society*. Oxford: Basil Blackwell Ltd.
- Federal Ministry of Science, Research and Economy. 2014. "Wissenschaft & Hochschulen". <http://wissenschaft.bmwf.gv.at/bmfw/wissenschaft-hochschulen/> (20 Aug. 2016).
- Ferguson, Gibson. 2015. "Attitudes to English". In Linn, Andrew; Bermel, Neil; Ferguson, Gibson (eds.). *Attitudes towards English in Europe*. Berlin: Walter de Gruyter, 3-24.
- Ferguson, Gibson. 2007. "The global spread of English, scientific communication and ESP: questions of equity, access and domain loss". *Ibérica* 13, 7-38.
- FH Campus Wien. 2016. "Study programs". <https://www.fh-campuswien.ac.at/en/studies/study-programs.html> (20 Aug. 2016).
- FHWien der WKW. 2016a. <http://en.fh-wien.ac.at/home/> (20 Aug. 2016).
- FHWien der WHW. 2016b. "Languages". <http://en.fh-wien.ac.at/international/languages/> (20 Aug. 2016).
- Field, Andy P. 2009. *Discovering statistics using SPSS*. (3rd edition). London: Sage publications.
- Fishman, Joshua. 2000. "Who speaks what language to whom and when?". In Wei, Li (ed.). *The bilingualism reader*. London/ New York: Routledge, 89-106.
- Fricker, Robert. D. Jr; Schonlau, Matthias. 2002. "Advantages and disadvantages of Internet-surveys: evidence from the literature". *Field Methods* 14(4), 347-367.
- Gardner, Robert. 1985. *Social psychology and second language learning: The role of attitudes and motivation*. London: Arnold.
- Gardner, Robert C.; Lambert, Wallace E. 1972. *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.
- Gardner, Robert C.; MacIntyre, Peter D. 1993. "On the measurement of affective variables in second language learning". *Language Learning* 43, 157-194.

- Gardner, Robert C.; Smythe, Padric C.; Clément, Richard; Gliksmann, Louis. 1976. "Second language acquisition: A social psychological perspective". *Canadian Modern Language Review* 32, 198-213.
- Garrett, Peter; Coupland, Nikolas; Williams, Angie. 2003. *Investigating language attitudes. Social meanings of dialect, ethnicity and performance*. Cardiff: University of Wales Press.
- Gerber, Ans; Engelbrecht, Johann; Harding, Ansie; Rogan, John. 2005. "The influence of second language teaching on undergraduate mathematics performance". *Mathematics Education Research Journal* 17(3), 3-21.
- Gordin, Michael D. 2015. *Scientific Babel. How science was done before and after global English*. Chicago: The University of Chicago Press.
- Graddol, David. 1997. *The future of English*. London: British Council.
- Gray, Jeffrey A. 1982. *The neuropsychology of anxiety: An enquiry into the functions of the septohippocampal system*. Oxford: Oxford University Press.
- Gürtler, Katherine; Kronewald, Elke. 2015. "Internationalization and English-medium instruction in German higher education". In Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 89-114
- Hellekjær, Glenn Ole. 2010. "Language matters: Assessing lecture comprehension in Norwegian English-medium higher education". In Smit, Ute; Nikula, Tarja; Dalton-Puffer, Christiane (eds.). *Language use in language and content integrated learning (CLIL)*. Amsterdam: John Benjamins Publishing Company, 233-258.
- Hellekjaer, Glenn Ole. 2006. "Screening criteria for English-medium programmes: A case study". In Wilkinson, Robert; Zegers, Vera; van Leeuwen, Charles (eds.). *Bridging the assessment gap in English-medium higher education*. Bochum: AKS-Verlag, 43-60.
- Henry, Alastair. 2009. "Gender differences in compulsory school pupils' L2 self-concepts: A longitudinal study". *System* 37(2), 177-193.
- Hincks, Rebecca. 2010. "Speaking rate and information content in English lingua franca presentations". *English for Specific Purposes* 29(1), 4-18.
- Hoffman, Charlotte. 1998. "Luxembourg and the European Schools". In Cenoz, Jasone; Genesee, Fred (eds.). *Beyond bilingualism: Multilingualism and multilingual education*. Clevedon: Multilingual Matters Ltd, 143-74.
- Horwitz, Elaine K. 2010. "Foreign and second language anxiety". *Language Teaching* 43, 154-167.
- Horwitz, Elaine K. 2001. "Language anxiety and achievement". *Annual Review of Applied Linguistics* 21, 112-126.
- Horwitz, Elaine K.; Horwitz, Michael B.; Cope, Joann. 1986. "Foreign language classroom anxiety". *The Modern Language Journal* 70, 125-132.
- Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka. 2015. "English-medium instruction in European higher education: From the north to the south". In Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 1-15.
- Hyland, Ken. 2016. "Academic publishing and the myth of linguistic injustice". *Journal of Second Language Writing* 31, 58-69.

