

English-Medium Instruction in a State University and Students' English Self-Efficacy Beliefs

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Abstract

This study explores university students' perspectives on English Medium Instruction (EMI) practice and investigates their self-efficacy beliefs for English. The study also examines how English learning is facilitated through EMI. The participants were undergraduate students of a university where EMI is increasingly dominant. The university is located in the south of Turkey. The participants were consisted of 634 students from varying class years including prep year, first, second, third and fourth year. The study was carried out in a single phase. Data were collected through a university-wide survey in which the questions were designed to gather both quantitative and qualitative data. The qualitative data were analysed using thematic analysis and the quantitative data were analysed using parametric statistical methods. The characteristics of the participants were described using frequencies. The overall mean for self-efficacy for English was 3.37. Results indicated high self-efficacy levels of those in higher years in EMI education and general positive attitudes of students regarding EMI. These findings were further supported by the data obtained from the open-ended questions. However, by revealing some problems regarding the EMI practices, the results also raised some questions with regard to EMI at undergraduate level. Students' self-efficacy beliefs and views about EMI explored in this study are believed to shed light on the learning experiences in departmental courses as well as in Preparatory Year Programmes, which might help university managers develop or reformulate their institution's language policy.

Keywords: Undergraduate students, self-efficacy beliefs, English as a Foreign Language, English-medium instruction, higher education

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Bir Devlet Üniversitesindeki İngiliz Dilinde Öğretim Uygulamaları ve Öğrencilerin İngilizce Özyeterlik İnançları

Öz

Bu çalışma, üniversite öğrencilerinin İngiliz dilinde öğretim uygulamaları hakkındaki görüşlerini ve İngilizce özyeterlik inançlarını incelemeyi amaçlamıştır. Çalışmada aynı zamanda öğretim dili olarak İngilizcenin İngilizce öğrenme sürecini nasıl kolaylaştırdığı da araştırılmıştır. Çalışmanın katılımcılarını öğretim dili olarak İngilizceyi kullanan bir üniversitenin 634 lisans öğrencisi oluşturmaktadır. Çalışmanın yürütüldüğü üniversite Türkiye'nin güneyinde yer almaktadır ve katılımcılar hazırlık okulu, 1. Sınıf, 2. Sınıf, 3. Sınıf ve 4. Sınıf öğrencilerini kapsayan farklı seviyelerden oluşmaktadır. Çalışma tek aşamada gerçekleştirilmiştir. Veriler üniversite genelinde uygulanan ve hem nitel hem de nicel veri toplamayı amaçlayan bir anket aracılığıyla toplanmıştır. Nitel veriler tematik analiz yoluyla incelenirken nicel veriler ise parametrik hipotez testleri yoluyla analiz edilmiştir. Katılımcıların özellikleri frekans değerleri ile sunulmuştur. İngilizce özyeterlik toplam ortalaması 3.37 olarak bulunmuştur. Sonuçlar öğretim dili olarak İngilizce eğitime devam eden üst sınıf öğrencilerinin özyeterlik puanlarının daha yüksek olduğunu ve genel olarak öğrencilerin öğretim dili olarak İngilizceye karşı olumlu tutumları olduğunu göstermiştir. Bu bulgular açık uçlu sorulardan elde edilen verilerle de desteklenmiştir. Ancak, sonuçlar öğretim dili olarak İngilizceye dair uygulamalara ilişkin bazı sorunları oraya koyarak lisans düzeyinde öğretim dili olarak İngilizce konusunda bazı soru işaretleri de oluşturmuştur. Bu çalışmada incelenen öğrencilerin özyeterlik inançlarının ve öğretim dili İngilizce olan programlar ile ilgili görüşlerinin gerek bölüm derslerinde gerekse hazırlık programlarındaki öğrenme deneyimlerine ışık tutarak üniversite yöneticilerinin kurumlarının dil politikasını geliştirmelerine veya yeniden yapılandırmalarına dair konularda yardımcı olacağına inanılmaktadır.

