

**THE REPUBLIC OF TURKEY**  
**SAKARYA UNIVERSITY**  
**INSTITUTE OF EDUCATIONAL SCIENCES**  
**DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

**EXPLORING THE FOREIGN LANGUAGE MEDIUM OF  
INSTRUCTION IN TERTIARY LEVEL EDUCATION IN  
TURKEY**

**A MASTER'S THESIS**

**HÜLYA FİDAN UÇAR**

**SUPERVISOR**

**DR. ADEM SORUÇ**

**JULY 2018**



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## DECLARATION

I declare that this master's thesis has been composed by me in respect to the academic honesty, and it has not been presented or published in anywhere before.

Signature

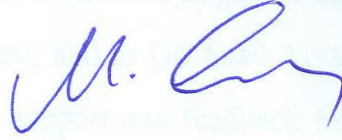
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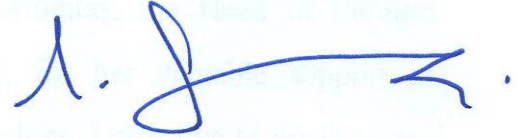
## JÜRİ ÜYELERİNİN İMZA SAYFASI

‘Exploring the Foreign Language Medium of Instruction in Tertiary Level Education in Turkey’ başlıklı bu yüksek lisans tezi, İngiliz Dili Eğitimi Bilim Dalında hazırlanmış ve jürimiz tarafından kabul edilmiştir.

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Yukarıdaki imzaların, adı geçen öğretim üyelerine ait olduğunu onaylarım.

16.08/2018

(İmza)

Prof. Dr. Mustafa YILMAZLAR

Enstitü Müdürü ✓

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## **DEDICATION**

I dedicate this thesis to my beloved husband and my dear family, to whom I am thankful for their support, love, and presence in my life.

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## ABSTRACT

# EXPLORING THE FOREIGN LANGUAGE MEDIUM OF INSTRUCTION IN TERTIARY LEVEL EDUCATION IN TURKEY

Fidan Uçar, Hülya

Master Thesis, Department of English Language Teaching

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This study investigated students' opinions of their achievement, motivation, and anxiety in one French-medium (FMI) and two English-medium (EMI) universities in Turkey investigating such variables as gender, context (EMI, FMI), grade, year of study, prep school education and GPA scores. To this end, 358 students were asked to complete a student questionnaire with 5-point Likert scale items as well as giving them opportunities to make comments for each item. In addition, 17 students were further invited to participate in semi-structured interviews. In order to analyze the quantitative data, first, factor analysis was run, and the overall reliability was calculated as .87. Descriptive and inferential statistics were run to analyze quantitative data using SPSS 20<sup>th</sup> edition, and qualitative data were analyzed by means of thematic analysis (pattern coding). The quantitative data indicated that while all students had higher median scores of achievement and motivation, they had lower sense of anxiety. Also, there were significant differences according to the variables of gender, context, grade, year of study, prep school education, and GPA scores. As for contextual differences, EMI students were more motivated while FMI students were more anxious. Regarding the qualitative results, while EMI and FMI students had positive opinions on their achievement and motivation, they were found to be anxious related to their learning in EMI or FMI.

**Keywords:** English Medium Instruction (EMI), French Medium Instruction (FMI), Achievement, Motivation, Anxiety

## ÖZET

# TÜRKİYE’DE YÜKSEK ÖĞRENİM SEVİYESİNDE YABANCI DİLDE EĞİTİMİN İNCELENMESİ

Fidan Uçar, Hülya

Yüksek Lisans Tezi, İngiliz Dili Eğitimi Anabilim Dalı

Danışman: Dr. Öğr. Üyesi Adem Soruç

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Bu çalışma, Türkiye’deki eğitim dili İngilizce (İDE) ve Fransızca (FDE) olan üniversitelerdeki öğrencilerin başarı, motivasyon ve kaygılarıyla ilgili görüşlerini incelemiştir. Ayrıca bu çalışma, cinsiyet, bağlam (İDE, FDE), sınıf, bölüm, dil geçmişi, hazırlık eğitimi ve diploma notunun öğrenci başarı, motivasyonu ve kaygısı üzerine etkilerini de incelemektedir. Bu anlamda, 358 öğrenci 5-puanlı ve yoruma açık öğrenci anketini cevaplandırmış ve 17 öğrenci de yarı-yapılandırılmış röportajlara katılmıştır. Faktör analizi sonrasında güvenilirlik .87 olarak hesaplanmıştır. Nicel veri, betimleyici ve çıkarımsal istatistik ile; nitel veri ise tematik analiz (model kodlama) yöntemleriyle analiz edilmiştir. Buna göre, nicel veri analizi incelendiğinde, İDE ve FDE öğrencileri yüksek başarı ve motivasyon algılarına sahipken, kaygılarının daha düşük olduğu saptanmıştır. Ayrıca, cinsiyet, bağlam (İDE, FDE), sınıf, bölüm, dil geçmişi, hazırlık eğitimi ve diploma notu da öğrencilerin başarı, motivasyon ve kaygısı üzerinde anlamlı bir etkiye sahiptir. Bağlamsal farklılıklarla ilgili olarak, İDE öğrencilerinin motivasyonu, FDE öğrencilerinin ise kaygıları daha yüksek bulunmaktadır. Nitel veri analizine göre ise, İDE ve FDE öğrencileri başarı ve motivasyonlarıyla ilgili olarak pozitif görüşe sahip iken, öğrenme ile ilgili kaygıları da olduğu gözlemlenmektedir.

**Anahtar Kelimeler:** İngiliz Dilinde Eğitim (İDE), Fransız Dilinde Eğitim (FDE), Başarı, Motivasyon, Kaygı

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# CHAPTER I

## INTRODUCTION

### 1.1 THE STATUS OF THE PROBLEM

#### 1.1.1 Foreign Language Medium of Instruction

Foreign language medium of instruction (FLMI) conveys the meaning of using a foreign language other than using the native language to teach the academic content (Costa & Coleman, 2013). English-medium instruction has taken the lead among the others – today known as “a rapidly growing global phenomenon of English medium instruction (EMI)” (Dearden, 2014: 2). Many countries over the world, where English is the non-spoken language, have employed EMI as their education policy. EMI has been defined by previous studies in a number of ways:

- i. academic content-specific learning with little or almost no concern to the language issue (British Council, 2013).
- ii. ‘a growing global phenomenon’ (Dearden, 2014: 2), aimed to be used to teach academic subjects such as arts and sciences.
- iii. academic practices of teaching content by means of English without an explicit aim of language teaching (Brochier, 2016).

Universities around the world have adopted English as a medium of instruction (Dearden, 2014; Walkinshaw, Fenton-Smith, & Humphreys, 2017). The mainspring to this trend is the efforts to become an international university (Dearden, 2014). Evidence suggests that it is impossible to be truly an international university without attracting the international students as well as the academic staff (Civan & Coşkun,

2016). EMI employment in tertiary level education is also essential to “compete with the international counterparts” (Civan & Coşkun, 2016: 1982). According to Doiz, Lasagabaster, and Sierra (2011) the reasons of using English as the language of content teaching are presented with such insights: a) to attract foreign students as well as teaching staff, b) to prepare local students for the global business c) to increase the university profiles, d) to provide local students with education opportunities abroad, e) to improve local students’ language abilities for the global labor. Nguyen, Walkinshaw, and Pham (2017) suggest that education institutions espouse EMI in order to ‘promote international exchange, increase the revenues, raise the quality and the prestige of education programs, and provide a well-structured bilingual workforce’ (p.37) to the benefit of the countries’ economy.

Turkey has also employed FLMI with a special interest given to EMI as its counterparts. Thus, an overview of foreign languages history in Turkey will provide a better understanding of the dynamics of FLMI over the country.

### **1.1.2 Historical Overview of the Foreign Languages in Turkish Tertiary Level Education Context**

The move towards FLMI (in English, French, and German) started in 1773 when military schools, the Medical School (Mekteb-i Tıbbiye-i Adliye-i Şahane) and the School of Political Science (Mekteb-i Mülkiye) attempted to introduce French as the medium of instruction (Selvi, 2014: 138). During Tanzimat Period (1839-1876), “Westernization” movement gained influence, and due to teaching science by means of French sources and instructors, French gained notable value (Sarıçoban, 2012). Prospering endeavors were maintained in the teaching of French in the Mekteb-i Sultani (Galatasaray Lisesi or Lycee de Galatasaray) established in İstanbul in 1867 (Sarıçoban, 2012). Galatasaray, established in 1481 by Sultan Beyazid II., served as an educational institution for more than 500 years (General Information, n.d.). Currently known as Galatasaray University, the school policy to employ a French-medium instruction (FMI) curriculum dates to 1838 (General Information, n.d.). Employment of French-medium instruction was followed by the attainment of English-medium of instruction (EMI) by Robert College in 1863. Following 1923,

when many reforms in many areas including education were initiated by M. Kemal Atatürk, the Founder of The Turkish Republic, many tertiary level students were sent to European countries not only to study the international disciplines, but also to learn languages such as English, French, and German (West & Aşık, 2015). Following the years of the establishment of the Turkish Republic, the Middle East Technical University (METU) was founded in 1956, and it employed EMI curriculum (Başibek et al., 2014). This growing trend was pursued by Bosphorus University (formerly named as Robert College) established in 1971, and it started to be adopted by private foundation universities, the first of which was Bilkent University founded in 1984 (West & Aşık, 2015). These private institutions which were dependent on their own funds became the chief-supporters of English medium instruction. They adopted English to teach science and mathematics (Selvi, 2014).

### **1.1.3 Foreign Language Medium of Instruction Policy in Today's Turkey**

There is an inclination towards the use of English as the medium of instruction (EMI) in Turkey's tertiary education (Civan and Coşkun, 2016). As English is the lingua franca (Dearden, 2014; Agai-Lochi, 2015; Kuchah, 2016), Turkey, like the other countries, give immense value to EMI, and aim to take the advantages of the policy. The Council of Higher Education (COHE) in Turkey has an important function in "both developing policies and practicing these policies" (Küçüköğlü, 2013: 1093) in educational fields.

Present-day Turkey supports both foreign language-medium instruction and foreign language learning as part of their tertiary level education policy. However, the government acknowledges the prominence of English by means of a report publicized by the Council of Higher Education (COHE). According to COHE's (2014) report, English, German, and French are the most prominently used mediums of instruction in tertiary level education in Turkey. However, English has taken precedence over the other two in latest years. The number of universities with English only policy has significantly ascended. As a result, universities started to offer courses with 30% of English, and some others employed English-only

instruction policy in the disciplines (COHE, 2014). However, as Turkish government aims to be a member of European Union (EU) and to compete with the globalized world, it is foreseen that knowing only one foreign language will not suffice to meet those aims, and Turkish students are to learn an additional language besides English such as French and German. Hence, in another report publicized by COHE (2010), it is announced that Turkey as a country aiming to become a part of European Union (EU) requires that students in tertiary education learn an additional foreign language. This is foreseen by EU for their allies to compete with the globalized and internationally industrialized world's demands (COHE, 2010).

Evidently, EMI has taken the lead recently in Turkey as in many other countries because it brings a number of advantages. For instance, according to Civan and Coşkun (2016) EMI brings several advantages: a) Academic materials in English are of higher quality and quantity compared to the ones in Turkish, b) Learners and content teachers develop a better way of education thanks to the abundant presence of academic materials. However, there are also a few concerns about EMI (e.g., Marsh, Pavón-Vázquez, & Frigols-Martín, 2013; Strotmann, et al., 2014). For example, Kirkgöz (2007) argued that: a) EMI has a debilitating effect on students' understanding which leads to artificial learning, b) EMI has an adverse impact on the development of national identity and culture, c) EMI students have difficulty in achieving their academic goals due to their low level of language capacity. Briefly, the universities aim to educate the students in EMI; however, there are still a number of issues to be considered (Macaro, Akincioglu, & Dearden, 2016).

In conclusion, though EMI has a globally growing interest, there are still concerns about its dynamics (Dearden, 2014). Therefore, the current study aimed to investigate learners' opinions about English and French-medium instructions in Turkish tertiary education, specifically addressing students' opinions in EMI context to those in FMI context. In addition, the effects of FLMI on students' motivation, their achievement, and their anxiety were explored. Gender, GPA score, grade, prep year education, and length of study were also investigated to observe whether they had a significant effect on the students' attitudes.

## **1.2 AIM OF THE STUDY**

Foreign language medium education, especially English medium instruction, is getting more attention in both Asian and European countries. Similarly, it makes a key component of foreign language instruction in Turkey. There are a number of studies (e.g., Arkin, 2013; Kırkgöz, 2005; Soruç & Griffiths, 2017) which sought for EMI students' perceptions. Moreover, this study aims to investigate more the sense of achievement, motivation, and the level of anxiety of students who learn the academic content by means of a foreign language in Turkish tertiary education. It further aims to compare English-medium to French-medium instruction to investigate the effects of these two contexts on students' perceptions of their achievement, motivation, and anxiety in order to understand what evokes the differences between these two contexts. Moreover, this study aims at investigating the effects of gender, context, grade, year of study, prep school education and GPA scores on students' perceptions.

## **1.3 RESEARCH QUESTIONS**

To the aim of the study, the current study seeks for answers to the following questions:

- i. What are the perceptions of students receiving tertiary education in foreign language medium instruction on their achievement, motivation, and anxiety?
- ii. Do students' perceptions change according to the gender, context (EMI vs FMI), receiving prep year education or not, grade, GPA scores, and length of study (language background)?
- iii. What do students report about their education in a foreign language at tertiary level?

## **1.4 SIGNIFICANCE OF THE STUDY**

This study aims to investigate the two contexts, EMI and FMI, in order to understand the dynamics of foreign language medium instruction better. The study is also significant to understand the foreign language medium instruction from the critical perspectives of students. This study therefore aims to contribute to the present literature in several ways:

- i. First, the studies in the literature (e.g., Kagwesage, 2012; Kırkgöz, 2005; Yang & Lau, 2003) generally focused on EMI students' general tenor or lenses. However, the present study explores psychological factors such as learners' achievement, motivation, and anxiety.
- ii. Second, there are only a few EMI studies (e.g. Macaro & Akıncıoğlu, 2017; Soruç, Griffiths, & Okur, 2017) to investigate the differences according to the variables such as gender and grade. However, this study investigates the effects of gender, context, GPA scores, length of study, grade, receiving prep year program or not.
- iii. Third, to date, there are only a few studies (e.g., Courcy & Burston, 2000; Kuchah, 2016) to investigate FMI students' perceptions. Therefore, this study also addresses FMI students to investigate their achievement, motivation, and anxiety.
- iv. In addition, to our knowledge, the studies in FMI (e.g., Courcy & Burston, 2000; Kuchah, 2016) is scant to understand the grouping effects of such variables as gender, grade, and so forth. Hence, this study examines the effects of gender, context, GPA score, length of study, grade, receiving prep year program or not, on FMI students' perceptions.

## **1.5 ASSUMPTIONS**

It was assumed that the universities applied would be willing to grant permission to conduct this study with their students. Moreover, it was presumed that a larger

number of participants would be found to participate, and they all would be willing to take part in the current study.

## 1.6 LIMITATIONS

There are a number of limitations to the study in spite of the attempts to eliminate them.

- i. First, it was not easy to make an appointment with the university deans in order to conduct this study in their universities since they were either too busy or they rejected to accept a researcher from another university. They were not willing to permit this study to be conducted with their students since they hesitated to share their students' profiles and attitudes with a researcher coming from a different university. They also rejected the study because answering the questions would take time and break the flow of the course syllabus, which their schools strictly stuck to. Also, the faculty deans were also uneasy because this study seeking for their students' anxiety might have a negative effect on their universities' future profiles. Therefore, the study was carried out only in the universities which consented the questionnaire to be conducted to the students. Due to such limitations, it was not possible to reach the target number of study sample. Thus, only the students whose deans granted permission participated in the study.
- ii. Also due to students' drop-outs, there were uneven sample sizes reached of EMI (N = 144) and FMI (N = 214) students, which is another limitation to the study because having uneven sample sizes might have a negative effect on the statistical power. However, use of Mann-Whitney U test might minimize the uneven sample size effect (Rusticus & Lovato, 2014).