- Internet World Stats. 2016. "Internet world users by language: Top 10 languages", 30 June. <http://www.internetworldstats.com/stats7.htm> (02 Aug 2016).
- Kachru, Braj B. 1985. "Standards, codification and sociolinguistic realism: The English language in the outer circle". In Quirk, Randolph; Widdowson, Henry G. (eds.). *English in the world: Teaching and learning the language and literatures*. Cambridge: Cambridge University Press, 11-30.
- Kim, Gyong Eun; Kweon, Soo-Ok; Kim, Jeongyeon. 2016. "Korean engineering students' perceptions of English-medium instruction (EMI) and L1 use in EMI classes". *Journal of Multilingual and Multicultural Development*, 1-16.
- Kim, Misook. 2015. "English-medium instruction. Perceptions of university students of different academic years and lecturers". *Studies in English Education* 20(4), 77-109.
- Kind, Per; Barnby, Patrick. 2015. "Defending attitude scales". In Khine, Myint Swe (ed.). *Attitude measurements in science education. Classic and contemporary approaches*. Charlotte, NC: Information Age Publishing, Inc, 119-138.
- Klaassen, Renate. 2006. "Content and language integrated teacher training for university lecturers". Talk given at "ICLHE Conference", Maastricht, 1 June 2006.
- Klaassen, Renate. 2005. "English language proficiency screening for lecturing staff in Dutch Higher Education". Paper presented at the conference on Bi and Multilingual Universities - challenges and future prospects, Helsinki, 1-3 Sept. 2006.
- Klaassen, Renate. 2001. "The international university curriculum: Challenges in English-medium engineering education". Unpublished PhD thesis, Delft University of Technology.
- Kluckhohn, Clyde; Murray, Henry A. 1948. *Personality in nature, society and culture*. New York: Knopf.
- Knapp, Anelie. 2014. "Language choice and the construction of knowledge in higher education". *European Journal of Applied Linguistics* 2(2), 165-203.
- Knapp, Annelie; Münch, Anja. 2008. "Doppelter Lernaufwand? Deutsche Studierende in englischsprachigen Lehrveranstaltungen". In Knapp, Annelie; Schumann, Adelheid (eds.). *Mehrsprachigkeit und Multikulturalität im Studium*. Frankfurt / Main: Peter Lang, 169-193.
- Knops, Uus; van Hout, Roeland. 1988. "Language attitudes in the Dutch language area: An introduction". In van Hout, Roeland; Knops, Uus (eds.). *Language Attitudes in the Dutch Language Area*. Dordrecht: Foris.
- Kruseman, Nieuwenhuijzen Arie. 2003. "Conceiving a bilingual university: Challenges and issues". In van Leeuwen, Charles; Wilkinson, Robert (eds.). *Multilingual approaches in university education: Challenges and practices*. Nijmegen: ValkhofPers, 7-11.
- Kuo, I-Chun. 2006. "Addressing the issue of teaching English as a lingua franca". *ELT Journal* 60(3), 213-221.
- Kuteeva, Maria; Airey, John. 2014. "Disciplinary differences in the use of English in higher education: Reflections on recent language policy developments". *Higher Education* 67(5), 533-549.
- Lasagabaster, David. 2016. "The relationship between motivation, gender, L1 and possible selves in English-medium instruction". *International Journal of Multilingualism* 13(3), 315-332.
- Liu, Meihua; Huang, Wenhong. 2011. "An exploration of foreign language anxiety and English learning motivation". *Education Research International*, 1-8.

- Ljosland, Ragnhild. 2008. "Lingua Franca, prestisjespråk og forestilt fellesskap: Om engelsksomakademiskspråk i Norge: Et kasusstudium i bred kontekst". PhD thesis, Norges teknisk-naturvitenskapelige universitet, Trondheim.
- Londo, Maciej. 2011. "Optimising EMI in higher education through CLIL. Case study at Vienna University of Technology". Diploma thesis, University of Vienna.
- MacIntyre, Peter D. 2002. "Motivation, anxiety and emotion in second language acquisition". In Robinson, Peter (ed.). *Individual differences and instructed language learning*. Amsterdam: John Benjamins Publishing Company, 45-68.
- MacIntyre, Peter D. 1999. "Language anxiety: A review of the research for language teachers". In Young, Dolly J. (ed.). *Affect in foreign language and second language learning*. Boston: McGraw-Hill, 24-45.
- MacIntyre, Peter D.; Gregersen, Tammy. 2012. "Affect: The role of language anxiety and other emotions in language learning". In Mercer, Sarah; Ryan, Stephen; Williams, Marion (eds.). *Psychology for language learning: Insights from research, theory & practice*. Basingstoke: Palgrave Macmillan, 103-118.
- MacIntyre, Peter D.; Mackinnon, Sean P.; Clément, Richard. 2009. "The baby, the bathwater, and the future of language learning motivation research". In Dörnyei, Zoltán; Ushioda, Ema (eds.). *Motivation, language identity and the L2 self*. Bristol, UK: Multilingual Matters, 43-65.
- Masgoret, Anne-Marie; Gardner, Robert C. 2003. "Attitudes, motivation, and second language learning: a meta-analysis of studies conducted by Gardner and associates". *Language Learning* 53(1), 123-163.
- Mauranen, Anna. 2006. "Signaling and preventing misunderstanding in English as lingua franca communication". *International Journal of the Sociology of Language* 177, 123-150.
- McClelland, Neil. 2000. "Goal orientations in Japanese college students learning EFL". In Cornwell, Steve; Robinson, Peter (eds.). *Individual differences in foreign language learning: Effects of aptitude, intelligence, and motivation*. Tokyo: Japanese Association for Language Teaching, 99-115.
- McGuire, William J. 1985. "Attitude and attitude change". In Lindzey, Gardner; Aronson, Elliot (eds.). *Handbook of social psychology*. (Volume 2). New York: Random House, 233-346.
- McKenzie, Robert M. 2010. *The social psychology of English as a global language. Attitudes, awareness and identity in the Japanese context*. Dordrecht: Springer.
- MODUL University Vienna. 2016. "FAQs". <https://www.modul.ac.at/admissions/apply-for-admission/faqs/> (20 Aug. 2016).
- Motschenbacher, Heiko. 2013. *New perspectives on English as a European lingua franca*. Amsterdam: John Benjamins Publishing Company.
- Musik und Kunst. 2016. "Proficiency in German". http://www.muk.ac.at/fileadmin/mediafiles/documents/Studienreferat_Formulare/A1_Deutschkenntnisse_engl.pdf (10 Aug. 2016).
- Noels, Kimberly A.; Pelletier, Luc G.; Clément, Richard; Vallerand, Robert J. 2000. "Why are you learning a second language? Motivational orientations and self-determination theory". *Language Learning* 50(1), 33-63.
- OeAD – Austrian Agency for International Cooperation in Education and Research. 2015. "Study in Austria – How?". https://www.oead.at/fileadmin/oead_zentrale/ueber_