Anahtar Kelimeler: Lisans öğrencileri, özyeterlik inancı, yabancı dil olarak İngilizce, öğretim dili olarak İngilizce, yükseköğretim

Introduction

The demand for education is on the rise as well as the demand for the quality in education. This case results partly from the direct and indirect effects of globalization. As Doiz, Lasagabaster and Sierra (2011) point, today the world is a global society, which helps to expand the effect of internationalization on higher education. Internationalisation in higher education reminds universities' internationalizing their curricula and struggling for developing a global presence (Galloway, Kriukow & Numajiri, 2017). There are numerous situations where the content is taught in a foreign language rather than the local language of students. According to Macaro, Curle, Pun, An and Dearden (2018), this type of learning can be called as "content-based learning" or "content and language integrated learning" (p. 37). Aguilar (2015) notes that the term EMI is used to distinguish the type of instruction from content and language integrated learning. Dearden (2015) defines EMI as "the use of the English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p.4). Various efforts on a global scale can be observed nowadays to adopt EMI in tertiary education. There can be different factors behind these efforts such as economic, cultural or political. For example, the steep rise in higher education programmes offering EMI can be closely related to the Bologna Process (Dafouz, Camacho & Urquia, 2014). EMI can also be implemented with the goal of improving students' proficiency in English so that they can better compete in the global job market (Lueg & Lueg, 2015; Sener & Erol, 2017).

The increase in introducing EMI at tertiary level can be attributed, as mentioned above, to academic and economic purposes, and this trend may be welcomed by a lot of higher education institutions. However, such trend is fiercely criticized in the belief that it is adopted before its advantages and disadvantages are considered thoroughly by the academics (Cho, 2012). Despite higher education institutions' willingness to focus on content over language (Costa & Coleman, 2013), some scholars criticized EMI degree programmes for failing to teach content subjects effectively (Kirkpatrick, 2017; Sert, 2008). Cho (2012) also claims that the adoption of EMI in Korean universities is influenced by media-initiated global university rankings, for which the number of EMI classes is a criterion. This sort of competition may drive universities to develop top-down EMI approaches without sufficient consultation with academics (Cho, 2012; Kirkpatrick, 2017). Kirkpatrick (2017) asserts that unless ministry of education and higher education institutions develop their language education policies by involving stakeholders, implementation of EMI seems unlikely to be successful. Additionally, the finding of Macaro and Akincioglu's (2017) review study concurs with that of Kirkpatrick (2017) in that, despite the opportunities current EMI practices create, they produce more challenges not only for students but also for teachers at all levels.

EMI at the Tertiary Level in Turkey

With more internationalized policies in higher education, the teaching of academic content through the medium of English has been gaining more ground recently (Doiz, Lasagabaster & Sierra, 2011). Turkey is also one of those countries where there is a special demand for EMI programmes by university students (Coşkun, 2013). One of the reasons why students prefer EMI programmes in Turkey is the students' perception that EMI programmes are more prestigious and advantageous in comparison to non-EMI (Coşkun, 2013; Macaro and Akincioglu, 2017; and Selvi, 2014). Various studies at local level mentioned the importance and advantages of EMI at tertiary level. For instance, EMI provides more exposure to English and more chances to acquire it (İbrahim, 2001), and students see EMI as a cultural richness (Görgülü, 1998; Sayarı, 2007). In addition, Alptekin and Tatar (2011) and Görgülü (1998) report that EMI gives the students the opportunity to keep up with the developments in the world by following the materials written in English. However, in addition to these advantages, a number of studies at local level also indicate the disadvantages of EMI. For instance, Kılıçkaya (2006) report that lecturers preferred first language instruction; Sert (2008) indicates that the academic content cannot be provided effectively through EMI; and Yıldız, Soruç, and Griffiths (2017) conclude that EMI leaves both students and teachers struggling to cope. Given these controversial views regarding EMI, it is clear that EMI has a number of advantages as well as challenges. One example for such challenge could be related to the students' English language background. Students who intend to study partial or full EMI degree programmes in Turkish universities are not required to prove their level of English language before they are formally admitted as a student to a university (Macaro & Akincioglu, 2017). However, undergraduate students studying full/partial EMI have to attend a 'Preparatory Year Programme' (PYP) in which English language teachers, native or non-native speakers of English, aim at enabling students to thrive on an EMI programme (Macaro, Akincioglu & Dearden, 2016).