## **1.7 THE LIST OF THE STUDY ABBREVIATIONS**

EMI: English-medium instruction

FMI: French Medium Instruction

FLMI: Foreign Language Medium Instruction

CLIL: Content and Language Integrated Learning

ESP: English for Specific Purposes

EGP: English for General Purposes

TMI: Turkish Medium Instruction

S1, S2, S3...: Student Number 1, 2, 3...

SPSS: Statistical Package for Social Sciences

SPA: Semester Point Averages

GPA: Grade Point Averages



## **CHAPTER II**

### **LITERATURE REVIEW**

There are a number of studies which investigated the dynamics of FLMI around the world. As EMI has recently taken the lead recently, the scientific studies have focused on the dynamics of it, particularly on its learning outcomes.

This chapter of the thesis begins with a framework of EMI studies in Turkey. Then it presents EMI in European and Asian countries. Finally, a framework of FMI studies is presented.

#### **2.1 PREVIOUS STUDIES ON EMI IN TURKEY**

Since EMI has gained considerable attention for the last two decades, several studies have been conducted on its dynamics in Turkey.

##### **2.1.1 Learning Achievement**

Learning achievement of the students in EMI context has been an interest to some studies in the literature. To this end the studies (e.g., Arkin, 2013; Civan & Coşkun, 2016; Kırkgöz, 2014) investigated the academic achievement of learners, and they compared the academic performance of Turkish-medium (TMI) students to EMI students. For example, Arkin (2013) investigated students' achievement in his PhD study in a Turkish university in North Cyprus. Data were gathered from 175 students

by means of a questionnaire, 4 video-recorded classes, follow-up interviews with 10 students, bilingual mathematics test (in Turkish and English) administered to 16 students, and follow-up interviews with 8 students. The study found that Turkish-medium students (TMI) performed better on the tests. EMI affected the students' exam performances negatively as well; as a result, "some students seemed to be demotivated and discouraged by their limited performance" (p.137). Similarly, Civan and Coşkun (2016) investigated the academic achievement of students from nine departments in a foundation university in İstanbul. TMI and EMI students' semester point averages (SPA) were compared. The study revealed that TMI students' SPAs were higher, and EMI had negative effect on students' academic achievement since they had difficulty in understanding the academic content in English. Kırkgöz (2014) explored final year engineering students' (N = 130) achievement by comparing the school performances of EMI students (N = 64) to those of Turkish-medium students (N = 66). Students participated in a survey questionnaire and an interview, and their exam papers were also compared. It was found that EMI students were having problems related to understanding the academic content, and Turkish-medium students had higher performances on their exams compared to EMI students.

### **2.1.2 Learning Motivation**

EMI has also been considerable in terms of learning motivation of the students as students' reasons to opt for EMI could have necessary implications on their studies. Thus, there are some studies (Demirbulak, 2011; Kırkgöz, 2005; Macaro & Akıncıoğlu, 2017) which investigated motivation of Turkish learners to opt for EMI. For example, Kırkgöz (2005) evaluated motivation of first and last year students (N = 203) in Çukurova University by means of a survey. The results showed that students were equally motivated by both instrumental and integrative drivers. However, they were mostly attracted to EMI due to such reasons as career, job, and study opportunities abroad. They also wanted to be able to read and watch in English. Similarly, Karakaş (2017) investigated learners' (N = 112) perceptions with respect to EMI in a Turkish university by means of student questionnaires and open-ended e-mail discussions with students. The study revealed that students' motives to

learn English were both instrumental and integrative. EMI was mostly esteemed due to its role of opening doors to opportunities. However, Demirbulak (2011) explored tertiary level education learners' motivation by means of a questionnaire with 350 students. The results revealed that students favored to study at an EMI university because English opened doors to job and study opportunities abroad, which indicated that students had instrumental motivation. Arkin (2013) also revealed in his study that although students believed that English had negative impact on their national identity, native language, and cultural values, they defined English as being important for their future academic careers, which indicated that they had instrumental motivation to opt for EMI rather than integrative motivation. Similarly, Başıbek et al. (2014) investigated the views of 63 EMI lecturers of engineering departments from two state universities in Turkey by means of a questionnaire. The results showed that although lecturers found language issue challenging to cover the academic content, they believed that EMI was prosperous for learners' academic and professional lives and would enhance their language capacity. According to them, learners favored academic sources in English which were in better quality and quantity compared to those in Turkish. Macaro and Akıncioğlu (2017) explored EMI students' (N = 989) motivation by comparing year of study, gender, and type of school (N = 18) differences. All students, irrespective of their year of study, were found positive and motivated towards EMI, and the major drivers were instrumental such as "internationalization and student mobility" (p.11). Finally, C. Hengsadeeikul, T. Hengsadeeikul, Koul, and Kaewkuekool (2010) conducted a review study of literature in Thai universities and concluded that EMI is an emerging curriculum adopted among the universities. As English has influences on business and economy, it is widely honored in Thai. In this respect, students' having positive attitudes are really considerable because it interferes in their learning performance.

### **2.1.3 Learning Anxiety**

Learning anxiety of the students was also an interest to the previous literature since students' difficulties might have significant effects on their learning. For this reason, studies focused on the students' anxiety as well. For instance, in Kırkgöz's (2005)

study, students in general stated that studying at an EMI school brought challenges related to understanding and learning the academic content due to their language barrier. In another study, Kırkgöz (2009) investigated learners' and lecturers' perceptions on EMI in a Turkish university. 220 learners and 15 lecturers participated in the study by means of questionnaires and interviews. The research revealed that since learners had a limited content-based vocabulary repertoire, they could not take part in class discussions, and they had serious problems to understand the academic content properly. According to the lecturers, students had difficulty in participating in class discussions because they had a lack of vocabulary, which was "affecting students' speaking fluency, obstructing reading comprehension, and causing low reading speed" (p.90). Arkin (2013) also revealed that students were challenged by "surface learning, increased study load, memorization, rote learning of content, limited exam performance, limited acquisition, and mastery of disciplinary knowledge" (p. 133). Also, learners' low level of language proficiency resulted in "slower delivery of content speed, shorter utterances, more repetition, and paraphrases" (p. 135), which had a negative impact because "less content material is covered" (p.136) in EMI classes. Similarly, Kırkgöz (2013) explored learning difficulties by means of a questionnaire administered to 151 students and follow-up interviews with 48 participants in a state university. The study found that the students had difficulty in understanding the lectures, to learn the content knowledge, and the key issues about their fields. They had to memorize because they did not understand the lectures nor did the lecturers pay considerable attention to their learning, which resulted in "superficial learning" (p. 36). Thus, learners developed several strategies to deal with learning problems. They shared, discussed, and reflected on what they learnt by means of "joint construction of disciplinary knowledge in groups" (p.37). They also code-switched between native and foreign language "as a way of complementing surface learning" (p. 38). Başıbek et al. (2014) also revealed that learners' low level of English proficiency prevented them to understand the content matter and to learn the academic subject well, so they thought TMI would increase their academic performance. According to Karakaş (2017), although students were satisfied with their institutions, and language abilities of their teachers, they expected an almost native-like performance from their teachers. They were not pleased with

their institutions' language policies either, which was based on general English skills rather than academic language.

The studies also made a number of suggestions on how to overcome learning difficulties. For example, Arkin (2013) suggested CLIL, where students' language and content knowledge are equally considered. Oruç (2008) recommended that teacher trainings and curriculum revisions are vital to increase the outcomes of foreign language medium instruction. Başıbek et al. (2014) concluded that "EMI has to be brought into discussion not just taking lecturers into consideration, but also the government and other stakeholders" (p.1824). Thus, they suggested that lecturers should be offered language remedial sessions so that they could develop their interactional and communicational abilities. Moreover, Civan and Coşkun (2016) concluded that "university education in English might improve students' English skills" (p.2000), increase their success and happiness in their later lives. And they suggested that "making students learn English better than the current situation might improve their wellbeing both during their education and after their graduation" (p.2001). Karakaş (2017) also suggested that institutions should re-regulate their curriculums based on students' academic language needs.

#### **2.1.4 Year of Study, Gender, Type of School, Type of Student, GPA Scores, Context, and Major**

Studies have also been carried out to investigate the effects of year of study, gender, type of school, type of student (normal; scholarship), GPA scores, context (partial; full), and major. For instance, Kırkgöz (2005) compared year of study in their study and found that last year learners perceived their language abilities slightly more positively, which showed that "students develop confidence in their abilities" (p. 117). The students in both years found speaking the most challenging skill, and they felt isolated from both their national culture and the academic content itself, which indicated that "the nature of the problems does not change over time in the university" (p. 117). Moreover, Oruç (2008) explored students' (N = 40) views from three departments in two Turkish universities (EMI and TMI) by means of a questionnaire of 5 item Likert scale with 14 statements. The research put forth that

the learners' opinions towards their subjects did not significantly differ, which suggested that "studying in English or native language does not affect the perceptions of learners towards their fields of study" (p.354). In their study, Civan and Coşkun (2016) investigated the effects of year of study and compared normal students to scholarship students. They found that first-year EMI students were more negatively affected. Students with scholarship were found more motivated than normal students, and they improved their academic achievement in English. Moreover, students were found to be positive towards EMI because they had a chance to use the academic materials in better quality and quantity in English. Furthermore, Macaro and Akıncioğlu (2017) also investigated gender and university type differences. They found that female students were more motivated, and they believed they could improve their education as well as their language proficiency by means of EMI. However, they found it more difficult to speak in front of other students. Private university students were more interested towards EMI thanks to its benefits; thus, they self-assessed their EMI experiences more positively. Although students in general reported to have little or no difficulty, private university students acknowledged to be challenged more by EMI courses than students of state universities. Besides, Soruç, Dinler, and Griffiths (2018) also investigated the effects of gender, context (full or partial EMI), grades, majors, and GPA scores, on listening strategies. The female students were found to apply more learning strategies because they were more attentive, interactive, and effective to use both sides of their brains. Partial EMI students employed specific strategies to understand the lecture, remain alert, and get the main idea. The fourth-year students employed more strategies because they learnt at deeper levels compared to the first graders. Students in different majors employed different strategies because different departments emphasized that learners employ content-specific strategies. Higher GPA scorers were also found to espouse strategies which activated their learning in class.

### **2.1.5 Teachers' Cooperation and Students' Cooperation**

There are studies which investigated whether EMI learners (e.g. Demirbulak, 2011) and teachers (Macaro et al., 2016) favored cooperation and among lecturers to

overcome the challenges they encountered as well as to foster their teaching and learning. For example, Demirbulak (2011) examined the effects of implementation of *an integrated and problem solving based learning* into EMI lectures by means of 26 classroom observations. Lecture observations indicated that students favored *problem-based approach and integrative work*, which helped them socialize and cooperate with other students from different disciplines. It also improved their sense of understanding, ‘and thus optimized the learning environment’ (p. 4087). Thus, the author suggested that collaboration between students and between content and language teachers helped to fulfill the objectives of problem solving and integrative work. Macaro et al. (2016) explored the efficiency of *collaboration* between *language specialists* (PYP) (N = 9) and *content teachers* (EMI) (N = 9) in 4 Turkish universities. They conducted *pre- and post- intervention interviews* with *nine collaborating pairs*. CPT teachers were found to be willing to improve learners’ language although this change was obviously “an iterative process requiring more than a single and relatively brief intervention” (p.69). Thus, as collaboration between teachers found to be beneficial, “a two-way process of learning” (p.70) was suggested in which language teachers paid special attention to students’ academic needs, and content teachers were more attentive at learners’ language needs.

### **2.1.6 Learners’ Strategies**

Learners’ strategies have been another concern for previous studies which concentrated on the issue of what strategies learners use to deal with their learning difficulties. For instance, Soruç and Griffiths (2017) examined learning strategies of 39 students by means of video-recording, open-ended questionnaires, and stimulated recall interviews. 27 difficulty items related to the constructs of listening/speaking, teacher/class, vocabulary, and affect/cognition were recorded in total. The students were aware of their difficulties; thus, they developed various kinds of strategies. They used cognitive strategies such as ‘asking questions, visualizing, using prior experience, etc.’ (p. 8), metacognitive strategies such as ‘taking notes, motivating teacher, participating actively etc. (p.9) to deal with their difficulties related to vocabulary such as ‘guessing from context, using a dictionary, using paralanguage

(for example gestures), translating, etc.’ (p.8-9). Soruç et al., (2018) investigated listening comprehension strategies of EMI students (N = 76) by means of a student survey and open-ended questions. The findings revealed that students employed almost all learning strategies in the survey. They especially used translation strategy to enhance their deep learning.

## **2.2 PREVIOUS STUDIES ON EMI IN EUROPEAN AND ASIAN COUNTRIES**

There are also a number of studies conducted in other countries to help to gain a vast array of knowledge of EMI and its relevant issues.

### **2.2.1 Teachers’ and Students’ Attitudes Towards EMI**

Studies investigated students’ teachers’, and parents’ attitudes towards EMI. First, Tung, Lam, and Tsang (1997) explored learners’, teachers’, and parents’ attitudes in Hong Kong. Three separate questionnaires were conducted to over 700 teachers, more than 5.000 students in 24 schools, and more than 4.600 parents. The study revealed that while parents and students strongly held the view that English should be adopted as the medium of instruction in all schools, but Chinese should also be used to overcome learning challenges, “teachers were more favorable to the idea of adopting mother-tongue education” (p.457). Similarly, Yang and Lau (2003) investigated Hong Kong students’ (N = 42) attitudes towards EMI before and after their tertiary level education. The data were collected by means of a 17-item questionnaire, 9 discussion sessions which lasted for three years, student journals, and interviews. The findings revealed that learners had positive attitudes towards English and demanded more communicative tasks. Learners’ attitudes from secondary to tertiary level did not change much. They, in general, were satisfied with their studies in English because they wanted to “equip themselves for future career needs and personal growth” (Yang & Lau, 2003: 119).



### **2.2.2 Learning Achievement**

Also, there are studies which investigated learners' achievement in EMI context. For instance, Yip, Tsang, and Cheung (2003) investigated students' scores on the science achievement tests (SAT) administered for 3 consecutive academic years, students' questionnaires, and videotaped classroom observation in Hong Kong schools (N = 114 EMI, 300 CMI: Chinese-medium). It was revealed that EMI students performed worse in SATs, especially on multiple choice questions, which required higher critical thinking skills and good command of the science language; and on open-ended questions, which required better understanding and deeper communication and expression abilities. The study also revealed that "many of the EMI students did not have the adequate English proficiency to learn effectively in English" (p. 324). Thus, EMI had a negative effect on learners' understanding and their academic achievement "despite their higher prior ability, at least in the initial years of immersion in English" (p. 325). However, Joe and Lee (2012) investigated learners' achievement in a Korean University. 61 medical students in two different classes (Korean and English) took pre- and post-tests in Korean and in English administered after classes taught by the same teacher, and they took part in student questionnaires. The results indicated that both groups performed well in post-tests in both languages, which indicated the language did not have a significant effect on their comprehending the academic content in Korean or English. Yang (2014) also investigated students' achievement by means of an online questionnaire delivered to 902 university students at a Korean university. The study found a positive correlation between EMI studies and students' abilities. Thus, students' abilities should be considered when EMI courses to be assigned. And also, students with high grades tended to achieve more in EMI courses. Similarly, Belhiah and Elhami (2015) investigated students' (500) and teachers' (100) attitudes towards EMI in 6 major cities of the United Arab Emirates by means of questionnaires and follow-up email interviews. The results showed that both students and teachers believed that EMI had a positive effect on learners' language proficiency. Huang (2015) explored Science and Technology students' (N = 157) perceptions on EMI with respect to learning motivation, learning anxiety, and learning achievement in Southern Taiwan

University by means of a survey questionnaire and students' interviews (N = 8). The study found that students believed that they could achieve to learn the language and the content by means of EMI. Komba and Bosco (2015) investigated 524 students in a Tanzania university. The data were collected by means of students' exam results and their previous documents. The study reported that students having more language background outperform others in their exam results. Thus, language background had a significant role on students' academic performances. In another study, Dafouz and Camacho-Minano (2016) compared the academic achievement of EMI students to Spanish-medium students. 383 Financial Accounting students' overall test scores were analyzed during four academic years in a Spanish university. The study revealed that EMI students outperformed non-EMI counterparts in three academic years. EMI students also performed better on three assessment tools (mid-terms, seminars, and finals), except on active participation evaluation; however, the difference was not statistically significant. Thus, it was clear that EMI students could get the same achievement as their non-EMI counterparts disregarding the medium of instruction. However, Maalim (2017) investigated 9<sup>th</sup> grader secondary school students' academic performance in EMI setting in Zanzibar. 54 students coming from Kiswahili-medium instruction primary school were taught biology in Kiswahili and in English respectively and their performance was observed. Findings revealed that Zanzibar students performed better when they were taught in Kiswahili, and there was an academic breakdown when students were educated in a language they were unfamiliar with. Some studies also focused on the gender differences on students' motivation.