- den_oead/publikationen/pdf/Informationsblaetter/leporello_web.pdf (10 Aug. 2016).
- OeAD – Austrian Agency for International Cooperation in Education and Research. 2014. “Higher Education Institutions 2014/15”. https://www.oead.at/fileadmin/oead_zentrale/ueber_den_oead/publikationen/pdf/higher_education/web_high_edu.pdf (10 Aug. 2016).
- Oxford, Rebecca L. 1990. *Language learning strategies: What every teacher should know*. Boston, MA: Heinle & Heinle.
- Pavlenko, Anita. 2005. *Emotions and multilingualism*. New York: Cambridge University Press.
- Perloff, Richard M. 2003. *The dynamics of persuasion: Communication and attitudes in the 21st century*. (2nd edition). Mahwah, New Jersey & London: Lawrence Erlbaum Associates, Inc.
- Phillipson, Robert. 2015. “English as threat or opportunity in European higher education”. In Hultgren, Anna Kristina; Jensen, Christian; Dimova, Slobodanka (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 19-42.
- Phillipson, Robert. 2006a. “Figuring out the Englishisation of Europe”. In Leung, Constant; Jenkins, Jennifer (eds.). *Reconfiguring Europe: The contribution of applied linguistics*. London: Equinox, 65-86.
- Phillipson, Robert. 2006b. “English, a cuckoo in the European higher education nest of languages?” *European Journal of English Studies* 10(1), 13-32.
- Piniel, Katalin; Csizér, Kata. 2014. “Changes in motivation, anxiety and self-efficacy during the course of an academic writing seminar”. In Dörnyei, Zoltán; MacIntyre, Peter D.; Henry, Alastair. *Motivational dynamics in language learning*. Bristol, UK: Multilingual Matters, 164-194.
- Pulcini, Virginia; Campagna, Sandra. 2015. “‘Internationalisation’ and the EMI controversy in Italian higher education”. In Dimova, Slobodanka; Hultgren, Anna Kristina; Jensen, Christian (eds.). *English-medium instruction in European higher education*. Boston & Berlin: De Gruyter Mouton, 65-88.
- Räsänen, Christine A.; Fortanet-Gómez, Inmaculada. 2008. “The state of ESP teaching and learning in Western European higher education after Bologna”. In Fortanet-Gómez, Inmaculada; Räsänen, Christine A. (eds.). *ESP in European higher education: Integrating language and content*. Amsterdam & Philadelphia: John Benjamins Publishing Company, 11-51.
- Read, John. 2015. *Assessing English proficiency for English study*. Basingstoke & New York: Palgrave Macmillan.
- Reeve, Johnmarshall. 1992. *Understanding motivation and emotion*. Toronto: Harcourt Brace Jovanovich College.
- Robinson, Peter. 2002. “Introduction: Researching individual differences and instructed learning”. In Robinson, Peter (ed.). *Individual differences and instructed language learning*. Amsterdam: John Benjamins Publishing Company, 1-10.
- Ryan, Stephen. 2009. “Self and identity in L2 motivation in Japan: The ideal L2 self and Japanese learners of English”. In Dörnyei, Zoltán; Ushioda, Ema (eds.). *Motivation, language identity and the L2 self*. Bristol, UK: Multilingual Matters, 120-143.
- Salö, Linus; Josephson, Olle. 2014. "Landrapport Sverige: Parallellspråkighet vid svenska universitet och högskolor". In Gregersen, Frans (ed.). *Hvor parallelt. Om*

- parallelspråkighet på Nordens universitet*. Copenhagen: TemaNord, Nordiska Ministerrådet, 261-322.
- Schiefele, Hans. 1963. *Motivation im Unterricht*. Munich: Franz Ehrenwirth Verlag KG.
- Seidlhofer, Barbara. 2011. *Understanding English as a lingua franca*. Oxford: Oxford University Press.
- Seidlhofer, Barbara. 2001. "Closing a conceptual gap: the case for a description of English as a lingua franca". *International Journal of Applied Linguistics* 11(2), 133-158.
- Shaw, Philip; Benson, Carol; Brunsberg, Sandra; Duhs, Rosalind; Minugh, David. 2008. "Preparing for international masters degrees at Stockholm University and the Royal Institute of Technology in Stockholm". In Fortanet-Gómez, Inmaculada; Räisänen, Christine A. (eds.). *ESP in European higher education: Integrating language and content*. Amsterdam & Philadelphia: John Benjamins Publishing Company, 267-282.
- Sigmund Freud Privatuniversität. 2015. "Bildungsangebot". http://old.sfu.ac.at/data//Bildungsangebot_2015.pdf (20 Aug. 2016).
- Skehan, Peter. 1989. *Individual differences in second-language learning*. London: Edward Arnold.
- Smit, Ute. 2010. *English as a lingua franca in higher education: A longitudinal study of classroom discourse*. Berlin: De Gruyter.
- Smit, Ute; Dafouz, Emma. 2012. "Integrating content and language in higher education: An introduction to English-medium policies, conceptual issues and research practices across Europe". *AILA Review* 25, 1-12.
- Smith, Kari. 2004. "Studying in an additional language: What is gained, what is lost, what is assessed". In Wilkinson, Robert (ed.). *Integrating content and language. Meeting the challenge of a multilingual higher education*. Maastricht: Universitaire Pers, 78-93.
- Snow, Richard E.; Corno, Lyn; Jackson, Douglas. 1996. "Individual differences in affective and conative functions". In Berliner, David C.; Calfee, Robert C. (eds.). *Handbook of educational psychology*. New York: Macmillan, 243-310.
- Söderlundh, Hedda. 2012. "Global policies and local norms: Sociolinguistic awareness and language choice at an international university". *International Journal of the Sociology of Language* 216, 87-109.
- Stegu, Martin; Seidlhofer, Barbara. 2003. "Planlos. Sprachenlernen an Universitäten". In Busch, Brigitta; de Cillia, Rudolf (eds.). *Sprachenpolitik in Österreich. Eine Bestandsaufnahme*. Frankfurt: Lang, 136-150.
- Tatzl, Dietmar. 2011. "English-medium masters' programmes at an Austrian university of applied sciences: Attitudes, experiences and challenges". *Journal of English for Academic Purposes* 10, 252-270.
- Taylor, Jasmine; Cooper-Thomas, Helena D; Peterson, Elizabeth R. 2015. "Motivated learning: The relationship between student needs and attitudes". In Rubie-Davies, Christine M.; Stephens, Jason M.; Watson, Penelope (eds.). *The Routledge international handbook of social psychology of the classroom*. London & New York: Taylor & Francis Group, 42-52.
- Thompson, Amy; Lee, Junkyu. 2013. "The impact of experience abroad and language proficiency on language learning anxiety". *TESOL Quarterly* 48(2), 252-274.
- Truchot, Claude. 2001. "The languages of science in France: Public debate and language policies". In Ammon, Ulrich (ed.). *The dominance of English as a language of*