Self-efficacy in Foreign Language Learning

The question why some students learn their subject more successfully with almost the same capabilities and aptitude has always been researchers' one of the main interests (Williams & Burden, 1997). To this end, a considerable body of research was conducted to analyse learners' individual differences such as learning strategies, personality traits, aptitude, age, motivation, use of learning materials and learning beliefs (Dörnyei, 2005; Forbes, 2018; Liu, 2013). Perceived self-efficacy belief as a way of explaining the effect of individual differences on the success of learning has been a growing research interest for many researchers in the last decades. Bandura (1997) defines it as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). In this sense, students need to orchestrate their language skills and knowledge in order to be successful in an EMI programme. As they succeed, their level of self-efficacy regarding English language is expected to increase. As Bandura (1997) indicates "students may perform poorly either because they lack the skills or because they have the skills but lack the perceived personal efficacy to make optimal use of them." (p. 215). Therefore, content lecturers can be expected to establish a type of environment in class which help to boost their students' self-efficacy.

Research on the efficacy of teaching in EMI settings shows that increases in self-efficacy beliefs could be linked to how they learn subject contents through English as a medium of instruction. Tripathi's (2013) study examined the effect of medium of instruction among university students on self-efficacy. Overall, the results appear to be representing higher level of self-efficacy among engineering students than medical students. Besides, results indicate higher level of self-efficacy among English-medium instructed students as compared to the students at native-language instructed programmes. Wang, Harrison, Cardullo and Lin (2018) emphasize that students' English self-efficacy is strongly related to their actual English language proficiency. Some researchers have drawn a link, a positive relationship, between students' high confidence in their knowledge of English and academic achievement with regard to EMI grades and course content (Cassidy, 2012; Chun et al., 2017; Pajares & Johnson, 1994).

Purpose of the Study

It is not obvious whether EMI in higher education helps students to improve their English language competence more effectively than studying English as a subject. Besides, whether students learn the academic subjects better through the medium of English is yet to be proved through further research (Macaro, Akincioglu & Dearden, 2016; Rivero-Menendez, Urquia-Grande, Lopez-Sanchez & Camacho-Minano, 2018). There is a lot of research analysing self-efficacy beliefs of university students enrolled in different subjects, but there is a dearth of research evidence on self-efficacy levels of students studying a subject through EMI, non-EMI or partial EMI. Raofi, Tam and Chan (2012) point a gap for research examining self-efficacy over a long period of time.

Taking the findings in the related literature into consideration, this study seeks to highlight the relationship between Turkish university students' views on studying through EMI and their self-efficacy beliefs for English. This study is not longitudinal in design, but it may provide views from a university-wide perspective.

In order to determine if there is a significant difference in self-efficacy beliefs of students who are enrolled in EMI programs, the following research questions were formulated:

RQ1: Are there any differences between students' self-efficacy levels according to age, gender, class standing and medium of instruction?

RQ2: What are the students' perspectives regarding their self-efficacy throughout their study via EMI?

Methodology

A mixed-method approach was used in the present study. Both quantitative and qualitative data were collected to answer the research questions. The study was conducted by means of students' self-reports in the spring semester of 2017-2018 academic year. Initially, the participants were informed about the aims of the study and the parts of the questionnaire either by the researchers or by the lecturers administering the questionnaire. They were also reminded that participation was on voluntary basis. Completing the questionnaires took approximately 15 minutes.

Research Setting

This study was undertaken at a small-size state university in Turkey which contains mostly engineering departments. Most of the programmes are offered in full EMI while a number of other programmes are offered in partial EMI.

Participants

The university, located in the south of Turkey, is one of the Turkish higher education institutions offering EMI in most of its programmes. A non-random method of convenience sampling was used to recruit participants. Target population consisted of 1561 students currently enrolled at this university; 674 students who were available for the study responded to the questionnaires. Eight participants were excluded from the data analysis due to incomplete data. After the elimination of incomplete data, the researchers decided to exclude 32 more questionnaires from the data which had been gathered from the students majoring in the Department of Translation and Interpreting as the nature of that programme could be controversial in terms of EMI. Table 1 demonstrates the demographics of the participants.