### **2.2.3 Learning Motivation**

In addition, the studies investigated what motivated learners and teachers towards EMI. For example, Wu (2006) explored students' motivation by means of a questionnaire in Chung Hua University in Taiwan and found that although the students did not have a good language levels, they thought that EMI helped them to improve their language skills. Thus, they were eager to pursue their studies as they

gave a high value to English. Cantoni (2007) explored the motivation of EMI students and teachers in a Namibian school by means of in-class and out-class observations, and semi-structured interviews with 4 teachers. The study found that teachers and students were positive towards EMI because of its global, economic and linguistic contributions. Likewise, Byun et al. (2010) examined students' motivation in Korean University. 4842 students participated in a student survey, and 20 university students, 5 local, and 2 international professors participated in semi-structured interviews. The study revealed that EMI increased the chance of professors to produce academic papers, and it provided career, job, and study opportunities to the learners. Similarly, Evans and Morrison (2011) explored learners' (137) motivation in Hong Kong by means of interviews, their activity logs and diaries, and 3009 students' answers to a student questionnaire. The study revealed that students appreciated studying English which confirmed "their recognition of its current pre-eminence as the global lingua franca" (p.202). Kagwesage (2012) investigated tertiary level learners' (N = 92) motivation by means of questionnaires and follow-up interviews (N = 25). The study revealed that learners were motivated due to instrumental reasons, and they wanted to pursue their studies in English due to its role in global world economy and business. Moreover, Costa and Coleman (2013) examined EMI students' motivation by means of a survey, interviews, and class observations in 38 Italian schools. The study found that the main grounds to introduce EMI courses were largely economic and instrumental such as to increase university's prestige, to attract international students, and to prepare the students for the international business. Similarly, Belhiah and Elhami (2015) also showed in their study that the students had instrumental motivation. Students preferred bilingual education because Arabic was the original language and English was the global language, and EMI would increase "their competitiveness and readiness for the job market" (p.19). Teachers also supported bilingual model because "use of Arabic in class would ensure that at least a minimum threshold of understanding and knowledge has been achieved" (p.19). However, Huang (2015) found in their study that learners were moderately motivated (both instrumental and integrative). In another study, Tabaro (2015) investigated Rwandan students' motivation to learn and study English. 24 students from three schools participated in

focus-group interviews, and 10 educationalists joined personal interviews. The results showed that EMI motivated Rwandans to learn and use English because it was the global language, and it increased their life standards and brought job opportunities to them. Thus, students were mostly instrumentally motivated though several integrative motives were also mentioned. Similarly, Barrios, López-Gutiérrez, and Lechuga (2016) investigated first year students' (N = 61) attitudes towards EMI at Primary Education Teaching program in the University of Malaga. The study revealed that since the students aimed to develop their abilities in English because they were aware of the importance of English for their careers, they demanded at least %50 of courses be taught in English with “a high oral language competence and various kinds of linguistic support (a language advisor, conversation classes, and different elective courses to choose from, depending on their needs)” (p. 240).

#### **2.2.4 Learning Anxiety**

Moreover, there are studies which focused on learners' anxiety considering the difficulties they faced during learning process. Yang and Lau (2003) found in their study that learners had difficulty in reading extensively and to share their thoughts although they believed that reading and critical thinking enhanced their language command. Similarly, Airey and Linder (2006) investigated Swedish physics students' anxiety in two English and Swedish medium universities by means of videotaped classes and follow-up semi-structured interviews. They found that although students did not perceive language issue as a threat, they felt reluctant to participate in class discussions, and they believed that they could follow the academic content in Swedish better since taking-notes in English required more time and effort, and more out-class study. Moreover, Cantoni (2007) found in their study that students had little or no exposure to English outside the school; thus, they were at a disadvantage to practice the language. Students encountered obstacles to play an active role in education due to the language effect since “it does not seem to provide comprehensible input, it does not seem to work as a tool for constructing knowledge in the content subjects and it is an obstacle for the learner centeredness” (p. 26).

Moreover, the artificial communication between teachers and students caused silence by hindering learners' participation, and their academic success. Furthermore, Byun et al. (2010) revealed in their study that although EMI courses were meeting their needs and improving their proficiency, it was time-consuming to study in English, and hindered their learning content knowledge. Although their proficiency level was sufficient to understand the course contents, they needed to improve their language skills. The students also complained about their instructors' limited language abilities. Likewise, Evans and Morrison (2011) reported in their study that students had difficulty in understanding the lecturers, to comprehend the content, to accomplish a necessary academic learning style, and to fulfill the discipline-related tasks. Foreign lecturers' excessive use of technical vocabulary and pronunciation hindered students' comprehension further. However, learners overcame some of these challenges by their increased study efforts, supportive negotiation of meaning with peers, high motivation, and integrated learning strategies. Moreover, Joe and Lee (2012) found in their study that learners having high or low proficiency in English perceived their capacity to learn the content knowledge the same, which indicated negative feelings towards English. Kagwesage (2012) found in their study that students were challenged by understanding the academic content due to their limited language, limited note-taking, teachers' unfamiliar accents, and their pace to deliver the subjects. They struggled to participate in class activities as a result of their anxiety and shyness though there were also students who talked no matter they made mistakes because they perceived "active participation as a way to improve their language and content knowledge" (p.7). Thus, learners either memorized or copied from their peers in order to cope with their challenges. Costa and Coleman (2013) also found that although the students regarded courses in English as facilitative, and they improved their listening and speaking skills, they were challenged by both their own and their lecturers' "insufficient English language competence" (p.14). Similarly, Belhiah and Elhami (2015) found in their study that although the learners could follow the lectures, few could apprehend the textbooks and class materials. Huang (2015) found that learners felt high anxiety because they believed their low level of English hindered their learning. Moreover, their self-perceived low level of English caused learning challenges, and learners felt "stress from the content

comprehension as well as from peer competition” (p.77). In their study, Barrios et al., (2016) found that although the students perceived their linguistic abilities higher than their actual situation, they also expressed anxiety to understand the lectures. Yet, they considered common student’s proficiency as too low, “making a very difficult task for their teachers to manage their instruction” (p. 241). Komba, Kafanabo, Njabili, and Kira (2012) investigated students’ difficulties in Sokoine University of Agriculture in Tanzania. The data were collected from 358 students in 20 different departments through English written tests. In accordance, students faced difficulties related to language, grammar, lexis, and pronunciation. Also, the study observed a positive correlation between students’ GPA scores and their written English performances.

The studies also made suggestions on how to deal with challenges that occurred in EMI context. For instance, Byun et al. (2010) suggested that “the compulsory enforcement of EMI without regard to students’/instructors’ language proficiency, the lack of a much-needed support system, available instructors to conduct EMI classes, and the unilateral implementation of EMI across academic disciplines have brought about a number of side effects” (p.447). Hence, “these issues should be properly addressed by both policy makers and the research community” (p.442). Similarly, Huang (2015) suggested that learning difficulties might be healed by “using effective strategies to facilitate comprehension of students with low levels of English”, “appropriate creation of interaction between local and foreign students in class” (p. 77), and quality of teaching employed by EMI teachers. Maalim (2017) also suggested that native language should be regarded as education provision rather than an obstruct. Policy makers should also ensure that medium of instruction in secondary schools is to be the native language to obtain better academic results from students.

### **2.2.5 Gender**

Gender differences in EMI have been another concern for the previous studies in Asian and European countries as well. For instance, Carr and Pauwels (2006) investigated over 200 male students in secondary education and revealed that gender

had a role on students' motivation towards language studies. In accordance, male students were not found interested in language studies, but rather in scientific courses. Thus, they conclude that while female students are attracted to social sciences, male students are involved in science. Kissau (2006) explored Grade 9 students' motivation in Canada. Approximately 500 students answered a survey questionnaire. This study also reported that gender had a significant role on students' motivation towards language studies. Similar to Carr and Pauwels's (2006) study, Kissau (2006) also found that female students were more motivated to study in a second/foreign language. This was because female students used both hemispheres of their brains while males used only one hemisphere. Lasagabaster (2015) investigated the gender differences in EMI. The study was carried out by means of a questionnaire to 189 students in a Spanish university. The study reported that gender as well as the students' L1s did not have a significant effect on students' motivation.

#### **2.2.6 Classroom Interactions in EMI**

Moreover, there are studies which investigated the classroom interactions in EMI context. For instance, Evans (2017) investigated students' school interaction in a Hong Kong university by means of a questionnaire with 828 students, semi-structured interviews with 77 students, and structured observation of 1,052 students. Findings indicated that there was a gap between the instructional in-class language and the institutional language policy, which resulted in more use of Cantonese in small groups. Although, this gap narrowed with the help of teachers' constant efforts to teach and contact with students in English, Cantonese prevailed students' in-between interactions out of class. Similarly, Hu and Li (2017) examined features of teachers' questions and students' responses in one Chinese-medium and one English-medium universities. From each university, 5 teachers were observed and recorded in 10 courses. Findings unfolded that students in Chinese class expressed themselves in a more comfortable way than students in EMI class, who kept more silent during class because of their limited language. Teachers mostly asked shorter and simpler lower-level questions, which lacked high cognitive abilities such as critical thinking and reasoning skills. Similarly, students' responses were also at lower-thinking level,

which were far from cognitive production. Hence, both teachers' and students' non-cognitive interaction threatened deep learning of students. Likewise, Ishamina and Deterding (2017) investigated code-switching in EMI classrooms in Brunei Darussalam. Interaction among 17 participants were recorded over ten sessions. It was revealed that Bruneian students code-switched between English and Malay, which resulted in misunderstanding. However, as Bruneian students were quite competent in English, code-switching did not prevent effective communication. In another study, Ngussa (2017) examined interaction in EMI context among the teacher trainees (N = 88) by means of a questionnaire in a Tanzanian University. Findings revealed that the medium of instruction (English or Kiswahili) did not have a significant impact on the level of interaction. However, language proficiency enhanced communication with teachers and students' in-between interactions. In addition, teachers' encouragement and support increased learners' participation in class activities and discussions.

### **2.2.7 School Policies and Teacher Reflections on EMI**

Furthermore, the studies investigated school policies and teachers' reflections on EMI. For instance, Costa and Coleman (2013) investigated school policies in employing teachers. The teachers were selected according to their linguistic and academic skills, and they were forced to teach in English. Moreover, the schools did not provide any teacher trainings either because they did not need that or did not have funding. All private schools required English-only-use in exams while, in public sector, there were also schools which used bilingual model. Koopman, Skeet, and Graaff (2014) explored teachers' competence to teach by means of English. 6 teachers were observed in three schools in the Netherlands. The study revealed that teachers were equipped with pedagogical skills to conduct language studies. Classroom tasks were both teacher and learner-centered, which gave "opportunities for learners to both receive and produce the L2" (p. 133). However, the tasks were not convincing since they focused on word descriptions or explanations rather than dealing with "inductive (chunk) learning; that is formulaic sequences, lexical collocations, and specific sentence constructions" (p. 133). Teachers used recasts to



correct learners' errors, which showed that Dutch teachers might lack strategies to lead the learner to self-correct. Thus, teachers' actions in class showed "a lack of a theoretical basis to their language" (p. 134). Likewise, Tolon (2014) investigated teachers' (N = 11) views on language shift to English at two Kigali public schools by means of semi-controlled interviews. The results revealed that teaching staff valued English due to its international role. However, although teachers had positive attitudes towards EMI, they literally experienced several challenges, which implied that "teachers were uncomfortable with having, or at least sharing, those negative feelings concerning the policy" (p. 45). Moreover, pushed to teach in English without any training, "teachers seemed to place the weight of the MOI shift on the shoulders of their students" (p.45). Agai-Lochi (2015) explored teachers' (N = 30) views from English Department (ED) and Language Centre (LC) in universities of Republic of Macedonia by means of an open-ended questionnaire with 8 items. The teachers believed that students learnt the academic content in English while there were teachers who acknowledged the difficulty in assessing this since learners did not have the same native languages. Teachers acknowledged that "using English in multilingual classrooms enhances students' language proficiency" (346), and English being the global language improved their teaching techniques, as they tried to adjust the materials to the students' needs and also assisted learners to improve their proficiency, as well.

### **2.3 PREVIOUS STUDIES ON FMI**

To our knowledge, there is a lack of study which has been conducted to investigate FMI yet. One study was carried out in 1996 in Europe regarding FMI by Courcy and Burston (2000). They evaluated the effects of teaching mathematics by means of French as a second language during year 3, 4, and 5 in primary education in Australia. The data were collected by means of written tests administered in first and second language and by means of interviews. The study revealed that students instructed in their native language outperformed bilingual students in tests given

equal time. FMI students mostly suffered from lack of lexical knowledge rather than performing a mathematical process. Thus, language did not have a positive influence on learners' mathematical abilities because learners mostly avoided reading French sentences; instead, they read the numbers and tried to come up with solutions based on their interpretations. Thus, it was suggested that "more focus on the written form of French be included from early on in the program" and that "students' ability in reading in their native language be harnessed to facilitate reading in French, rather than being seen only as a source of interference" (p. 94).

In another study, Kuchah (2016) explored the perspectives of learners (N = 4), their parents (N = 4), teachers and a pedagogic inspector in an English-French bilingual setting in two schools in Yaounde, the capital of Cameroon. The data were collected by means of 30-45 minute-interviews. The common belief reflected that bilingualism opened doors to job opportunities by putting a child above her monolingual Francophone or Anglophone counterparts. Also, students' preference of French as the interview language indicated that local languages were not regarded as educational tools. However, although pupils' proficiency levels were negatively affected by little home support and parents' unfavorable socioeconomic status, which affected the quality of education negatively, it was believed that bilingual education in school could promote learning and active participation.

## **2.4 THE CONCLUSION OF LITERATURE REVIEW**

Considering the studies in the literature, the studies generally focused on EMI although there are a few which also investigated FMI. The studies found different results in terms of students' achievement, motivation, and anxiety. Given to the results, a review of the previous studies which investigated EMI in Turkey is presented below with the following frameworks:

- i. First, studies found negative effects on students' achievement (e.g., Arkin, 2013; Civan & Coşkun, 2016).

- ii. The studies found instrumental motivation among the students (e.g., Arkin, 2013; Başıbek et al., 2014; Demirbulak, 2011; Macaro & Akıncıoğlu, 2017) while there were also studies which indicated both instrumental and integrative motivation (e.g., Karakaş, 2017; Kırkgöz, 2005).
- iii. Also, students were found to have a number of difficulties (e.g., Arkin, 2013; Başıbek et al., 2014; Karakaş, 2017; Kırkgöz, 2009, 2013).
- iv. There were also studies which found differences according to the year of study (e.g., Civan & Coşkun, 2016; Kırkgöz, 2005; Macaro & Akıncıoğlu, 2017; Oruç, 2008; Soruç et al., 2018).
- v. Moreover, the studies found positive effect of cooperation among students (e.g., Demirbulak, 2011) and cooperation among teachers (Macaro et al., 2016).
- vi. Also, there were studies which investigated students' strategy use (e.g., Soruç & Griffiths, 2017; Soruç et al., 2018).