- science: Effects on other languages and language communities*. Berlin: Walter de Gruyter, 319-328.
- TU Wien. 2016. "Fields of study". https://www.tuwien.ac.at/en/services/departments_for_studies_and_examinations/study_programmes/ (10 Aug. 2016).
- University of Vienna. 2016. "What to study". <http://studentpoint.univie.ac.at/en/what-to-study/master-programmes/> (10 Aug. 2016).
- Universität für Musik und darstellende Kunst Wien. 2016. "Nachweis von Deutschkenntnissen". <https://www.mdw.ac.at/398> (20 Aug. 2016).
- Unterberger, Barbara. 2012. "English-medium programmes at Austrian business faculties: A status quo survey on national trends and a case study on programme design and delivery". *AILA Review* 25 (1), 80-100.
- Ushioda, Ema. 2013. "Motivation and ELT: global issues and local concerns". In Ushioda, Ema (ed.). *International perspectives on motivation: language learning and professional challenges*. Basingstoke: Palgrave Macmillan, 1-17.
- Ushioda, Ema. 2006. "Language motivation in a reconfigured Europe: Access, identity and autonomy". *Journal of Multilingual and Multicultural Development* 27, 148-61.
- Ushioda, Ema; Dörnyei, Zoltán. 2012. "Motivation". In Gass, Susan M.; Mackey, Alison (eds.). *The Routledge handbook of second language acquisition*. New York: Routledge.
- van Geert, Paul. 1994. *Dynamic systems of development: Change between complexity and chaos*. Hertfordshire: Harvester Wheatsheaf.
- Vetmeduni Vienna. 2016. "Academic programmes at the University of Veterinary Medicine, Vienna". <https://www.vetmeduni.ac.at/en/studies/degree-programmes/> (20 Aug. 2016).
- Vinke, Adriana A. 1995. "English as the medium of instruction in Dutch engineering education". Unpublished PhD thesis, Delft University of Technology.
- Vinke, Adriana A.; Snippe, Joke; Jochems, Wim. 1998. "English-medium content courses in non-English higher education: A study of lecturer experiences and teaching behaviours". *Teaching in Higher Education* 3, 383-394.
- Vogler, Philipp M. 2014. "English in European tertiary education: A case study at the Faculty of Chemistry at the University of Vienna". Diploma thesis, University of Vienna.
- Wächter, Bernd; Maiworm, Friedhelm. 2014. "Part I – The big picture". In Wächter, Bernd; Maiworm, Friedhelm (eds.). *English-taught programmes in European higher education: The state of play in 2014*. Bonn: Lemmens.
- Webster University Vienna. 2016. "Welcome to Webster Vienna". <http://webster.ac.at/about-webster> (20 Aug. 2016).
- Wilkinson, Robert. 2008. "English-taught study courses: principles and practice. In Gnutzmann, Claus (ed.). *English in academia: Catalyst or carrier?*. Tübingen: Gunter Narr: 169-182.
- Wirtschaftsuniversität Wien. 2016. <https://www.wu.ac.at/en/the-university/organizational-structure/service-units/international-office/international-office/> (10 Aug. 2016).

8. Appendix

8.1 Abstract (English)

The present study investigates postgraduate students who are non-native speakers of English in English-medium education, with a particular focus on their motivation to study in English and attitude towards EMI. The main objective of this study is to determine whether and to what extent (1) domestic students, i.e. those who already have experience with Austrian educational system, differ from foreign students, and (2) students coming from different disciplines differ from one another with regard to the foci of the study.

The data gathered in the empirical part of the study was obtained from a questionnaire comprising fourteen different concepts pertaining to the research questions. The concepts were categorised into three groups: Background and interest, Perception and anxiety, and English use at university. One hundred respondents from different backgrounds took part in the survey.

The analysis of the obtained data has resulted in several relevant findings. Firstly, the results show no difference between domestic and international students when it comes to their language backgrounds and interest in foreign languages, perception of themselves as foreign language speakers and anxiety, and use of English at university. Furthermore, the findings point towards the need for a discipline-specific approach to EMI, as the results show several differences in motivation and attitudes towards EMI between students from different disciplines.

Overall, even though EMI is seen in a rather positive light by the participants, the analysis has uncovered a wide range of different attitudes towards its use in tertiary education at the postgraduate level. Arguably, this is due to differing levels of English language proficiency which result in increased anxiety related to the use of English, and the need for additional language support by higher education institutions.

8.2 Zusammenfassung (German)

Diese Vorschungsarbeit bezieht sich auf Studenten des Master- und Doktorstudiumprogrammes, wessen Muttersprache nicht Englisch ist, in einer EMI (English-medium instruction), mit dem Akzent auf die Motivation zum lernen der Englischen Sprache und der Ansichten, die sie gegenüber des EMI haben. Das wesentliche Ziel dieser Vorschungsarbeit ist zu zeigen ob und in welchem Umfang die (1) inländischen Studierenden, d.h die Studierenden, die mit dem Österreichischen Schulsystem vertraut sind, abweichen von ausländischen Studierenden und (2) die Studierenden, die in anderen Forschungsbereichen tätig sind, abweichen von einander, bezüglich der Bezugspunkte der Vorschungsarbeit.

Die im empirischen Teil der Studie gesammelten Daten stammen aus einem Fragebogen mit 14 verschiedenen Konzepten zu den Forschungsfragen. Die Konzepte wurden in 3 Gruppen eingeteilt: Hintergrund und Interesse, Wahrnehmung und Aufregung und Nutzung der Englischen Sprache an der Universität. An der Umfrage nahmen einhundert Teilnehmer verschiedener Hintergründe teil.