A sample of 634 students, 247 females and 387 males, from 13 programmes participated in this study. Of the 634 students, 294 were enrolled in various undergraduate programmes and 340 were attending the PYP. Participants were selected from degree programmes, namely, Computer Engineering, Bioengineering, Electrical and Electronic Engineering, Industrial Engineering, Food Engineering, Civil Engineering, Mechanical Engineering, Materials Engineering, International Trade and Finance, Management Information Systems, Tourism Management, Political Science and Public Administration, and Business Administration.

Table 1
Demographics of the Participants

Variable	Group	N	%
Gender	Male	387	61,0
	Female	247	39,0
	Total	634	100,0
Age	18-19 years	267	42,1
	20-21 years	227	35,8
	22-23 years	113	17,8
	24 and older	23	3,6
	Missing	4	0,7
	Total	634	100,0
Class Standing	PYP	340	53,6
	1 st year	89	14
	2 nd year	93	14,7
	3 rd year	96	15,1
	4 th year	16	2,5
	Total	634	100,0
Medium of Instruction	EMI	463	73,0
	Partial EMI	171	27,0
	Total	634	100,0

Data Collection and Analysis

A scale to measure students' self-efficacy levels in English and an open-ended questionnaire were employed as the primary sources of data collection. The two data collection instruments used in the study are as follows.

Self-efficacy scale for English. This scale was developed by Hancı-Yanar and Bümen (2012). The Cronbach's Alpha coefficient was calculated to be 0.96 for the overall scale; 0.88 for reading sub-scale, 0.87 for writing sub-scale, 0.91 for listening sub-scale, and 0.86 for speaking sub-scale. Self-efficacy scale consisted of 34 items.

Open-ended questionnaire. The questionnaire prepared by the researchers aimed to explore students' views about the delivery of subject contents in EMI, which provided insights about their learning experiences. The questionnaire consisted of demographics (age, gender, class standing, medium of instruction, and field of study) and seven open-ended questions. The following points were also taken into account with respect to reliability and validity. Based on the literature on foreign language self-efficacy of students, interview questions were developed after receiving feedback from an expert on higher education policies. Researchers modified the items in accordance with the expert's suggestions. As for the Self-Efficacy for English, a reliability check on the items was carried out and a Cronbach's alpha of 0.95 was obtained. This result provided reassurances of the measure's internal reliability.

Quantitative data were analysed using descriptive analyses, reliability test, independent samples t-test, one-way ANOVA and Bonferroni post-hoc tests. It is necessary to note that before employing one-way analysis of variance and independent sample t-test, their assumptions, such as normality and homogeneity of variance (equal variance), were tested. In this study, the distribution of the data was normal and the samples in the study groups had equal variance. The reason why this post-hoc test is preferred is that Bonferroni method can be used in one-way classifications where there are unbalanced group sizes (Miller, 1977). Qualitative data

can be analysed in many different ways (Creswell, 2014); this study aimed to explore the emerging themes. The data collected through open-ended questions were reported by counting frequencies and presenting the emerging categories and themes. Thematic analysis is one of the most-preferred forms of analysis in qualitative methodology and used mostly for analysing, organizing, describing and reporting themes from a data set (Braun & Clarke, 2006).

Results

In order to answer the first research question, which aimed to find out whether there were any differences between students' self-efficacy levels according to age, gender, class standing and medium of instruction, a one-way ANOVA and t-test analyses were run (Table 2).

Table 2
One-Way Analysis of Variance Results Comparing Age on Students' Self-efficacy

Source	SS	df	MS	F	p
Between Groups	10.62	3	3.540	7.741	.000
Within Groups	286.26	626	.457		
Total	296.87	629			

A one-way analysis of variance was conducted to determine whether there were statistically significant different means among different age groups. It was found that there were statistically significant differences among mean self-efficacy levels between the groups ($F(3,626) = 7.741; p = .000$). A post-hoc test was conducted on mean scores to determine which means were significantly different. As the data met the assumption of homogeneity of variances as determined by Levene's test, Bonferroni was conducted (Table 3).