With respect to EMI, there is also the framework of the studies in European and Asian countries with the following insights:

- i. For instance, the studies found positive effects on students' attitudes (e.g., Yang & Lau, 2003) and students', parents', and teachers' attitudes (e.g., Tung et al., 1997).
- ii. Also, the studies found negative effects on students' achievement (e.g., Belhiah & Elhami, 2015; Huang, 2015; Maalim, 2017; Yip et al., 2003) while positive effect was found in others (e.g., Dafouz & Camacho-Minano, 2016) or no effect (Joe & Lee, 2012).
- iii. Moreover, the students had instrumental motivation (e.g., Belhiah & Elhami, 2015; Byun et al., 2010; Cantoni, 2007; Costa & Coleman, 2013; Evans & Morrison, 2011; Kagwesage, 2012; Barrios et al., 2016; Tabaro, 2015) while they had both instrumental and integrative motivation in other studies (e.g., Huang, 2015).
- iv. The studies found that students had difficulties (e.g., Airey & Linder, 2006; Belhiah & Elhami, 2015; Byun et al., 2010; Cantoni, 2007; Costa & Coleman, 2013; Evans & Morrison, 2011; Huang, 2015; Joe & Lee, 2012; Kagwesage, 2012; Barrios et al., 2016; Yang & Lau, 2003).

- v. In addition, there was found a negative effect on classroom interactions in the studies (e.g., Evans, 2017; Hu & Li, 2017; Ishamina & Deterding, 2017), while others found no effect (e.g., Ngussa, 2017).
- vi. Finally, the studies found negative effect on teachers' teaching (e.g., Costa & Coleman, 2013; Tolon, 2014), while there were other studies which found positive impact (e.g., Agai-Lochi, 2015; Koopman, Skeet, & Graaff, 2014)

In relevance to FMI, a review of studies is presented with the following insights:

- i. There was found a negative impact on students' achievement (e.g., Courcy & Burston, 2000).
- ii. Furthermore, the studies indicated instrumental motivation among the students (e.g., Kuchah, 2016).

Given to the previous research, it is obvious that studies which investigated the comparative effects of both EMI and FMI simultaneously (e.g., Kuchah, 2016) are quite scant. In fact, understanding foreign language as medium of instruction from the frameworks of both is one of the main aims of this study. Moreover, there are only a few studies which focused on achievement, motivation, and anxiety of learners (e.g., Arkin, 2013; Huang, 2015), which is another one of the main concerns of the current study. In addition, there are only a few studies which investigated the effects of gender, year of study, grade, GPA scores, prep school (e.g., Macaro & Akıncioğlu, 2017; Soruç et al., 2018), which is another contribution of this study.

Therefore, the current study aims to investigate students' achievement, motivation, and anxiety in EMI and FMI contexts. It also aims at exploring the group effects of gender, grade, context, prep school education, GPA scores, and length of study.

## **CHAPTER III**

### **METHODOLOGY**

This chapter presents the research design to compare EMI and FMI contexts investigating psychological factors such as their achievement, motivation, and anxiety.

#### **3.1 STUDY DESIGN**

This study was designed to explore the addressed research questions by means of a questionnaire with comment sections (Research Question 1 &2), and follow-up semi-structured focus-group interviews with student interviewees (Research Question 3). Thus, the study adopted a mixed-method study design (Creswell, 2009; Dörnyei, 2007) in which both qualitative and quantitative research was conducted to collect, analyze, and interpret data for a single or longitudinal study. The aim was to conduct research in order to better understand the features of a study question. Therefore, in this study both quantitative and qualitative data collection tools were used to strengthen the current study.

This study is also cross-sectional (Creswell, 2009) in that it aimed to collect data and find out differences among the two contexts, EMI and FMI. Thus, this study explored the differences between EMI and FMI students' attitudes.

### **3.2 CONTEXT**

The study was carried out in three Turkish universities. Students were Turkish native speakers; however, there were also international students coming from other countries such as Germany, France, and Syria etc. One of the schools adopted a French-medium curriculum, and the others delivered courses in an English-medium curriculum. As the schools' curriculums required total immersion in either French or English, students were expected to certify their language proficiency via local or international proficiency tests before they were accepted to the departments; otherwise, they had to attend prep schools for one or two years to achieve a reasonable level of language proficiency. At the end of one-year study at prep schools, the students took proficiency tests again to be able to pursue their studies in their departments. On achieving their tests, they were taken to their departments. The school lecturers were Turkish-native speakers though there were also lecturers who were native speakers of either French or English. The courses were taught either in English or French only.

### **3.3 PARTICIPANTS**

The questionnaire data were collected from 214 FMI and 144 EMI students who were conveniently selected as representative groups of target research population. The study participants were Turkish native speakers. They were at their first, second, third, and fourth grades at 17 different departments. The participants were 184 male and 174 female students at the ages ranging between 18 and 31. Their GPA scores ranged between .71 and 3.91. The students' profiles regarding their gender, grade, prep school education, and length of study are presented in Table 1, and their departments are given in Table 2.

Table 1. Descriptive Statistics According to the Variable of Context

Context	Gender			Grade				Prep		Length of Study			
	Male	Female	Total	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Yes	No	1-5	6-10	11-15	16+
EMI	75	69	144	66	45	20	13	94	50	51	42	32	19
FMI	109	105	214	26	90	76	22	135	79	135	56	17	6

Table 2. Departments of the Participants

DEPARTMENT	EMI	FMI	TOTAL
Computer	1	-	1
Chemistry	1	-	1
International Relations	-	24	24
Electronical Engineering	6	-	6
Philosophy	-	5	5
Mathematics	-	13	13
Political Science	-	12	12
Economy	6	29	35
Business	35	43	78
Electrical Engineering	4	-	4
Computer Engineering	5	16	21
Sociology	-	5	5
International Trade	2	-	2
Medicine	39	-	39
Law	28	34	62
Industrial Engineering	5	19	24
Communication	12	14	26
Total	144	214	358

### **3.4 DATA COLLECTION PROCEDURES**

The current study was conducted in spring semester of 2016-2017 in three universities. One of them was a state university of FMI located in İstanbul. Half of its students were selected by means of Turkish university exam, and the other half came from French high schools. Other two were private universities of EMI located in İstanbul. They both chose their students in accordance with Turkish university exam. These three universities were conveniently sampled. First, the universities were contacted in order to obtain consent for the data collection. On receiving the consents, quantitative data was gathered by means of a questionnaire, and qualitative data was obtained by means of semi-structured and focus-group interviews with students. The participation to the study was voluntary; thus, the students were assured of the confidentiality and the anonymity of their data.

### **3.5 INSTRUMENTS**

This section presents the features of the data collection tools: a questionnaire enabling students' comments and follow-up semi-structured focus-group interviews.

#### **3.5.1 Student Survey Questionnaire**

The questionnaire was inspired by the study of Huang (2015), which basically focused on three constructs: achievement, motivation, and anxiety. 34 questionnaire items were developed on an extensive reading of previous studies (e.g., Arkin, 2013; Belhiah & Elhami, 2015; Huang, 2015; Dearden & Macaro, 2016). The items were first piloted with 5 students and an instructor in FMI school. The feedback from the piloting was used to clarify or completely take out the ambiguous or contradictory items in the survey. The last version of survey was translated into Turkish and peer-



checked for clarity and accuracy. Then, it was piloted with one FMI and 50 EMI students.

The questionnaire consisted of two main sections. The first section sought for students' background information such as their gender, age, length of study, prep school education, nationality, grade, GPA, and native language. The second section consisted of three psychological constructs; achievement, motivation, and anxiety respectively. The items in this section aimed to gather data regarding (i) learners' perceptions of their achievement, (ii) source of motivation to learn a foreign language, and (iii) the challenges they faced during the process of foreign language medium education. Students who were voluntary took the study after signing the consent form. The participants responded to 34 items with 5-point Likert-scale: 5 (strongly agree), 4 (agree), 3 (neutral), 2 (disagree), 1 (strongly disagree). Each item in this section included a comment section at the end in case the participants would like to make further comments. At the end of the questionnaire, students were given a section for further comments to write their overall comments (see Appendix A).

### **3.5.2 Semi-structured Focus-group Interview**

Semi-structured interview questions were constructed by considering the 3 constructs in the questionnaire: achievement, motivation, and anxiety. A pilot interview was also conducted with 5 FMI students to ensure that the questions guided the students to uncover their opinions. Their feedback was used in order to investigate whether the questions guided students enough to talk on the given subject.

The interviews were conducted with 9 EMI and 8 FMI students who volunteered to take part upon having completed the questionnaire. They were informed that the interviews would be audio-recorded only for the study purposes. The interviewees opted to be interviewed in their native language because they felt more comfortable and confident to express themselves; thus, they were interviewed in Turkish. All the students participated in the focus group interviews (Mackey & Gass, 2016), which involved more than one participant at a time. Only 1 EMI student was interviewed individually because he had a lot of words to say.

Semi-structured focus-group interviews were guided around 3 open-ended questions, and it allowed for freedom to the students to reflect more on the relevant topic, and stimulated open-ended discussion (Mackey & Gass, 2016). Literally, the interview sought answers to the following questions:

- i. What do you think you can achieve by learning a foreign language?
- ii. Why do you think you should learn a foreign language?
- iii. What are the difficulties you encounter during the learning process?

The interviews were transcribed verbatim and grouped under certain themes for thematic analysis.

### **3.6 DATA ANALYSIS**

The data of the questionnaires were typed into the Statistical Package for Social Sciences (SPSS, version 20). The data were first analyzed for factor analysis (see Appendix F) to remove the items which did not fit into any sets of items, and 2 items were removed. Cronbach's alpha was found to be .876, which was acceptable for internal reliability (Dörnyei, 2007). Descriptive measures and frequency analysis were conducted in order to define the data sets. Inferential statistics were used to interpret the data derived from students' responses to the questionnaire items. As the data sets did not normally distribute ( $p = .002$ ), non-parametric tests of Mann-Whitney U for two variables and Kruskal-Wallis were conducted for the comparisons of grade. As for the qualitative data, first, the interviews were audio-recorded and transcribed verbatim. Then, they were coded to "categorize data, and then identify any emerging concepts and themes from categories" (Arkın, 2013: 78). Thus, first, three stages of pattern coding (Heath & Cowley, 2004; Bowen, 2008) were followed to code and to category the qualitative data. Initially, preliminary codes were identified (open-coding). Then, the codes were clustered, compared, and organized (axial coding). Finally, main codes were identified (selective coding). There were 337 statements, which were coded into 3 themes: achievement, motivation, and

anxiety. Finally, there were 25 statements about students' achievement, 44 statements about motivation, and 56 statements about anxiety. Other statements (N = 212) were not taken into analysis since they did not fit into any theme, or they were either repeated or previously uttered statements. Then, all the themes were examined by two raters to ensure an agreement on the themes. Finally, an inter-rater reliability (Gwet, 2014) was found to be 95%.



## **CHAPTER IV**

### **RESULTS**

This chapter presents the results of quantitative data analysis (questionnaires) and qualitative data analysis (comment sections of questionnaires and interviews).

#### **4.1 QUANTITATIVE RESULTS**

##### **4.1.1 Frequency Results with the Median Ratings**

Descriptive statistics were run to explore the questionnaire items answered by students (N = 358). While students had positive attitudes towards their achievement and motivation, they had neutral opinions on their anxiety. In accordance, learners' perceptions of their achievement (M = 4.00) and motivation (M = 4.00) was high while they had a moderate sense of anxiety level (M = 3.00).

Particularly, the students gave a median rating of 4.00 (agree) to the achievement items. Thus, they agreed with all the achievement items. The results are presented in Table 3.

Table 3. Frequency Results of Learning Achievement

ITEM	Valid Percent	Median
1. I can improve my competence and proficiency in English/French	52.0	4.00
2. I can read the academic materials written in English/French	42.7	4.00
3. I can improve my writing and speaking skills	47.2	4.00
4. I can improve my reading and listening skills	48.6	4.00
5. I can enrich my grammar and vocabulary knowledge	45.8	4.00
6. I can express myself well in English/French lectures	36.1	4.00
7. I can understand and respond to the lecturers' questions	46.1	4.00
8. I can understand lectures and class materials	48.0	4.00
9. I can understand /read the class materials	49.2	4.00
1=strongly disagree      2=disagree      3= neutral      4=agree      5=strongly agree		

Similarly, the students gave a median rating of 4.00 (agree) to the motivation items. Thus, they agreed with both instrumental and integrative motivation to pursue EMI and FMI. Table 4 represents the results.

Table 4. Frequency Results of Learning Motivation

ITEM	Valid Percent	Median
10. I want to increase my school performance	47.8	4.00
11. I want to learn/improve my English/French for my career.	53.4	5.00
12. I want to learn English/French/ job opportunities abroad.	55.3	5.00
13. I want to improve my content knowledge in English/French	40.5	4.00
14. I want to read the academic sources in English/French	49.4	4.00
15. I want to produce/publish good research papers	35.5	4.00
16. I want to familiarize myself with English/French society/culture.	26.8	4.00
17. I want to interact with foreign students/people in English/French.	50.0	5.00
18. I want to watch movies and read for fun in English/French.	47.9	4.00
19. I want to improve my English/French to travel abroad.	54.6	5.00
1=strongly disagree      2=disagree      3= neutral      4=agree      5=strongly agree		

Regarding their anxiety, the students gave a median rating of either 2.00 (disagree) or 3.00 (neutral) to the anxiety items. In other words, they either had no opinion on the items, or they disagreed with them. The results are given in Table 5.

Table 5. Frequency Results of Learning Anxiety

ITEM	Valid Percent	Median
20. I have difficulty in learning the academic content in English/French.	30.3	3.00
21. I have difficulty in taking notes during the lectures in English/French.	30.3	3.00
22. I have difficulty in finding resources in English/French.	32.0	2.00
23. I have difficulty in gaining “professional knowledge” in English/French courses.	24.1	3.00
24. I feel anxious to take part in class discussions in English/French.	28.3	3.00
25. I feel anxious to understand the teachers during the lectures.	35.0	2.00
26. I feel anxious to communicate in English/French	28.3	2.00
27. I feel anxious to speak to the teacher in English/French	29.1	3.00
28. I feel anxious to understand the terms and concepts.	29.7	2.00
29. English/French courses limit my critical thinking skills in courses.	27.2	2.00
30. English/French courses limit my academic success and creativity.	23.5	3.00
31. English/French courses slow down my learning process.	21.3	3.00
32. I cannot express myself in exams in English/French.	28.9	2.00

1=strongly disagree      2=disagree      3= neutral      4=agree      5=strongly agree

#### 4.1.2 Significant Differences According to the Variable of Gender

A Mann-Whitney U (2 independent samples) test was run to explore any gender differences between female (N = 174) and male (N = 184) students based on their answers to the questionnaire items.

Regarding their achievement, the results indicated that female students had higher mean ranks for one achievement item (item = 8). Table 6 presents the results.

Table 6. Gender Differences on Learning Achievement

ITEM	MEAN RANK		Sig.
	Male	Female	
8. I can understand lectures and class materials	169.35	190.23	.03

Female students also had higher mean ranks for five motivation items (items = 10, 11, 13, 15, 16). Particularly, female students were more motivated for the items shown in Table 7.

Table 7. Gender Differences on Learning Motivation

ITEM	MEAN RANK		Sig.
	Male	Female	
10. I want to increase my school performance.	166.75	192.98	.01
11. I want to learn/improve English/French for my career.	167.00	192.72	.01
13. I want to improve my content knowledge in English/French	165.82	193.97	.00
16. I want to familiarize myself with English/French society and culture.	167.04	192.68	.01
17. I want to interact with foreign students and people in English/French.	166.05	193.72	.00

Moreover, female students' mean ranks were higher for two anxiety items (items = 23, 24) at the level of  $p < .05$ . In accordance, female students were more anxious on the items given in Table 8.



Table 8. Gender Differences on Learning Anxiety

ITEM	MEAN RANK		Sig.
	Male	Female	
23. I have difficulty in gaining “professional knowledge” in English/French courses.	164.51	194.42	.00
24. I feel anxious to take part in class discussions in English/French.	167.73	190.99	.02

#### 4.1.3 Significant Differences According to the Variable of Context

Mann-Whitney U test (2 independent samples) was run to check any significant differences between the rank averages of students’ perceptions in EMI (N = 144) and FMI (N = 214) context. The results indicated that EMI group were more motivated on six items (items = 11, 12, 13, 15, 18, 19). Table 9 represents the results.