Die Analyse der gesammelten Daten hat zu mehreren relevanten Befunden geführt. Erstens, die Ergebnisse weisen auf keine Unterschiede zwischen inländischen und internationalen Studierenden, im Bezug auf ihre Hintergründe und Interessen an Fremdsprachen, der Wahrnehmung von sich selbst als fremdsprachige und Aufregung, die sie als solche verspüren und Nutzung der Englischen Sprache an der Universität. Weiter, deuten die Ergebnisse auf die Notwendigkeit eines disziplinspezifischen Ansatzes zur EMI hin, da die Ergebnisse auf Unterschiede bezüglich der Motivation und Einstellung zur EMI der Studierenden unterschiedlicher Forschungsbereiche hinweisen.

Insgesamt wird die EMI von den Teilnehmern als positiv betrachtet, die Analyse hat eine breite Palette von verschiedenen Einstellungen gegenüber ihrer Verwendung in der tertiären Bildung im Master-und Doktorstudiumprogramm aufgedeckt. Dies ist vermutlich auf unterschiedliche Sprachkenntnisse zurückzuführen, die zu einer steigender Aufregung im Bezug auf die Verwendung der Englischen Sprache und der Notwendigkeit einer zusätzlichen Sprachunterstützung an den Universitäten führen.

8.3 Items in the questionnaire

| Items in the present questionnaire | Items from existing questionnaires |
|---|--|
| <p>1. Background and Interest</p> <p>1.1 Interest in Foreign Languages</p> <ul style="list-style-type: none"> * I would really like to learn a lot of foreign languages. * I wish I could speak more languages perfectly. * I enjoy meeting and listening to people who speak other languages. * When I visit a foreign country, I like to be able to speak the language of the people. * If I planned to stay in another country, I would make an effort to learn the language even though I could get by in English. * There is no real need to learn languages other than English because nowadays everyone speaks English. * Everyone should speak more than one language. | <p>Interest in foreign languages (Gardner 1985: 175)</p> <ul style="list-style-type: none"> * I would really like to learn a lot of foreign languages. * I wish I could speak another language perfectly. * I enjoy meeting and listening to people who speak other languages. * If I were visiting a foreign country I would like to be able to speak the language of the people. * If I planned to stay in another country, I would make a great effort to learn the language even though I could get along in English. |
| <p>1.2 Frequency of English Use</p> <ul style="list-style-type: none"> * I have many friends with whom I speak English. * I use English when I'm online. * I listen to music in English. * I use English on holiday. * I use English for work. * I watch movies and TV shows in English. * I speak English mostly during English-medium classes. * I don't use English to communicate with other people outside university. * I speak English with someone in my family. | |
| <p>1.3 Instrumentality (Professional Environment)</p> <ul style="list-style-type: none"> * The things I want to do in the future require me to use English. * Studying English is important to me because I am planning to live abroad. * Studying English is important to me because with English I can work globally. | <p>Instrumentality (Dörnyei & Taguchi 2010: 142)</p> <ul style="list-style-type: none"> * The things I want to do in the future require me to use English. * Studying English is important to me because I am planning to study abroad. * Studying English is important to me because with English I can work globally. |

| | |
|--|---|
| <ul style="list-style-type: none"> * I believe I will get a better job if my English is flawless. * I can't be successful in my future career without English. | |
| <p>1.4 English Learning History</p> <ul style="list-style-type: none"> * Overall, I'm satisfied with the quality of English lessons I had throughout my education. * I learned more from TV series and movies than my classes. * I didn't enjoy learning English in school. * My teachers were very competent. | |
| <p>2. Perception and Anxiety</p> <p>2.1 Overall English Use Anxiety</p> <ul style="list-style-type: none"> * When I have to speak in English on the phone, I easily become confused. * I feel calm and confident in the company of English speaking people. * I usually get uneasy when I have to speak in English to people I don't know. * I am afraid of sounding stupid in English because of the mistakes I make. * I feel uncomfortable if people correct my mistakes when I speak English. | <p>English Use Anxiety (Clement & Baker 2001: 31)</p> <ul style="list-style-type: none"> * When I have to speak in English on the phone I easily become confused. * I feel calm and confident in the company of English-speaking people. * I usually get uneasy when I have to speak in English. <p>English Anxiety (Dörnyei & Taguchi 2010: 147)</p> <ul style="list-style-type: none"> * How afraid are you of sounding stupid in English because of the mistakes you make? |
| <p>2.2 Anxiety in English-medium Class</p> <ul style="list-style-type: none"> * It embarrasses me to volunteer answers in our classes. * I feel quite sure of myself when I am speaking in our classes. * I always feel that the other students speak English better than I do. * I get nervous and confused when I am speaking in my class. * I'm afraid that other students will laugh at me if I make language mistakes. * I would participate more in class if it were in my first language. | <p>Anxiety in Class (Clement & Baker 2001: 31)</p> <ul style="list-style-type: none"> * It embarrasses me to volunteer answers in our English class. * I never feel quite sure of myself when I am speaking English in our English class. * I always feel that the other students speak English better than I do. * I get nervous and confused when I am speaking in my English class. * I am afraid that other students will laugh at me when I speak English. |
| <p>2.3. Native vs. Non-native Speakers of English</p> | <p>English Anxiety (Dörnyei & Taguchi 2010: 147)</p> |

| | |
|---|---|
| <ul style="list-style-type: none"> * I am worried that native speakers of English would find my English strange. * I prefer speaking to other non-native speakers of English rather than native speakers. * I worry less about making mistakes when I talk to non-native speakers of English. * I find it embarrassing if I have to give directions in English to English native speakers. * I feel confident speaking English with a native speaker even if I don't know them. | <ul style="list-style-type: none"> * How worried are you that other speakers of English would find your English strange? |
| <p>2.4 Ideal L2 Self</p> <ul style="list-style-type: none"> * I imagine myself as someone who is able to speak English. * I can imagine myself living abroad and using English effectively to communicate. * I've always imagined myself speaking English with international friends or colleagues. * Whenever I think of my future career, I imagine myself using English. * I don't think my English will be perfect one day. * I don't think I will ever sound like a native speaker of English. * I think if a person speaks English well, they have to sound like a native speaker. | <p>Ideal L2 Self (Dörnyei & Taguchi 2010: 140)</p> <ul style="list-style-type: none"> * I imagine myself as someone who is able to speak English. * I can imagine myself living abroad and using English effectively for communicating with the locals. * I can imagine myself speaking English with international friends or colleagues. * Whenever I think of my future career, I imagine myself using English. |
| <p>2.5 Linguistic Self-confidence</p> <ul style="list-style-type: none"> * If I make an effort, I'm sure I'll be able to master English. * I believe that I will be capable of reading and understanding most texts in English if I keep learning it. * Learning English was easy for me. * I feel shy when I have to speak English. * I could learn any language if I put my mind to it. * I consider myself better at languages than others. | <p>Linguistic Self-confidence (Dörnyei & Taguchi 2010: 140)</p> <ul style="list-style-type: none"> * If I make more effort, I am sure I will be able to master English. * I believe that I will be capable of reading and understanding most texts in English if I keep studying it. |

| | |
|---|--|
| <ul style="list-style-type: none"> * I'm not talented when it comes to languages. * I'm afraid of making mistakes in foreign languages. | |
| <p>3. English Use at University</p> <p>3.1 Support</p> <ul style="list-style-type: none"> * There is no need for additional English language support from the University. * I think the University offers enough language support to students who struggle with English. * I think there are students in my classes who need help with their English. * I wish we had more language courses to help students who need it with their English. * If you're studying in English, it's necessary to use English fluently. * I wish I had taken an extra English language course before I started my postgraduate studies. | |
| <p>3.2 Grading</p> <ul style="list-style-type: none"> * It is possible to get good grades without good English. * Lecturers give lower grades if you make grammar and spelling mistakes. * If I didn't have a foreign accent when I speak English, I would get better grades. * If my English were better, I would get better grades. * The content of a paper is more important than language mistakes. | |
| <p>3.3 Production</p> <ul style="list-style-type: none"> * I can always express myself easily in English. * Giving academic presentations in English is more difficult than doing the same in my first language. * It takes me longer to write a paper in English than in my first language. * I prefer having someone proofread my papers in English. * I would participate more in class if my English were better. | |
| 3.4 Receptive skills | |

| | |
|--|--|
| <ul style="list-style-type: none"> * I can follow lectures without any problems of comprehension. * I prefer studying in English rather than in my first language. * It would be easier for me to learn from texts in my first language. * I often have to look up unfamiliar words when reading in English. * I wish more study materials were available in my first language. | |
| <p>3.5 Change</p> <ul style="list-style-type: none"> * I believe my English has improved since I started my studies. * I participate more in class than I used to at the beginning of my studies. * I haven't noticed a significant change in my English skills. * I feel more comfortable speaking English in class than I used to at the beginning of my studies. * Overall, I'm more relaxed when I speak English to other people. * I wish I had been better prepared for studying in English. | |

8.4 Overview of Facebook groups

1. Foreigner students in Vienna
2. Foreigners in Vienna
3. Foreign in Vienna 2
4. WINF Masterstudium TU Wien
5. Biomedical engineering @ TU Wien
6. Master Business Informatics @ TU Wien
7. Computational Intelligence (TU Wien)
8. International students at SFU
9. Mei: CogSci 2015/16
10. Applied limnology & LWM
11. FH Technikum Wien Studenten and Absolventen
12. FH Campus Wien – Studententreff
13. EYSIB
14. share & care – wien
15. Women of Vienna

8.5 Non-parametric test results

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|----|--|---|------|-----------------------------|
| 1 | The distribution of IFL is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .471 | Retain the null hypothesis. |
| 2 | The distribution of FEU is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .191 | Retain the null hypothesis. |
| 3 | The distribution of IPE is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .879 | Retain the null hypothesis. |
| 4 | The distribution of ELH is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .688 | Retain the null hypothesis. |
| 5 | The distribution of EUA is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .138 | Retain the null hypothesis. |
| 6 | The distribution of AEC is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .183 | Retain the null hypothesis. |
| 7 | The distribution of NNS is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .904 | Retain the null hypothesis. |
| 8 | The distribution of IL2 is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .592 | Retain the null hypothesis. |
| 9 | The distribution of SC is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .758 | Retain the null hypothesis. |
| 10 | The distribution of SUP is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .857 | Retain the null hypothesis. |
| 11 | The distribution of GRA is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .650 | Retain the null hypothesis. |
| 12 | The distribution of PRO is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .874 | Retain the null hypothesis. |
| 13 | The distribution of REC is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .202 | Retain the null hypothesis. |
| 14 | The distribution of CHA is the same across categories of Previous study exp. in Austria. | Independent-Samples Mann-Whitney U Test | .937 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