Table 9. Context Differences on Learning Motivation

ITEM	MEAN	MEAN	Sig.
	RANK	RANK	
	EMI	FMI	
11. I want to learn/improve English/French for my career.	195.58	168.68	.00
12. I want to learn English/French for job opportunities abroad.	196.07	168.35	.00
13. I want to improve my professional knowledge.	200.33	165.48	.00
15. I want to produce/publish good research papers.	204.71	162.54	.00
18. I want to watch movies and read for fun in English/French.	199.64	165.04	.00
19. I want to improve my English/French to travel abroad.	196.63	167.08	.00

However, FMI group were significantly more anxious on five items (items = 21, 22, 25, 26, 27),  $p < .05$ . Table 10 presents the results.

Table 10. Context Differences on Learning Anxiety

ITEM	MEAN	MEAN	Sig.
	RANK	RANK	
	FMI	EMI	
21. I have difficulty in taking notes during the lectures in English/French.	193.76	157.17	.00
22. I have difficulty in finding resources in English/French.	199.61	147.42	.00
25. I feel anxious to understand the teachers during the lectures.	191.26	160.87	.00
26. I feel anxious to communicate with others.	194.11	156.65	.00
27. I feel anxious to speak to the teacher in English/French.	188.24	165.33	.03

#### **4.1.4 Significant Differences According to the Variable of Prep Year of Education**

Mann-Whitney U test (2 independent samples) was run to see any significant differences between the rank averages of students' perceptions who received prep school education (Yes,  $N = 228$ ) and those who did not (No,  $N = 129$ ). The results revealed that students who did not receive prep school education had higher sense of achievement on nine achievement items (items= 1, 2, 3, 4, 5, 6, 7, 8, 9). The results are presented in Table 11.

Table 11. Prep Education Differences on Learning Achievement

ITEM	MEAN	MEAN	Sig.
	RANK	RANK	
	Yes	No	
1. I can improve my competence and proficiency in English/French courses.	169.28	196.18	.00
2. I can read the academic materials written in English/French.	158.98	214.39	.00
3. I can improve my writing and speaking skills.	163.10	207.10	.00
4. I can improve my reading and listening skills	162.47	208.21	.00
5. I can enrich my grammar and vocabulary knowledge.	164.66	204.35	.00
6. I can express myself well in English/French lectures.	147.94	232.27	.00
7. I can understand and respond to the lecturers' questions	147.90	233.97	.00
8. I can understand lectures and class materials	147.87	234.03	.00
9. I can understand /read the class materials	149.47	231.20	.00

Moreover, those students who did not study in prep schools had higher sense of motivation on six motivation items (items= 11, 12, 15, 16, 17, 18), and Table 12 represents the details.

Table 12. Prep Education Differences on Learning Motivation

ITEM	MEAN	MEAN	Sig.
	RANK	RANK	
	Yes	No	
11. I want to learn/improve English/French for my career.	170.64	193.78	.02
12. I want to learn English/French for job opportunities abroad.	170.31	194.36	.01
15. I want to produce/publish good research papers	170.15	194.64	.02
16. I want to familiarize myself with English/French society and culture.	157.90	216.30	.00
17. I want to interact with foreign students/people in English/French.	168.19	198.11	.00
18. I want to watch movies and read for fun in English/French.	168.44	196.42	.00

However, the students who received prep school education had higher sense of anxiety on 13 anxiety items (items= 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32),  $p < .05$ . The details are given in Table 13.

Table 13. Prep Education Differences on Learning Anxiety

ITEM	MEAN	MEAN	Sig.
	RANK	RANK	
	Yes	No	
20. I have difficulty in learning the academic content	211.00	120.60	.00
21. I have difficulty in taking notes during the lectures	205.88	129.73	.00
22. I have difficulty in finding resources in English/French.	189.44	157.71	.00
23. I have difficulty in gaining “professional knowledge” in English/French courses.	201.06	138.31	.00
24. I feel anxious to take part in class discussions in English/French.	206.52	128.59	.00
25. I feel anxious to understand the teachers during lectures.	209.85	122.66	.00
26. I feel anxious to communicate in English/French.	204.98	131.34	.00
27. I feel anxious to speak to the teacher in English/French	206.67	128.32	.00
28. I feel anxious to understand the terms and concepts.	203.41	134.13	.00
29. English/French courses limit my critical thinking skills.	206.06	129.40	.00
30. English/French courses limit my academic success and creativity.	202.24	136.21	.00
31. English/French slow down my learning process.	207.56	126.74	.00
32. I cannot express myself in exams in English/French.	209.14	123.93	.00

#### 4.1.5 Significant Differences According to the Variable of Grade

A Kruskal-Wallis test was conducted to examine whether grade has a significant effect on students’ perceptions. The results indicated that freshman students (N = 92) had significantly higher mean ranks than sophomores (N = 135), juniors (N = 96) and seniors (N = 35) on ten motivation items (items= 10, 11, 12, 13, 14, 15, 16, 17, 18, 19). The details appear in Table 14.

Table 14. Grade Differences on Learning Motivation

Item		MEAN	MEAN	MEAN	MEAN	Sig.
		RANK	RANK	RANK	RANK	
		FRESH.	SOP.	JUN.	SEN.	
10	I want to increase my school performance.	196.05	191.37	150.29	170.31	.00
11	I want to learn/improve English/French for my career.	205.20	177.81	161.67	167.39	.01
12	I want to learn English/French for job opportunities abroad.	202.43	178.94	162.39	168.33	.02
13	I want to improve my professional knowledge	204.10	186.94	158.92	142.59	.00
14	I want to read academic sources.	198.13	188.11	155.15	164.13	.00
15	I want to produce/publish good research papers.	199.01	198.80	138.02	167.54	.00
16	I want to familiarize myself with English/French society and culture.	195.10	191.58	163.07	136.94	.00
17	I want to interact with foreign students/people in English/French.	206.14	194.12	146.43	143.81	.00
18	I want to watch movies and read for fun in English/French.	202.69	185.37	153.14	163.76	.00
19	I want to improve my English/French to travel abroad.	197.88	184.30	159.24	163.66	.02

However, juniors were more anxious on one anxiety item (item= 22). Table 15 sums up the details.

Table 15. Grade Differences on Learning Anxiety

Item	MEAN RANK FRESH.	MEAN RANK SOP.	MEAN RANK JUN.	MEAN RANK SEN.	Sig.
22 I have difficulty in finding resources in English/French.	156.62	184.71	197.49	159.90	.02

#### 4.1.6 Significant Correlations According to the GPA Scores

A Spearman's Rho correlation was run to analyze the relationship between students' GPA scores and the questionnaire items. There was a strong, negative correlation between GPA scores and one motivation item (item= 14), which was found statistically significant at  $p < .05$  ( $r_s(358) = -.11, p = .02$ ). The details are represented in Table 16.

Table 16. Correlations Between GPA and Learning Motivation

ITEM	N	Correlation Coefficient	Sig.
14 I want to read academic sources in English/French.	358	-.11	.02

#### 4.1.7 Significant Correlations According to the Length of Study

A Spearman's Rho correlation was conducted to examine the effect of length of study in English or French on students' responses. There was a strong, positive relationship for eight achievement items (items= 2, 3, 4, 5, 6, 7, 8, 9) and length of study. The results appear in Table 17.

Table 17. Correlations Between Length of Study and Learning Achievement

Item		Correlation Coefficient	Sig.
2	I can read the academic materials written in English/French.	.23	.00
3	I can improve my writing and speaking skills.	.16	.00
4	I can improve my reading and listening skills.	.14	.00
5	I can enrich my grammar and vocabulary knowledge.	.14	.00
6	I can express myself well in lectures.	.31	.00
7	I can understand and respond to the lecturers' questions.	.36	.00
8	I can understand lectures and class materials.	.33	.00
9	I can understand /read the class materials.	.28	.00

Moreover, there was a positive relationship between length of study and four motivation items (12, 15, 16, 17, 18) at  $p < .01$  and one motivation item (18) at  $p < .05$ . Table 18 represents the results.

Table 18. Correlations Between Length of Study and Learning Motivation

Item		Correlation Coefficient	Sig.
12	I want to learn English/French for job opportunities abroad.	.13	.00
15	I want to produce/publish good research papers.	.15	.00
16	I want to familiarize myself with English/French society and culture.	.19	.00
17	I want to interact with foreign students/people in English/French.	.13	.01
18	I want to watch movies and read for fun in English/French.	.10	.04



Furthermore, there was a strong, negative correlation between length of study and 13 anxiety items (items= 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32) at significance level of  $p < .01$ . The results are presented in Table 19.

Table 19. Correlations Between Length of Study and Learning Anxiety

Item		Correlation Coefficient	Sig.
20	I have difficulty in learning the academic content in English/French.	-.25	.00
21	I have difficulty in taking notes during the lectures in English/French.	-.29	.00
22	I have difficulty in finding resources in English/French.	-.14	.00
23	I have difficulty in gaining “professional knowledge” in English/French courses.	-.18	.00
24	I feel anxious to take part in class discussions in English/French.	-.23	.00
25	I feel anxious to understand the teachers during the lectures.	-.30	.00
26	I feel anxious to communicate in English/French.	-.32	.00
27	I feel anxious to speak to the teacher in English/French.	-.31	.00
28	I feel anxious to understand the terms and concepts.	-.28	.00
29	English/French courses limit my critical thinking skills.	-.21	.00
30	English/French courses limit my academic success and creativity.	-.23	.00
31	English/French courses slow down my learning process.	-.25	.00
32	I cannot express myself in exams in English/French.	-.28	.00

To sum up, students were found to have high sense of achievement, motivation and low level of anxiety according to their median scores. Regarding their gender differences, female students had higher sense of achievement, motivation, and anxiety. While EMI students were more motivated, FMI students were more anxious, and students who did not receive prep school education had higher sense of achievement and motivation, and low level of anxiety. Moreover, freshmen were

found to have higher perceptions of their achievement and motivation. Finally, in relevance to the GPA scores and length of study, students' GPA scores negatively correlated with their motivation, and there was a positive relationship between students' length of study and their achievement and motivation, and a negative relationship with their anxiety.

## **4.2 QUALITATIVE RESULTS**

This section presents the results of qualitative data analysis according to EMI and FMI students' achievement, motivation, and anxiety. Themes, codes, and sub-codes are presented below in the tables with number of times of the statements, frequencies, and number of students (Student 1-9=EMI interviewees, Student 10-12=EMI commenters; Student 13-20=FMI interviewees, Student 21-30= FMI commenters). (S1-S12=EMI students and commenters; S13-S30=FMI students and commenters)

### **4.2.1 Learning Achievement**

The students stated that they improved their language competency, learned the academic content, and improved their learning in EMI and FMI context (25 times in total). The details are presented in Table 20.

Table 20. Qualitative Results of Learning Achievement

Themes	Codes	Sub-Codes	n	f	Students
Learning Achievement	Learning	Facility in learning	8	32%	S2, S10, S15, S16, S17, S19, S21, S28
		Language competency	5	20%	S9, S15, S16, S17, S25
	Academic content	Speaking (Expressing oneself in the target language)	1	4%	S9
		Professional knowledge	5	20%	S2, S10, S16, S19, S23
		Find academic sources	5	20%	S2, S9, S10, S17, S19
		Understand lecture(r)s, class materials	1	4%	S20

Given to the results, the learners (N = 8, f=32 %) expressed that studying by means of a foreign language facilitated their learning. Thus, both EMI and FMI students believed that foreign language was necessary for their learning.

*S2: "More use of English, which is a global language, facilitates learning and knowledge to be more useful"*

*S28: "...Courses in foreign language (French) help us to comprehend the academic subjects..."*

Students (N = 5, f= 20%) also stated that they improved their lexical and linguistic skills, thus expressed themselves well in lectures. Hence, they stated that:

*S9: "English concepts of which we know the meanings facilitate to express ourselves more comfortably"*

*S25: "...courses delivered in French facilitate to improve my language and help me think like a European"*

Students (N = 5, f=20%) uttered that FLMI fostered their language development, thus, it helped them gain specific mastery skills in their professional lives.

*S10: "...learning English helps us to increase our job opportunities and help people to perform better in that job"*

*S23: "It (French) will contribute more to our language development and career"*

Students (N = 5, f= 20 %) opined that they could easily reach academic sources in foreign language.

*S10: "...by knowing English we can easily find material for every single subject and watch and understand YouTube videos as well..."*

However, FMI students claimed that sometimes, it might be a challenge for them to find academic sources in French:

*S17: "In prep school, teachers assigned a task which they expected us to use French sources only. But, it was really hard to find sources in French"*

*S19: "You cannot find sources in French. It is also irritating that French people rejects use of English materials"*

#### **4.2.2 Learning Motivation**

Integrative motivation is internal desires or personal interests that derive people towards learning a language while instrumental motivation is when the source of motives comes from outside (Finocchiaro, 1989). Integrative motivation, similar to intrinsic motivation, stems from when learners want to become integrated into target language, its people, and its culture (Gardner, 2001) while instrumental motivation reflects a surface interest in language learning as it is viewed as a medium to reach an aim of job, career etc. (Oroujlou & Vahedi, 2011). Integrative motivation relates to intrinsic motivation while instrumental motivation relates to extrinsic motivation (Tabaro, 2015). In accordance, students in this study stated that they increased their career and study opportunities, improved their professional life and knowledge, found academic sources related to their fields, read books, and communicated with foreign people in foreign language. The results indicated that students' drivers

towards foreign language were both instrumental and integrative. However, instrumental motivation was more at play than integrative motivation (44 times in total). The details are presented in Table 21.

Table 21. Qualitative Results of Learning Motivation

Themes	Codes	Sub-Codes	n	f	Students
Motivation	Instrumental	Professional knowledge	15	34%	S1, S3, S4, S6, S8, S9, S13, S14, S15, S16, 14, S18, S19, S27, S30
		Academic sources	13	29.5%	S2, S3, S4, S5, S6, S7, S8, S9, S13, S14, S16, S19, S20
		Career, job, study opportunities	8	18.1%	S5, S7, S10 S13, S15, S17, S18, 24
	Integrative	Read books in the original language	4	9%	S5, S7, S8, S13
		Communicate with people	4	9%	S5, S7, S9, S13

Given to the results, the students (N = 36, f= 81,6) desired to learn or improve their foreign language knowledge due to the instrumental reasons.

Students (N = 15, f=34) uttered that foreign language knowledge fostered their content knowledge by giving them a chance to follow the scientific developments (instrumental motivation). Interestingly, FMI students (N = 5) opined that English would do better to improve their professional knowledge:

*S6: “Also (English is) important in terms of catching up with the developments in medicine. Translation to Turkish takes time. Medicine is already up-dating itself very fast”*

*S8: “... English is very important in business life”*

Students (N = 13, f = 29,5%) stated that they could easily reach academic materials in superior quality and quantity in English or French compared to those in Turkish. However, FMI students also complained about the lack of academic sources in French:

*S5-S6-S8: "...Sources are abundant in English. Searching in English also requires knowing academic terms. You cannot achieve this in Turkish"*

*S20: "We would be unfamiliar with foreign literature in Turkish."*

*S14: "French is no use for our department. Everybody including French people use English. All sources are in English. Thus, it is absurd to study French translations or versions of original materials in English"*

Students (N = 8, f=18,1) also opined that learning a foreign language would improve their career, open doors to study and job opportunities abroad:

*S5: "...Work and study opportunities in foreign countries also matter. So, English is very important."*

*S10: "...learning English helps us to increase our job opportunities and to help people perform better in that job"*

*S24: "...mathematics and sociology courses in French will be more beneficial in terms of career in the department of management."*

One of the students (N = 1, f= 2,2) also stated that they would like to improve their school performance.

*S13: "I don't have a source of motivation towards French. I only want my French is good enough to increase my grades..."*

Both EMI and FMI students (N = 8, f=18) also mentioned that they would like to read books related to the target culture and to communicate with foreign people in their original language (integrative motivation). However, additionally to the data presented in the table above, there were also FMI students (N = 5) who uttered that English was the global language; thus, it provided better opportunities than French:

*S7-S8: "Watching YouTube videos, reading books, and searching for academic articles are also easy by knowing English. We cannot do all these in Turkish"*

*S13: “... As a person who knows French, it is good to be able to read products of French authors in the original language...”*

*S13: “...Because it (English) is the world language, which you can communicate with most of the people in the world. You can contact 200 million people in the world in French, but they already know English, so you can speak in English with them as well. Thus, English has more advantages”*

One of the students (N = 1, f= 2,2) also stated that they are satisfied to know foreign cultures.

*S16: “...We are not only learning the language but also the culture. So, I’m happy to learn French”*

### **4.2.3 Learning Anxiety**

Students stated that they had anxiety due to teacher, learner, language, content, and education policy-oriented reasons. Thus, their anxiety had negative effects on their deep learning. Moreover, it was more time-consuming to study, and they felt unconfident to express themselves in English or French. (56 statements in total). The details are presented in Table 22.

Table 22. Qualitative Results of Learning Anxiety

Themes	Codes	Sub-Codes	n	f	Students
Learning Anxiety	Causes of Anxiety	Teacher-oriented	8	14.2%	S1, S3, S4, S7, S13, S17, S18, S19
		Education policy-oriented	8	14.2%	S3, S9, S13, S14, S15, S17, S19, S29
		Language-oriented	7	12.5%	S13, S16, S17, S18, S19, S20, S26
		Content-oriented	3	5.3%	S13, S17, S19
		Learner-oriented	2	3.5%	S2, S3
	Anxiety Effects	Surface Learning	17	30.3%	S1, S2, S3, S5, S8, S9, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S22
		Unconfident expressions	6	10.7%	S2, S5, S15, S17, S18, S19
		Time-consuming study loads	5	8.9%	S2, S7, S14, S16, S19

#### 4.2.3.1 Causes of anxiety

Students (N = 8, f=14,2%) opined that teacher-oriented reasons such as their pace and flow, inattention to learning, their lack of language proficiency had debilitating effects on their learning (teacher-oriented):

*S1: "Most of our teachers lack English language proficiency. They cannot express themselves enough..."*

*S13: "Turkish teachers' pronunciation, accents, and stresses can be so awful that nothing is understood really."*

*S19: "...But if the teachers are not paying much attention to what we understand, and keeps teaching, it may turn into a pileup in a foreign language you do not understand well?"*



Students (N = 8, f= 14,2%) uttered that educational policies also had debilitating effects on their learning, and specifically FMI students mentioned that prep school education policy did not meet their language needs for academic studies; thus, it should be lengthened to two years as it was in the past. One of the student also claimed that prep school education in university could not suffice to meet their needs; thus, language education in high school should be revised (educational policy-oriented):

*S17: "Our prep school education is insufficient in terms of its length, and passing grades is too low..."*

*S19: "... In preparatory school, grammar is not taught, and they (the teachers) expect us to write an essay. How can we write an essay without knowing grammar?... I also believe that foreign language education in high school must be improved. One year of prep school education in university cannot add much."*

FMI students (N = 3) also mentioned that education systems were completely different in French and Turkish, and they are enforced to integrate into the new system.

*S13: "...Their system is a far cry from ours, and they expect us to be integrated"*

French students (N = 7, f= 12,5%) mentioned that language-oriented reasons also accounted for their anxiety. Thus, difficult structures and lexis in the target language had a negative effect on their learning (language-oriented):

*S13: "French is a very difficult language... Some theories are hard to understand even in Turkish. How can I understand them in French?"*

*S19: "...French is also not like Turkish in structure. Structures and rules are different, and it makes it hard to learn."*

*S26: "We cannot learn disciplines delivered with difficult lexis of French with a complete efficiency."*

Students (N = 3, f=5,3%) mentioned that content-oriented reasons also accounted for their anxiety in learning. Thus, they claimed that unfamiliar and complex content were challenging for them (content-oriented)

*S13: "...You need to discuss the rules and contents of the course especially the concepts and the academic terms, and it is necessary to draw conclusions. But it is in French, it is difficult to discuss..."*

*S19: "... in some courses, for example in x course, the content is so complicated that I even don't know what I did not understand..."*

*S17: "I did not attend x course. Because I started to learn in a wrong way because of my limited understanding of course content... It was better not to attend rather than learning in a wrong way"*

Two of the students (N = 2, f=3,5%) mentioned that shyness limited student talk in class, and their lack of language competence inhibited their understanding (learner-oriented):

*S2: "Some people in class are feeling shy. Even if they know English well, they prefer not to talk in class."*

*S3: "When I have a lack of vocabulary, I might not understand the lessons..."*

#### **4.2.3.2 Anxiety effects**

Given to the results, learners (N = 17, f= 30,3) uttered that FLMI caused surface learning (Stanger-Hall, 2012). Thus, students did not really understand properly, and they had to memorize rather than understand. Moreover, they could not learn the academic contents properly (surface learning):

*S11: "...there is a great disadvantage of the field delivered in English on student's deep learning of the academic content"*

*S12: "... students deal with understanding unknown words and concepts before exam, which slows down their learning speed, detracts learning, and lowers the gains from courses."*

*S13: "French also causes memorization..."*

*S22: "French is a difficult language to learn and practice. It restricts learning..."*

Students (N = 6, f=10,7%) stated that they felt unconfident to express themselves in a language that they were not competent enough, and felt anxious to make mistakes (unconfident expressions of themselves):

*S3: "... even if you try to utter sentences in class, you are aware that your sentences are not good enough. When you are not happy with your sentences, you prefer not to talk."*

*S17-S19: "Our French is worse this year... I cannot even ask a proper question this year so, I prefer to keep silent instead of making a lot of mistakes."*

Students (N = 3) also mentioned that as a strategy to deal with challenges they encountered, they studied in collaboration with their peers:

*S19: "So we beg for help from our friends who understand well. We ask for their class notes. For example, İrem sound-records the classes, and I write verbatim. Then we make purifications. Tuğba reads the notes, and we come together to discuss. In A... K... 's course, Tuğba reads Turkish sources, I put in chronological order, and then we come together to discuss."*

Students (N = 5, f = 8,9%) stated that studying in a foreign language was time-consuming especially when compared to studying in Turkish (time-consuming study loads):

*S14: "French is already a challenge. You can understand in Turkish in one hour, maybe in French you will understand in 10 hours."*

*S16: "...But reading is time-consuming in French. It really takes time to understand...it is also meaningless to learn just a little after such an extensive reading"*

In conclusion, students considered themselves successful in language competency, understanding the academic subjects, and learning. Moreover, students were motivated towards EMI and FMI, and they mentioned a number of sources for their motivation: instrumental and integrative although they had instrumental motivation more. Finally, students indicated that they had difficulties due to teacher, education-policy, language, content, and learner-oriented reasons, which resulted in surface learning, students' unconfident expressions, and time-consuming studies.

## **CHAPTER V**

### **DISCUSSION, CONCLUSION, AND SUGGESTIONS**

This chapter presents the discussion of the findings of this study in which EMI and FMI students' attitudes were investigated by considering gender, age, year of study, prep school education, GPA scores, and grade. Then, it concludes by giving further implications and suggestions for future studies.

#### **5.1 DISCUSSION**

The current study investigated EMI and FMI students' attitudes towards FLMI in three Turkish universities, and it aimed to find out answers to three research questions.

##### **5.1.1 Discussion of the Students' Opinions on Their Achievement, Motivation, and Anxiety**

The first question aimed to find out students' general perceptions on their sense of achievement, motivation, and level of anxiety in EMI or FMI context (*What are the perceptions of students receiving tertiary education in foreign language medium instruction on their achievement, motivation, and anxiety?*). Regarding students' achievement, students in EMI and FMI had strong beliefs in their abilities in gaining language competence/proficiency, grammar, vocabulary, language skills, expressions, understanding the content as they perceived positively what they might

achieve in learning by means of a foreign language. In accordance, students in general feel positive about their linguistic skills as well as mastery skills in gaining academic content knowledge. Thus, it could be argued that learning disciplines in a foreign language (English, French) facilitates learners to improve their abilities in that language as well as in comprehension of the lectures and the class materials, which in turn reinforces their skills in gaining the content knowledge. In other studies, (e.g., Belhiah & Elhami, 2015; Evans & Morrison, 2011; Huang, 2015) students also perceived their abilities in English positively and their achievement in turn. Also, according to Wu (2006), EMI has a positive evidence on improving students' language proficiency.

As for the students' motivation, the students were motivated towards studying in EMI and FMI, and they aspire to a foreign language for both instrumental and integrative drivers. Herewith, students opt for a foreign language medium in order to increase their opportunities to find a high-ranked job and to create better career probabilities for their future. This study exhibited that students in general valued English and French more than their mother language. Probably this was due to the reasons of "internationalization and student mobility" (Macaro & Akıncıoğlu, 2017: 11), and to the opportunities obtained by studying in a global or scientific language such as English or French. Besides, such aspirations as meeting and interacting with foreign students and people and travelling abroad are the other main drivers which increase students' motivation to pursue their studies in English and French. Thus, as the students had also intrinsic incentives to be involved in studies in a foreign language, it is quite evident that not only instrumental but also integrative aspirations drive learners towards a foreign language medium of instruction. In Huang (2015), Kırkgöz (2005), and Tabaro's (2015) studies, students also had instrumental and integrative motivation. For example, in Kırkgöz's (2005) study, EMI students' major instrumental incentives were "better paid jobs and being broadly educated" (p.110), and they also wanted to "get on well with English speaking people and learn about English speaking culture" (p.110). Moreover, according to Huang (2015), interaction with international students, improving language skills, and developing their professional knowledge stimulated learners towards EMI.

EMI and FMI students reflected positive attitudes towards their achievement and motivation. According to Huang (2015), students' positive attitudes derived from the benefits of education in English. Similarly, students' not agreeing with their anxiety seems to confirm that they have positive attitudes towards studying in a foreign language (English and French). Herewith, it could be argued that studying in English and French does not bring challenges to students' learning; does not obstruct students' understanding the academic content, understanding the lectures, or participating in the class tasks. EMI and FMI do not bring difficulties to the learning environment, but rather it promotes learning. Although in some studies, students mentioned a number of difficulties (e.g., Airey & Linder, 2006; Byun et al., 2010; Evans & Morrison, 2011; Kırkgöz, 2013), in Kırkgöz (2014) and Macaro and Akıncıoğlu's (2017) studies, students did not perceive EMI challenging much, and they also had positive attitudes towards their challenges. For instance, in Macaro and Akıncıoğlu's (2017) study, students were also aware of their challenges; nevertheless, they could overcome those challenges due to their positive attitudes. Henceforth, it could be concluded that EMI and FMI students did not have difficulties that they could not deal with, but rather they could overcome their difficulties over time thanks to their positive attitudes.

### **5.1.2 Discussion of the Students' Opinions According to Gender, Context (EMI vs. FMI), Prep Year Education, Grade, GPA Scores, and Length of Study**

Second research question sought to find out the differences of gender, context (EMI vs FMI), prep year program, grade, GPA scores and length of study (*Do students' perceptions change according to the gender, context (EMI vs FMI), receiving prep year education or not, grade, GPA scores, and length of study-language background?*). Regarding gender differences, gender seems to play a significant role on students' learning practices because female students in this study had more positive opinions on their achievement. The students acknowledged their abilities in understanding lectures and class materials. Soruç et al., (2018) similarly found that female students better handled with their comprehension problems by using several strategies such as listening to the lecturer carefully, concentrating on the topic, and

picturing the concepts in mind. Henceforth, it could be concluded that female students are better at certain tasks, and gender has a significant role on learners' achievement. Moreover, female students' higher motivation than male students also represents their higher expectations from what they could gain from EMI and FMI programs. And also, it might show that female students are better involved in and attracted to language studies. In some previous research female students were found to be inclined to feel more enthusiasm towards social sciences such as language arts than male students (Carr & Pauwels, 2006) while male students generally were more attracted to science and mathematics (Meece, Bower, & Burg, 2006). Moreover, Dörnyei, Csizer, and Nemeth (2006) also found that as girls were more motivated towards language learning, they were more ready and attentive to spend more learning efforts to integrate the foreign language. However, Lasagabaster (2015) maintained that this feminine attribute might be specific to EFL setting since he did not observe any significant gender differences in EMI setting, and As EMI is concerned to teach content by means of a foreign language, it might eliminate this clear-cut thought and motivate both male and female students (Carr & Pauwels, 2006; Kissau, 2006). All in all, as this study also found females to be notably more motivated towards studying content in a foreign language, Lasagabaster's (2015) argument needs further research. Regarding gender differences on learner anxiety, female students felt higher level of anxiety to gain content knowledge and to take part in class discussions. In accordance, females seem to be apprehensive towards gaining mastery of their disciplines in EMI and FMI. Also, female students' anxiety to participate in class discussions might provide evidence that suppressed participation of females could lead to a male-dominant classroom environment. Thus, females will not benefit the learning environment as well as males do. In Macaro and Akıncioğlu's (2017) study, female had also more difficulty in expressing themselves in front of others. However, further evidence is needed regarding females' anxiety to speak out in class.

Second, as for the context differences, students appear to acknowledge the role of English as the global language, and it could be determined that English is a better motivation tool for foreign language learners. The career, job opportunities, gaining professional knowledge, producing good research papers are the principal drivers for

EMI students as well as watching movies, reading for fun, and travelling. Other studies (e.g., Belhiah & Elhami, 2015; Evans and Morrison, 2011; Tabaro, 2015) also approve the role of English as being the global language and language of science and its positive evidence on students. Regarding students' anxiety, FMI obviously causes anxiety to learners to take notes, to find resources, to understand the teachers, to communicate with people, and to speak to the teacher in French, and their difficulties are, in general, aligned with using their language competency and proficiency in French. A likely reason for why FMI students had more anxiety in French while EMI students did not is that FMI students had little or no exposure to French in their former academic years. Thus, EMI students who had previous language knowledge had more language competency and proficiency; thus, they felt more confident to use the language. Belhiah and Elhami (2015) seemed to agree that EMI learners felt confident to interact in English due to their previous studies in that language as well as ongoing support from their teachers. Thus, at this point, it might be assumed that little previous exposure to the target language raises insecurity and anxiety in the learning environment. The students who have more language background benefit the most in their learning.

Third, according to the prep education, students who did not receive prep education had more positive senses on their achievement and motivation and less anxiety. Since students who did not receive prep education were those who passed the proficiency exam of their schools, they almost certainly had sufficient language background to pursue their academic studies. As for those students who received prep education, their lack of achievement and motivation and higher anxiety acknowledges that they could not gain enough mastery skills in prep schools. One likely reason for this is that students either could not achieve an acceptable language proficiency level in prep schools necessary for their field studies, which put the burden on prep school educationalists' shoulders, or they simply could not achieve to bring positive attitudes to the new learning environment. However, this assumption should be carefully considered. Thus, at this point, it might be misleading to come to a decision yet, and it is necessary to resolve this argument based on the qualitative data.



Moreover, regarding the students' grades, first year students had higher motivation levels. Thus, according to this result, it is evident that grade has a meaningful role on EMI and FMI learners' motivation. Freshmen's being more motivated have more hopes on their academic studies. However, Civan and Coşkun (2016) and Macaro and Akıncioğlu (2017) did not find any significant differences among first-year and last-year students in terms of their motivation towards EMI. Moreover, third year students in this study had higher anxiety levels to find academic sources. This study did not investigate whether this effect was due to EMI or FMI; thus, clearly further research is required. Nonetheless, as contextual differences revealed (Table 10, item 22) it might be third year FMI students who have trouble in finding resources. Civan and Coşkun (2016) had a different view at this point that first-year students were having slightly more difficulties although last-year students were also negatively affected in EMI. However, the negative effect does not persist during the following years; nor does it completely fade away. However, Kırkgöz's (2005) study, first and last-year students were having the same difficulties related to understanding the lectures and learning the academic content. Thus, it is overt that grade has also a significant impact on students' anxiety levels.

Furthermore, the current study found negative relationship between GPA scores and one motivation item. In accordance, students' motivation to learn English or French was not only 'to be able to read academic sources in English/French', but they also had other aspirations to pursue EMI and FMI. Although it is true that students would like to reach and read academic materials in English and French, this does not account for their overall motivation towards EMI and FMI. Previous studies in the literature (e.g., Komba, et al., 2012; Soruç et al., 2018; Yang, 2014) also acknowledged that GPA scores have an impact on students' attitudes. For instance, Yang (2014) found that high GPA scorers had more language abilities, which helped them to have positive attitudes towards EMI. Moreover, Komba et. al. (2012) found a positive relationship between students' GPA scores and their academic performance on Written English tests. ( $r = .314, p < .01$ ). Soruç et al., (2018) also found that high GPA scorers achieved to apply effective learning strategies such as keeping more active, taking notes, following and audio-recording lectures, combining their

background knowledge with what they learn during class. Thus, it is evident that high GPA scorers are better at developing their motivations as well as building their achievement in their studies in English and French.