8.6 Correlations

| CLIL experience | | | | | Spearman's rho | | | | | Correlations (part 1.1) | | | | | |
|--------------------------------|---------------------|----------------------------|-----|---------------------|----------------------------|--------|---------------------|----------------------------|-----|----------------------------|----------------------------|-----|------|--------|-------------------------------------|
| English language experience | | Number of semesters | | Age | | Gender | | | | | | | | | |
| N | Sig. (2- tailed) | Correlation Coefficient | N | Sig. (2- tailed) | Correlation Coefficient | N | Sig. (2- tailed) | Correlation Coefficient | N | Sig. (2- tailed) | Correlation Coefficient | | | | |
| 100 | .710 | .038 | 100 | .654 | -.045 | 100 | .558 | -.059 | 100 | .195 | -.131 | 100 | .017 | -.238* | Interest in foreign languages |
| 100 | .440 | .078 | 100 | .037 | .209* | 100 | .357 | .093 | 100 | .033 | -.213* | 100 | .828 | -.022 | Frequency of English use |
| 100 | .641 | -.047 | 100 | .462 | .074 | 100 | .156 | .143 | 100 | .198 | -.130 | 100 | .949 | -.006 | Instrumentality |
| 100 | .257 | -.114 | 100 | .322 | .100 | 100 | .455 | -.076 | 100 | .502 | .068 | 100 | .688 | .041 | English language history |
| 100 | .458 | .075 | 100 | .834 | -.021 | 100 | .823 | -.023 | 100 | .231 | -.121 | 100 | .589 | -.055 | English use anxiety |
| 100 | .458 | .075 | 100 | .604 | -.052 | 100 | .502 | -.068 | 100 | .911 | -.011 | 100 | .823 | -.023 | Anxiety in English- medium class |
| 100 | .060 | -.188 | 100 | .624 | -.050 | 100 | .717 | .037 | 100 | .215 | .125 | 100 | .260 | .114 | Native vs. non- native speakers |
| 100 | .174 | -.137 | 100 | .602 | .053 | 100 | .541 | .062 | 100 | .750 | -.032 | 100 | .957 | -.005 | Ideal L2-self |
| 100 | .848 | .019 | 100 | .740 | .034 | 100 | .616 | .051 | 100 | .849 | .019 | 100 | .072 | -.181 | Linguistic self- confidence |
| 100 | .893 | .014 | 100 | .531 | -.063 | 100 | .373 | .090 | 100 | .013 | .248* | 100 | .266 | -.112 | Support |
| 100 | .506 | .067 | 100 | .532 | -.063 | 100 | .816 | .024 | 100 | .257 | -.114 | 100 | .022 | .228* | Grading |
| 100 | .365 | .092 | 100 | .022 | .229* | 100 | .487 | .070 | 100 | .556 | -.060 | 100 | .594 | .054 | Production |
| 100 | .228 | -.122 | 100 | .016 | .241* | 100 | .496 | .069 | 100 | .278 | -.110 | 100 | .329 | -.099 | Receptive skills |
| 100 | .288 | .107 | 100 | .763 | -.031 | 100 | .459 | -.075 | 100 | .118 | -.157 | 100 | .812 | -.024 | Change |

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

| English speaking country experience | | | Previous study experience in Austria | | | Programme | | | University | | | Language | | | Number of languages | | | Correlations (part 1.2) |
|-------------------------------------|-----------------|-------------------------|--------------------------------------|-----------------|-------------------------|-----------|-----------------|-------------------------|------------|-----------------|-------------------------|----------|-----------------|-------------------------|---------------------|-----------------|-------------------------|-------------------------------|
| N | Sig. (2-tailed) | Correlation Coefficient | N | Sig. (2-tailed) | Correlation Coefficient | N | Sig. (2-tailed) | Correlation Coefficient | N | Sig. (2-tailed) | Correlation Coefficient | N | Sig. (2-tailed) | Correlation Coefficient | N | Sig. (2-tailed) | Correlation Coefficient | |
| 100 | .193 | -.131 | 100 | .474 | .072 | 100 | .134 | -.151 | 100 | .427 | -.080 | 100 | .603 | .053 | 100 | .002 | .312** | Interest in foreign languages |
| 100 | .518 | .065 | 100 | .192 | -.131 | 100 | .612 | -.051 | 100 | .567 | -.058 | 100 | .400 | -.085 | 100 | .575 | .057 | Frequency of English use |
| 100 | .168 | -.139 | 100 | .880 | -.015 | 100 | .777 | -.029 | 100 | .054 | -.193 | 100 | .517 | -.066 | 100 | .941 | -.007 | Instrumentality |
| 100 | .513 | .066 | 100 | .690 | .040 | 100 | .427 | -.080 | 100 | .813 | -.024 | 100 | .543 | .062 | 100 | .063 | .187 | English language history |
| 100 | .038 | .208* | 100 | .139 | -.149 | 100 | .840 | -.020 | 100 | .389 | -.087 | 100 | .081 | -.175 | 100 | .008 | -.263** | English use anxiety |
| 100 | .058 | .190 | 100 | .184 | .134 | 100 | .208 | -.127 | 100 | .024 | -.226* | 100 | .390 | .087 | 100 | .284 | -.108 | Anxiety in English-medium |
| 100 | .006 | -.273** | 100 | .904 | -.012 | 100 | .807 | .025 | 100 | .843 | -.020 | 100 | .512 | -.066 | 100 | .540 | .062 | Naive vs. non-native speakers |
| 100 | .849 | .019 | 100 | .594 | .054 | 100 | .014 | -.245* | 100 | .135 | -.150 | 100 | .155 | .143 | 100 | .197 | .130 | Ideal L2-self |
| 100 | .225 | -.122 | 100 | .760 | .031 | 100 | .128 | -.153 | 100 | .085 | -.173 | 100 | .479 | .072 | 100 | .001 | .331** | Linguistic self-confidence |
| 100 | .357 | .093 | 100 | .858 | -.018 | 100 | .737 | -.034 | 100 | .318 | -.101 | 100 | .543 | .061 | 100 | .787 | .027 | Support |
| 100 | .418 | -.082 | 100 | .653 | -.046 | 100 | .001 | .332** | 100 | .002 | .305** | 100 | .049 | -.197* | 100 | .716 | -.037 | Grading |
| 100 | .695 | -.040 | 100 | .875 | .016 | 100 | .012 | -.252* | 100 | .015 | -.244* | 100 | .428 | -.080 | 100 | .746 | .033 | Production |
| 100 | .010 | -.256* | 100 | .204 | -.128 | 100 | .794 | -.026 | 100 | .963 | .005 | 100 | .611 | -.052 | 100 | .469 | -.073 | Receptive skills |
| 100 | .002 | .308** | 100 | .937 | .008 | 100 | .778 | -.029 | 100 | .441 | .078 | 100 | .250 | .116 | 100 | .170 | -.138 | Change |