Finally, this study indicated that length of study had a positive effect on students' motivation and achievement while it lowered their anxiety. It confirms that students need to have sufficient language background to pursue their academic studies as well as keeping their motivation at high levels. Thus, having little length of study decreases students' motivation and increases their anxiety and thus interferes in their learning. However, as the students build confidence on their linguistic abilities over time (Kırkgöz, 2005), increased length of study could have a positive effect on learners. Komba and Bosco (2015) also reported that students having more English background understood both the lecture(s) and learning materials better. Other students spent more time to comprehend the content and to understand the lexis rather than focusing more on the academic content. Thus, it might be concluded that having prior language knowledge has a significant effect on both learners' attitudes and their academic performances as well.

### **5.1.3 Discussion of the Students' Opinions About Their Experiences in EMI and FMI Context**

Third research question sought for learners' opinions about their experiences in EMI and FMI context (*What do students report about their education in a foreign language at tertiary level?*). Students had positive opinions on their achievement. Thus, it is maintained that students in EMI and FMI are satisfied with their abilities in language, content, and learning. In accordance, studying in a foreign language fosters students' way of improving their language skills, understanding the content-specific knowledge as well as learning the academic content through a foreign language. Thus, it could be deduced that EMI and FMI have a positive evidence on students' overall achievement.

*“As education is in superior quality at school, French improves all my skills”*

*“Courses in French enhances our learning. We can learn about French theories”*

Macaro and Akıncioğlu (2017) also maintain that students have positive attitudes towards their progress in language and learning; thus, EMI has a positive effect on their achievement.

Regarding motivation, students (N = 44) had positive opinions on their motivation. Students' motivation seemed to stem from the instrumental aspirations (N = 36, f= 82) though integrative motivations (N = 8, f= 18) were also mentioned. In other words, and also similar to other studies (e.g., Arkin, 2013; Belhiah & Elhami, 2015; Tabaro, 2015), their motivation was in general coming from outside sources such as career/job opportunities, improving their content knowledge, and finding academic sources. Tabaro (2015) argued that since the students are aware of the global and international role of English, they aspire to the instrumental motivation such as job and career opportunities, and country development. Thus, it is obvious that students are in general expectant for their studies in English and French since these languages will contribute and present privileges to their future life. However, they also have cultural motivations such as reading books related to the target culture and communicating with people since they also desire to catch up with the changing world. It is a clear-cut fact that although students have instrumental reasons, cultural reasons also motivate learners to opt for a foreign language medium study.

*“English is important. World language is English. Also, English is the language of science.”*  
(instrumental motivation)

*“I may pursue my career in academics in the future when I finished university. French is important for our university.”* (instrumental motivation)

*“English is the global language. We can read and watch YouTube videos thanks to our English.”* (integrative motivation)

*“As a person who knows French, it is good to be able to read French authors in the original language”* (integrative motivation)

In terms of anxiety, although according to the quantitative data, the students did not have anxiety, qualitative data revealed that students (N = 56) had a number of difficulties, and their difficulties had a number of negative effects on their learning.

First of all, similar to other studies (e.g., Başıbek et al., 2014; Costa & Coleman, 2013; Evans & Morrison, 2011; Kırkgöz, 2013) students (N = 8, f=14,2) in this study seemed to be dissatisfied with the way of their teachers' style of delivery (their pace/flow), lack of language proficiency/competence, content knowledge, and their lack of concern for students' learning. Thus, it is overt that teachers have a definitely significant role on students' learning. Teachers speaking too fast might negatively affect learning; as a result, students who have linguistic problems have difficulty to understand their teachers. Also, not paying enough attention at students' learning affects students' understanding levels in a negative way. Kırkgöz (2013) revealed that due to lecturers' delivery style and not paying enough attention to students' understanding, students had to study in collaboration with peers after class, which took extra more time and effort. Teachers' language proficiency/competence as well as their unfamiliar pronunciation put learners at a disadvantage. Since teachers have trouble to express themselves with their lack of language proficiency, it inhibits learners' understanding the teachers' utterances. Moreover, teachers are also expected to have enough mastery in their fields. Otherwise, teachers' not having enough command of their fields impedes with learners' understanding the field-related content too. According to Costa and Coleman (2013) lecturers' unfamiliar accents as well as the unfamiliar class contents are the primary challenges on students' comprehension. According to Başıbek et al. (2014) if the teachers have difficulty in teaching and expressing themselves in English, students have difficulty in understanding the academic content as well.

*“Some teachers are talking too fast without considering our level of language” (pace/flow)*

*“I do not think that most academicians in our country know English well enough to teach a course in English...” (lack of language competence)*

*“We have difficulty in understanding the teachers when they cannot express themselves well.” (lack of language competence)*

*“Teachers' perspective is also important...if the teachers are not paying attention much to what we understand, and keeps teaching, we do not understand well”. (lack of concern for students' learning)*

Second, the findings also revealed that students (N = 8, f=14,2) were dissatisfied with the schools' education policies. Students believe that education in Turkey cause learners to memorize rather than to learn. Definitely, this calls for a further research investigating academic practices in higher education in Turkey. Because, the problem pointed out here does not only concerns foreign language medium education, but also overall education in Turkey. Moreover, it calls for an action for all education system as well.

*“I think education in native language is crucial in a country which is incompetent to lead people gain ‘thinking skills’ and where a qualified language education is rare. When we deal with a language we do not fully master, language learning process comes to a standstill. And our memorizing trend goes on.”*

Also, the students (N = 6) mentioned that prep school education was inadequate in length and in quality to prepare students for their academic studies. As this finding goes aligned with the quantitative data, based on both quantitative and qualitative data, it might be concluded that prep school educations do not cover students' language needs for their academic studies. As Macaro et al. (2016) also revealed, prep education lack theme-based language teaching (necessary to teach the academic content), but it rather focuses on skills-based learning, which causes a language barrier. In accordance, even the prosperous students in prep schools might face difficulty due to different type of language used in the departments. As a result, they are to deal with understanding both the content and the content specific language. Kırkgöz (2009) also argued that students feel dissatisfied with the irrelevance of language taught in prep schools and the content language used in the departments because prep schools teach skills-based colloquial language which does not foster students' academic studies. All in all, this education-policy gap causes learners to have difficulty in understanding the lectures, in deciphering the lexis, and in participating in class discussions.

*“Our prep year education has also deficiencies. From second week on, you have to speak French in class. What can you understand in two weeks?” (quality)*

*“Prep school education must be increased to 2 years. Because, not having a command of academic language causes not having a command of our field” (length)*

Moreover, as Evans & Morrison (2011) argued, students feel stressed by being enforced to ‘acculturation process’ (p. 204), in which they are expected to get a new identity, integrate new education system, and the new culture. Students are expected to get acculturated to the new education system in English and French culture, which causes education-policy oriented anxiety in students. A different system from what they get used to place learners at a great disadvantage because students do not easily adapt; rather, they might reject.

*“After you got used to Turkish education system, it is hard to get used to French education system. Their system is a far cry from ours, and they expect us to be integrated.”*

Third, according to the students (N = 7, f=12,5), foreign language brings anxiety to the learning environment. Students do not understand the academic content because they do not understand the academic lexis. Thus, they feel trouble due to the unfamiliar and complex vocabulary as well as the difficult linguistic structures used to teach the academic content, which in turn obstructs students’ overall learning. Students also have to spend more time and effort to study in English and French than in Turkish. As a result, the demanding nature of as well as understanding problem in a foreign language bring disadvantages to the students. Byun et al. (2010) also argued that studying courses in English is time-consuming, and it inhibits the comprehension of content-specific knowledge.

*“Studying in Turkish maybe takes only one hour while studying in French takes four or five hours.” (time-consuming)*

*“Structures and lexis is not like Turkish. It is difficult to learn in English.” (complex lexis)*

*“It is really difficult to learn in French. And seeing that the language is very difficult to learn, it really demotivates you.” (demanding learning)*

Moreover, FMI students (N = 7) had difficulty to find academic materials they needed in French. Thus, it was inevitable for them to search and find those materials in English, in which there were more academic sources. Students having difficulty to find sources in French have to find sources in English in order to complete their assignments as well as to understand their field knowledge. Also, the teachers do not allow the use of English in class or exams. As a result, they have to translate from

English to French. Translating is another issue that should be carefully considered because it adds extra load to the students' study charges. Thus, it is obvious that studying in French is time-consuming for the students and requires more effort. Students feel overwhelmed with study loads, memorization, and language-oriented source of anxiety at the end.

*“You cannot find sources in French. Then you search for materials in English. It is also irritating that French people rejects use of English sources.”*

*“English would be more motivating for me. Because you cannot find sources related to your field. Even if you search internet for French sources, google gives you English results. I have an exam this week, and for example one of the articles in my bag is in English.”*

Moreover, the content might be demanding for the students, and it causes content-oriented source of anxiety. Students (N = 3, f=5,3) acknowledged that they had anxiety due to the academic-content itself. Since the academic content is already demanding and unfamiliar to the students, it might be a factor affecting the learning environment other than the language. Thus, complex academic content causes challenges to learners, and students face content-oriented anxiety.

*“In some courses, for example A... K... 's, it (the course instructor) is so complicated that I even don't know what I did not understand.”*

In addition, students (N = 2, f=3,5) face learner-oriented anxiety. Learners having limited language competence face difficulties in understanding the academic content as well as in expressing themselves. Byun et al. (2010) also indicated that besides teachers', students' language proficiency impedes the negotiation of meaning and comprehension of the content-specific terms. Also, feeling anxiety to make mistakes, students do not feel confident to participate in class interactions/discussions. Insecurity and shyness to speak out cause learners to be passive and silent in class, which in turn leads to teacher-centered classrooms where teacher-talk dominates student-talk. However, the students benefit more when they are more active with their domineering talk. According to the Constructivist Theory, the grounded theory to the student-centered teaching, Piaget emphasized the importance of student interaction in learning a second language, and active learners were the ones who

benefitted the most in the learning environment (Student-centered Learning, 2018). Thus, teacher-centered classrooms in EMI and FMI will not bring fruitful outcomes to the learning area.

*“Due to our language level, we cannot understand things in French clearly well....”  
(limited language competence)*

*“Some people in class are feeling shy. Even if they know English well, they prefer not to talk in class.” (shyness)*

As a matter of course, students’ difficulties have a number of effects on their learning, studying, and expressing themselves. The students (N = 28) who do not understand the class content properly try to memorize rather than learn the academic content deeply, which in turn leads to surface learning. According to Arkin (2013), Kagwesage (2012), and Kırkgöz (2013), students missing the main points and details try to memorize or copy from their peers to deal with the difficulties they face and to pass the exams. Deep learning is necessary for learners to understand and make connection between concepts, draw links between the events, and make conclusions and judgments on the arguments as well as retain the information in the brain (Deep and Surface Learning, n.d.). Thus, the students who memorize cannot learn deeply but learn artificially, which makes the knowledge fade away over time.

*“...I just have to memorize what is shown; I cannot get the logic of the things in English in my head, which causes everything to fly after a while...” (surface learning)*

Moreover, EMI and FMI take more time to study and to understand the course contents. As the students have to put in more effort to understand the academic content in a foreign language, this in turn takes more time and has a negative effect on their learning. Arkin (2013) also argued that EMI is more time-consuming than the students’ native language.

*“Learning both the content-specific concepts in French and understanding the course contents at the same time slows down the learning process” (time-consuming)*

Students also feel unconfident to express themselves in English and French as they cannot make sure of their sentences’ correctness. This again causes the students not to talk to the teachers and not to participate in class discussions. According to Arkin



(2013), Cantoni (2007), Kagwesage (2012), Kırkgöz (2013), and Oruç (2008), this was due to students' narrow language abilities, which put them at a disadvantage. And according to Oruç (2008), students need to improve their language abilities in order to express themselves in a more confident way in class.

*“we would like to ask questions sometimes, but I cannot make the sentence. I cannot be sure of the sentence, whether it is correct or not. I would definitely be more comfortable in Turkish...”. (Unconfident expressions)*

## 5.2 CONCLUSION

This study investigated the achievement, motivation, and anxiety of Turkish students in tertiary level education. To the aim of the study, a cross-sectional study design was employed, and EMI students were compared to FMI students in terms of their opinions. Also, a mixed-method study design was adopted, and to this end, both quantitative and qualitative data were used. First, EMI and FMI students participated in a 5-point Likert scale questionnaire and commented on the questionnaire items. Next, semi-structured focus-group interviews were carried out with 9 EMI and 8 FMI students.

To conclude, the quantitative data revealed that students had positive opinions on their achievement and motivation, and their motivation was both instrumental and integrative, and they had low level of anxiety. A number of significant differences were also found according to gender, context, prep education, grade, year of study, and GPA scores. First of all, female students felt more positive about their achievement and more motivated while they were more anxious. As for contextual differences, although EMI students were slightly more positive about their achievement than FMI students, the difference was not significant. However, it was significant that while EMI students were more motivated, FMI students were more anxious. Regarding prep education, while students who received prep education had lower sense of achievement and motivation, they had more anxiety than the others who did not receive prep education. Also, while first year students had higher sense

of motivation, third year students felt more anxious. Furthermore, there was a negative relationship between students' motivation and their GPA scores, which suggested that students did not have only one aspiration to follow EMI or FMI education, but they had other motivations. As for the length of study, there was a positive relationship between the students' length of study (language background) and their achievement and motivation. Therefore, their anxiety decreased when their language background increased.

According to the qualitative data, students' opinions revealed that they had positive attitudes towards their achievement and their motivation. The students (N = 36) were motivated to pursue their education in English or French due to instrumental aspirations such as career, job, and study opportunities while a few of them (N = 8) were motivated to read books related to the target culture and communicate with people. However, students had anxiety due to teacher, education-policy, language, content, and learner-oriented reasons. As a result, their anxiety caused surface learning, unconfident expressions of themselves, and time-consuming study loads. Based on the findings, there are a number of pedagogical implications and suggestions for further studies in the following section.

## **5.3 SUGGESTIONS**

### **5.3.1 Pedagogical Implications**

This study revealed that when students' responses to the questionnaire items were analyzed, there were significant results related to their achievement, motivation and anxiety to the focus of the pedagogy. Therefore, the findings of the current study have a number of pedagogical suggestions for foreign language as medium of instruction:

First of all, this study revealed that FMI students were less positive about their achievement and motivation while they had more anxiety than those of EMI. C. Hengsadeeikul et al., (2010) indicated that positive motivation would decrease the

students' anxiety levels and foster their achievement. Hengsadeeikul et al., (2010) also stressed the status of English as a global language, and that having better English knowledge played a significant role in international communication. Therefore, English might be a better motivation source for FMI students rather than French because of its global and scientific worldwide prominence. According to the qualitative data of the current study, FMI students (N = 5) confirmed high ranked global status of English more than the global status of French. Thus, learning disciplines by means of English might raise their achievement and motivation while reducing their anxiety. Hence, FMI students might be offered several elective courses in English considering their academic needs.

Second, the results of the current study indicated that students who received prep school education had lower sense of achievement and motivation while their anxiety was more. Moreover, students in different departments had different mean scores for their achievement, motivation, and anxiety. Considering these results, it is crucial that prep school education consider the needs of students from different departments. Hence, prep schools should replace their current policy, English for General Purposes (EGP), with English for Specific Purposes (ESP) and should integrate language and content with the students' needs. As ESP aims to prepare students for their academic studies by carefully considering students' specific needs (Duff, 2001; Master, 2005), it might help to reduce their anxiety.

Third, this study indicated that learners were also challenged by their lack of language background knowledge (length of study). As Hengsadeeikul et al. (2010) revealed, having language background has a positive effect on learners' academic performance. Thus, it might be crucial that the instructional language be maintained by means of the education levels to increase students' language background. Sudden shifts in medium of instruction might negatively affect students' academic performance. Moreover, students who have poor language background should not be ignored by the policy makers. Thus, as Komba and Bosco (2015) also suggested, language aid might be provided to those students who pursue their studies in their academic fields. This way, students might overcome their linguistic challenges by means of elective language aid courses offered in the departments.

Although students either did not have anxiety or they were neutral on their sense of anxiety according to the quantitative results, the qualitative data revealed that learning academic content in a foreign language yields challenges for the learners. Thus, the findings of the current study have also several recommendations on how to overcome those challenges or at least to reduce the effects:

First, there are a number of recommendations in order to decrease learner-oriented anxiety. For example, in-class group works might reduce learner-oriented anxiety. As Airey and Linder (2006) acknowledged, increasing the student interaction might create a less-threatening classroom atmosphere for students to easily express themselves, ask and answer questions, and check for meaning. In doing so, all students would gain opportunity to negotiate meaning and interact in a group. Group works would also increase student confidence and help to reduce unconfident expressions of themselves. Also, as Flowerdew (1994) suggested, changing the classroom atmosphere and providing chances for students to interact and communicate more would also facilitate comprehension of the content.

Second, this study also presents a number of suggestions to overcome teacher-oriented anxiety. The results of the study revealed that learners were challenged by the lack of linguistic competence, the incorrect or non-native pronunciation, the lack of content-specific lexical knowledge of their lecturers. Since the quality of the educational staff is a critical issue which should be carefully considered, as Komba and Bosco (2015) and Yahaya et al. (2009) argued, teachers should have a good command of language to present academic content. Hence, it is suggested that teachers be offered teacher trainings to improve their language so that they could teach the academic content using a foreign language. Moreover, the study found out that teachers' teaching profiles might have a negative effect on students' learning. As Klaassen (2001) and Airey and Linder (2006) revealed, teaching styles have a crucial effect on how learners experience their learning. Teachers speaking too fast without paying much attention to learners' understanding might impede with learners' comprehension of the content. The students might not catch on the subject due to their limited understanding. Thus, teachers' pace and flow need to be reconsidered so that the students could understand what the teachers utter.

Third, this study also suggests how to reduce language-oriented anxiety. As the study findings revealed, students were challenged by the different and difficult structures of the foreign language, and they had difficulty in understanding the content in that language. Hence, mother tongue support at the end of lecturing might facilitate a less threatening learning atmosphere. As Airey and Linder (2006) argued, students wished to ask what they did not understand or wished to discuss ambiguity with teachers in their native language. Therefore, extra time might be given to the students for native language support at the end of each session. Moreover, language remedial sessions might alleviate language-oriented anxiety. Moreover, students' language needs also cause language-oriented anxiety, and they should be reconsidered in both their prep school education and their departments. Hence, a collaborative work is needed between language schools and academic fields. For this purpose, both language and content teachers should consider their students' linguistic needs necessary for their content knowledge.

In addition, this study has also a number of suggestions to reduce content-oriented anxiety. The study revealed that students were challenged by the complexity of the academic content knowledge. They mentioned that the foreign language was difficult, but the content delivered by means of it was even more challenging. Thus, using various class materials such as visuals (pictures, charts, tables etc.), computer slides, demonstrations, lecture handouts might reduce content-oriented anxiety. This was, as Airey and Linder (2006) also argued, lectures might be given a multi-dimensional aspect. Moreover, the results of the study indicated that learners spent a lot of time and effort to study in English and French. Thus, students might be asked to read class materials before a new topic is introduced. As Airey and Linder (2006) argued, familiarity with the subject might save time to discuss about it, clarify ambiguity, and facilitate comprehension of the content knowledge. Thus, sharing class notes with students before lectures might reduce their content-oriented anxiety to follow the lectures especially which introduce a new topic. Moreover, learning by means of a foreign language might be fostered by means of "more interactive, supportive, and carefully scaffolded" (Macaro et al., 2016, p.71) way of lecturing. Thus, flipped classrooms, making online lectures available for students to see at any

time (Macaro et al., 2016 and O'Brian & Hegelheimer, 2007) might reduce content-oriented anxiety. Because, this way, students would have an opportunity to reach content-specific knowledge at any time and to check for their understanding before and after lecturing. As qualitative data clearly exhibited, learners, particularly female ones, got a great advantage of collaborative study with peers out of classroom. Hence, flipped classrooms might also help the students come together to watch lectures and discuss about it with their peers.

Furthermore, there are a number of recommendations on how to reduce education policy-oriented anxiety. As stated before, EGP should be replaced with ESP in prep schools. Language teachers should pay more attention at their students' language needs necessary to learn the academic content. However, it should not be only language teachers' responsibility to provide language aid. Content teachers should also consider their students' linguistic needs. Thus, a shift to CLIL might reduce education policy-oriented anxiety. Because CLIL addresses both language and content concurrently rather than completely discarding language concerns (Arkin, 2013; European Commission, 2005; Oruç, 2008).

Last but not least, the results of the current study revealed that foreign language as the medium of instruction had a negative effect on students' deep learning. According to Stanger-Hall (2012), teachers' test techniques such as multiple-questions caused students to memorize to get higher grades. Thus, changing test techniques might help learners to change their study habits so that they no longer memorize. Teachers should ask questions which provoke students' critical thinking skills. This way, learners could change their study habits, and they would make effort to understand more rather than to memorize.

### **5.3.2 Suggestions for Further Studies**

Further research might be carried out considering the following viewpoints and issues:

First of all, this study did not investigate the effects of gender, grade, year of study, prep school education, and GPA scores on EMI and FMI students separately. This

study investigated the effects of those variables on students' overall achievement, motivation, and anxiety in EMI and FMI jointly. Hence, a further research is needed in order to explore the contextual differences separately and the effects of those variables on the achievement, motivation, and anxiety in different contexts.

a replica study might be conducted to investigate the different contexts of FLMI. The previous studies particularly investigated EMI context only (e.g., Klaassen, 2001; Kuchah, 2016; Macaro et al., 2016). However, involving other contexts such as Turkish medium instruction will help us to gain more overviews into FLMI in terms of its effects on learning the academic content. For instance, comparison of the EMI students' achievement to that of Turkish-medium students might shed light on our understanding of students' achievement.

Second, a replication study could be conducted in different settings (local, international, Asian, European, etc.) involving different educational degrees (primary, secondary, tertiary, graduate level, etc.) to understand and to gain more insights into FLMI. Each location and educational degree might present distinct aspects related to its dynamics.

Third, another research might be carried out to investigate other parties' (teachers, administrators, parents, etc.) opinions on FLMI. Getting only students' perspectives might not help to gain an overall understanding of FLMI. Thus, getting more insights from those parties might help to understand FLMI more from their perspectives.

In addition, a further research might be conducted to investigate lecturers' teaching achievement, motivation, and anxiety. As well as understanding those of students, it is quite important to understand teachers' abilities, readiness and availability to lecture in a foreign language. It is also crucial to understand what motivation they have and what difficulties they face to teach by means of a foreign language. Understanding FLMI only from students' perspectives might not suffice to improve our understanding of FLMI.

Moreover, a longitudinal research could be conducted to investigate learning outcomes of FLMI. Thus, students' achievement might be observed over a longer period and be examined by means of pre-, post-, and follow-up achievement tests.

Moreover, a comparative study might be conducted. Students' achievement in foreign language medium class might be compared to that of the students in native language medium class in order to improve our understanding of whether FLMI has an effect on learning or not.

Last but not least, as far as students' education policy-oriented anxiety is concerned, CLIL might be an alternative approach to FLMI. However, a comparative study might be conducted in order to investigate learners' achievement/performance and anxiety in these two contexts.





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## APPENDICES

### APPENDIX-1. İNDİLİZCE/FRANSIZCA ÖĞRENCİ ANKETİ

Değerli öğrencimiz,

Bu çalışma, Dr. Öğretim Üyesi Adem Soruç danışmanlığında tez çalışması kapsamında yürütülmekte ve “Türkiye’deki Yükseköğretim Kurumlarında Alan Bilgisi Derslerinin Yabancı Dilde (İngilizce-Fransızca) Öğretimi” (FLMI) konusunda öğrencilerin görüşlerini almayı hedeflemektedir. Anketin sonuçları yalnızca bu araştırma için kullanılacak ve kişisel bilgileriniz kesinlikle gizli tutulacaktır. Katkılarınız ve yardımlarınız için teşekkür eder, derslerinizde başarılar dileriz!

*Yukarıdaki bilgileri okuduğumu bildirir ve FLMI çalışmalarına katılmayı ve çalışmanın sonuçlarının yayınlanmasını ve / veya sunulmasını kabul ettiğimi teyit ederim.*

Participant Signature: .....

Date: .....

#### **PART A. Kişisel Bilgiler**

1. Cinsiyetiniz: Kız Erkek
2. Yaşınız: \_\_\_\_\_
3. Uyruğunuz: \_\_\_\_\_
4. Bölümünüz: \_\_\_\_\_
5. Sınıfınız:  Hazırlık  Bir  İki  Üç  Dört  Diğer \_\_\_\_\_
6. Hazırlık okudunuz mu? Evet Hayır
7. Not ortalamanız (4.00 üzerinden): \_\_\_\_\_
8. Ana diliniz:  Türkçe  İngilizce  Fransızca  Diğer \_\_\_\_\_
9. Kaç yıldır İngilizce okuyorsunuz? 1-5 6-10 11-15 16+

#### **PART B. Yabancı Dilde Eğitim: Öğrenci Tutum ve Görüşleri**

Aşağıdaki tümceleri okuyarak, “derecelendirme ölçeği” üzerinde görüşlerinizi bildiriniz. Her bir ifade ile ilgili eklemek istediğiniz görüşlerinizi sağ taraftaki boşluklara yazınız. Lütfen cevapsız ifade bırakmayınız.

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1-Kesinlikle katılmıyorum	2-Katılmıyorum	3-Fikrim yok	4-Katılıyorum	5-Kesinlikle katılıyorum
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#### **A. Öğrenme Başarısı/Becerileri**

İfadeler	Derece	Yorum
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1. İngilizce / Fransızca derslerde yabancı dil yeterlilik düzeyimi artırabilirim.		
2. İngilizce / Fransızca yazılmış akademik materyalleri okuyabilirim.		
3. Konuşma ve yazma becerilerimi geliştirebilirim.		
4. Dinleme ve okuma becerilerimi geliştirebilirim.		
5. Dilbilgimi ve kelime bilgimi geliştirebilirim.		
6. İngilizce / Fransızca derslerde kendimi pekâlâ ifade edebilirim.		
7. Öğretim elemanlarının İngilizce / Fransızca sorularını anlayabilir ve cevaplayabilirim.		
8. İngilizce / Fransızca ders içeriğini pekâlâ anlayabilirim.		
9. İngilizce / Fransızca ders materyallerini pekâlâ okuyabilirim/anlayabilirim.		

#### **B. Öğrenme Motivasyonu**

10. Okul performansımı artırmak için İngilizcemi geliştirmek isterim.		
11. Kariyerim için İngilizceyi / Fransızca'yı öğrenmek/geliştirmek isterim.		
12. Yurtdışındaki iş olanakları için İngilizceyi / Fransızca'yı öğrenmek/geliştirmek isterim.		
13. İngilizce / Fransızca eğitimi sayesinde mesleki bilgilerimi güçlendirmek isterim.		
14. Akademik kaynakları okuyabilmek için İngilizcemi / Fransızcamı geliştirmek isterim.		
15. İngilizce / Fransızca akademik araştırmalar yapmak ve yayınlamak isterim.		
16. İngiliz / Fransız toplumu ve kültürüne aşina olmak/uyum sağlamak isterim.		
17. Yabancı öğrencilerle/yabancılarla İngilizce / Fransızca iletişim kurmak isterim.		

18. İngilizce / Fransızca film izlemek ve kitap okumak isterim.		
19. Yurtdışına seyahat edebilmek için İngilizcemi / Fransızcamı geliştirmek isterim.		

### C. Öğrenme Kaygıları

20. Alan derslerini İngilizce / Fransızca öğrenmekte güçlük çekerim.		
21. İngilizce / Fransızca derslerde not almakta güçlük çekerim.		
22. İngilizce / Fransızca kaynak bulmakta güçlük çekerim.		
23. İngilizce / Fransızca yeterliliğimin düşük olması "alanda/mesleki bilgi" kazanmamı zorlaştırır.		
24. İngilizce / Fransızca sınıf tartışmalarına katılma konusunda endişelenirim.		
25. Derslerde İngilizce / Fransızca konuşan öğretmenleri anlayabilme konusunda endişelenirim.		
26. İngilizce / Fransızca iletişim kurma konusunda endişelenirim.		
27. Derste öğretmenle İngilizce / Fransızca konuşma konusunda endişelenirim.		
28. Alan bilgisi terim ve kavramları anlayabilme konusunda endişelenirim.		
29. Alan derslerinin İngilizce / Fransızca olması, eleştirel düşünme becerilerimi sınırlar.		
30. Alan derslerinin İngilizce / Fransızca olması, akademik başarıyı ve yaratıcılığımı sınırlar.		
31. Alan derslerinin İngilizce / Fransızca olması, öğrenme/kavrama sürecimi yavaşlatır.		
32. İngilizce / Fransızca sınavlarda kendimi iyi ifade edemem.		

### Yorumlar:

Lütfen diğer yorumlarınızı yazınız:

.....

.....

.....

## APPENDIX-2. FACTOR ANALYSIS RESULTS

Reliability measures for 34 items were conducted before factor analysis was run and Cronbach's Alpha was found .87, which indicated that items' internal consistency was high close to 1 according to Dörnyei, 2007. Exploratory factor analysis was run with several criteria displayed on SPSS. Kaiser-Meyer-Olkin measure of sampling adequacy was found .92, which was above the suggested value of .6. Barlett's test of sphericity was found significant at level  $p < .05$ , which allowed for operating factorability analysis. According to principal components analysis, initial eigenvalues showed that 8 factors extracted, which explained 65.12% of the total variance. However, 3 factors (achievement, motivation, and anxiety) were retained according to the observed leveling of eigenvalues on scree plot chart because the remaining factors failed to explain significant range of total variance. The 3 factors that retained explained 51.92% of the total variance, which was a good number because "a model that is a good fit will have less than 50% of the non-redundant residuals with absolute values that are greater than .05" (Yong & Pearce, 2013: 90). Rotated component matrix analysis revealed that 2 items were removed because they did not fit into a structure of one factor only. For instance, item "I can increase my content knowledge thanks to courses in English/French" had factor loadings between .42 and .43, and the item "I can better act in professional life thanks to my English/French knowledge" had factor loadings between .48 and .38 on two separate factors; thus, they were removed. A principle component factor analysis was run with remaining 32 items, and all items were observed to have factor loadings over .4. The factor loadings of this final analysis are shown below in Table 23.

Table 23. Factor loadings based on principle components analysis with varimax rotation for 32 items in Students' Questionnaire (SQP) (N = 352).

	Learning Anxiety	Learning Motivation	Learning Achievement
1		.39	.52
2		.31	.61
3		.36	.63

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4		.42	.60
5		.34	.65
6	-.45		.59
7	-.48		.65
8	-.46		.65
9	-.43		.61
10		.73	
11		.78	
12		.73	
13		.69	
14		.73	
15		.61	
16		.45	
17		.60	
18		.59	
19		.65	
20	.70		-.32
21	.74		
22	.41		
23	.45	.35	
24	.68		-.36
25	.66		-.39
26	.66		-.40
27	.69		-.40
28	.63		
29	.76		
30	.79		
31	.80		

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Internal consistency with the extracted factors was analyzed, and Cronbach's alpha was found .876 with scales ranging between .884 and .868, which indicates an overall reliability measure close to 1 (Dörnyei, 2007). The details are presented in Table 24.

Table 24. Internal Consistency with Extracted Factors Calculated as the Cronbach Alpha Reliability

Items	Cronbach Alpha Reliability Coefficients
8,	.88
9, 10	.88
11, 18	.88
4, 17	.87
1, 5, 6, 7, 19, 21,	.87
13, 14, 15, 25,	.87
16, 22	.87
12,	.87
28,	.87
23, 24, 27, 29, 30, 31, 32	.86

Kolmogorov-Smirnov test of normality found that test items were not normally distributed with skewness of -.69 (SE=.12) and kurtosis of 1.59 (SE=.25), which was statistically significant at significance level of .00,  $p < .05$ . Thus, non-parametric tests were conducted as a forthcoming process. The results are given in Table 25.

Table 25. Normality Test of Items

Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	df	Sig.
.06	358	.00	.97	358	.00

a. Lilliefors Significance Correction





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