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

| Anxiety in English-medium class | | English use anxiety | | English language history | | Instrumentality | | Frequency of English use | | Interest in foreign languages | | Correlations (part 2.1) |
|---------------------------------|-----------------------------|---------------------|-----------------------------|--------------------------|-----------------------------|-----------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|---------------------------------|
| N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | |
| 100.094 | -.168 | 100.039 | -.207* | 100.221 | .123 | 100.794 | -.026 | 100.595 | -.054 | 100 | 1.000 | Interest in foreign languages |
| 100.304 | -.104 | 100.350 | .094 | 100.486 | .070 | 100.087 | .172 | 100 | 1.000 | 100.595 | -.054 | Frequency of English use |
| 100.786 | -.028 | 100.825 | .022 | 100.637 | -.048 | 100 | 1.000 | 100.087 | .172 | 100.794 | -.026 | Instrumentality |
| 100.003 | -.298** | 100.003 | -.294** | 100 | 1.000 | 100.637 | -.048 | 100.486 | .070 | 100.221 | .123 | English language history |
| 100.000 | .675** | 100 | 1.000 | 100.003 | -.294** | 100.825 | .022 | 100.350 | .094 | 100.039 | -.207* | English use anxiety |
| 100 | 1.000 | 100.000 | .675** | 100.003 | -.298** | 100.786 | -.028 | 100.304 | -.104 | 100.094 | -.168 | Anxiety in English-medium class |
| 100.000 | -.629** | 100.000 | -.625** | 100.001 | .323** | 100.457 | .075 | 100.766 | -.030 | 100.426 | .080 | Native vs. non-native speakers |
| 100.000 | -.449** | 100.000 | -.582** | 100.087 | .172 | 100.390 | .087 | 100.832 | -.021 | 100.028 | .219* | Ideal L2-self |
| 100.000 | -.470** | 100.000 | -.563** | 100.001 | .340** | 100.452 | .076 | 100.790 | .027 | 100.000 | .393** | Linguistic self-confidence |
| 100.000 | .395** | 100.006 | .273** | 100.110 | -.161 | 100.140 | .148 | 100.185 | -.134 | 100.977 | -.003 | Support |
| 100.850 | -.019 | 100.700 | .039 | 100.294 | -.106 | 100.315 | .102 | 100.883 | .015 | 100.037 | -.209* | Grading |
| 100.710 | .038 | 100.885 | .015 | 100.630 | -.049 | 100.507 | .067 | 100.000 | .397** | 100.084 | .173 | Production |
| 100.000 | -.465** | 100.000 | -.409** | 100.982 | .002 | 100.217 | .124 | 100.356 | .093 | 100.618 | -.050 | Receptive skills |
| 100.764 | .030 | 100.886 | -.015 | 100.583 | .056 | 100.704 | .039 | 100.702 | .039 | 100.492 | .070 | Change |

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

| Production | | Grading | | Support | | Linguistic self-confidence | | Ideal L2-self | | Native vs. non-native speakers | | Correlations (part 2.2) |
|------------|-----------------------------|----------|-----------------------------|----------|-----------------------------|----------------------------|-----------------------------|---------------|-----------------------------|--------------------------------|-----------------------------|---------------------------------|
| N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | N | Sig. (2-tailed) Coefficient | |
| 100 .084 | .173 | 100 .037 | -.209* | 100 .977 | -.003 | 100 .000 | .393** | 100 .028 | .219* | 100 .426 | .080 | Interest in foreign languages |
| 100 .000 | .397** | 100 .883 | .015 | 100 .185 | -.134 | 100 .790 | .027 | 100 .832 | -.021 | 100 .766 | -.030 | Frequency of English use |
| 100 .507 | .067 | 100 .315 | .102 | 100 .140 | .148 | 100 .452 | .076 | 100 .390 | .087 | 100 .457 | .075 | Instrumentality |
| 100 .630 | -.049 | 100 .294 | -.106 | 100 .110 | -.161 | 100 .001 | .340** | 100 .087 | .172 | 100 .001 | .323** | English language history |
| 100 .885 | .015 | 100 .700 | .039 | 100 .006 | .273** | 100 .000 | -.563** | 100 .000 | -.582** | 100 .000 | -.625** | English use anxiety |
| 100 .710 | .038 | 100 .850 | -.019 | 100 .000 | .395** | 100 .000 | -.470** | 100 .000 | -.449** | 100 .000 | -.629** | Anxiety in English-medium class |
| 100 .384 | -.088 | 100 .975 | .003 | 100 .018 | -.236** | 100 .001 | .338** | 100 .000 | .501** | 100 | 1.000 | Native vs. non-native speakers |
| 100 .732 | .035 | 100 .093 | -.169 | 100 .320 | -.100 | 100 .000 | .508** | 100 | 1.000 | 100 .000 | .501** | Ideal L2-self |
| 100 .165 | .140 | 100 .037 | -.209* | 100 .876 | -.016 | 100 | 1.000 | 100 .000 | .508** | 100 .001 | .338** | Linguistic self-confidence |
| 100 .976 | .003 | 100 .097 | -.167 | 100 | 1.000 | 100 .876 | -.016 | 100 .320 | -.100 | 100 .018 | -.236* | Support |
| 100 .711 | .037 | 100 | 1.000 | 100 .097 | -.167 | 100 .037 | -.209* | 100 .093 | -.169 | 100 .975 | .003 | Grading |
| 100 | 1.000 | 100 .711 | .037 | 100 .976 | .003 | 100 .165 | .140 | 100 .732 | .035 | 100 .384 | -.088 | Production |
| 100 .797 | -.026 | 100 .834 | .021 | 100 .002 | -.306** | 100 .003 | .293** | 100 .000 | .366** | 100 .075 | .179 | Receptive skills |
| 100 .709 | .038 | 100 .365 | -.092 | 100 .688 | .041 | 100 .913 | -.011 | 100 .403 | .084 | 100 .376 | -.089 | Change |

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

| Spearman's rho | | | Correlations (part 2.3) |
|----------------|------------------|-----------------|---------------------------------|
| Change | Receptive skills | | |
| N | Sig. (2-tailed) | Sig. (2-tailed) | |
| 100 | .492 | .070 | Interest in foreign languages |
| 100 | .702 | .039 | Frequency of English use |
| 100 | .704 | .039 | Instrumentality |
| 100 | .583 | .056 | English language history |
| 100 | .886 | -.015 | English use anxiety |
| 100 | .764 | .030 | Anxiety in English-medium class |
| 100 | .376 | -.089 | Native vs. non-native speakers |
| 100 | .403 | .084 | Ideal L2-self |
| 100 | .913 | -.011 | Linguistic self-confidence |
| 100 | .688 | .041 | Support |
| 100 | .365 | -.092 | Grading |
| 100 | .709 | .038 | Production |
| 100 | .025 | -.224* | Receptive skills |
| 100 | 1.000 | | Change |

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).