Table 3
Descriptive Statistics and Bonferroni Post-hoc Analyses of the Groups' Mean Scores

Groups	Mean	Mean difference	Std. Error	p	
18-19	22-23	3.296	-.2688	.0759	.003
	24 and older		-.5110	.1470	.003
20-21	22-23	3.324	-.2409	.0779	.012
	24 and older		-.4832	.1480	.007
22-23	18-19	3.565	.2688	.0759	.003
	20-21		.2409	.0779	.012
24 and older	18-19	3.807	.5110	.1470	.003
	20-21		.4832	.1480	.007

As it is seen in Table 3, significant mean differences were found mostly between younger and older age groups. A statistically significant difference was found between 18-19 and 24 and older age groups in self-efficacy (mean difference: $-.5110$ and $p = .003$). A significant difference was also found between 18-19 and 22-23 age groups ($MD = -.2688; p = .003$); and the mean of 20-21 age group was significantly lower than the means of 22-23 ($MD = -.2409; p = .012$) and 24 and older age ($-.4832; p = .007$) groups. As for

the effect of gender on self-efficacy in an EMI setting, there were no statistically significant differences between group means in terms of gender as determined by independent samples t-test ($t(292) = .355; p = .723$).

ANOVA tests were conducted on the data to compare self-efficacy of undergraduate students in the different class standings, ranging from PYP to 4th year students. Table 4 and Table 5 present the results of descriptive analysis, one-way analysis of variance and the Bonferroni test.

Table 4

One-way ANOVA Results of Self-efficacy Scores by Class Standing

Source	SS	df	MS	F	P
Between Groups	24.55	5	4.910	11.230	.000
Within Groups	274.57	628	.437		
Total	299.12	633			

Table 5

Descriptive Statistics and Bonferroni Post-hoc Analyses of the Groups' Mean Scores

Groups		Mean	Mean difference	Std. Error	P
PYP	2 nd year	3.247	-.2591	.0773	.009
	3 rd year		-.4975	.0764	.000
	4 th year		-.5258	.1691	.020
1 st year	3 rd year	3.249	-.4956	.0972	.000
	4 th year		-.5239	.1795	.036
2 nd year	PYP	3.506	.2591	.0773	.009
3 rd year	PYP	3.744	.4975	.0764	.000
	1 st year		.4956	.0973	.000
4 th year	PYP	3.772	.5258	.1691	.020
	1 st year		.5239	.1795	.036

A One-way ANOVA used to determine perceptions of self-efficacy toward English language revealed a significant F ratio of 13.854 ($p = .000$), which demonstrated a significant difference between the groups. For post-hoc analysis, the Bonferroni method was used to compare all groups of students with each other. The post-hoc multiple comparison test showed that 4th year ($M = 3.772$) and 3rd year ($M = 3.744$) groups had significantly higher means than those of PYP ($M = 3.247$) and 1st year ($M = 3.249$) groups in terms of the scores from the English Self-efficacy Scale. On the other hand, 2nd year group's mean ($M = 3.506$) was significantly higher than the PYP's.

The first research question also seeks to answer whether there are measurable differences between EMI and partial-EMI. Hence, the self-efficacy levels were calculated for both groups after all the PYP students had been excluded from the dataset. Table 6 indicates the students' mean scores with the standard deviations of the English Self-efficacy Scale.

The independent samples t-test results demonstrate no significant medium of instruction differences ($t(292) = -2.942; p = .719$) in the students' self-efficacy. Based on the descriptive scores, the EMI group students had relatively higher ($M = 3.57; SD = .695$) self-efficacy than the partial-EMI group students ($M = 3.23; SD = .636$).

Table 6
Findings on the Medium of Instruction and Students' Self-efficacy for English

	Mean	N	SD	df	T	p
EMI	3.57	253	.695	292	-2.942	.719
Partial EMI	3.23	41	.636			
Partial EMI	3.23	41	.636			

To support the data obtained from the Self-Efficacy Scale, the participants were asked seven open-ended questions; responses are presented in the tables below. The first question aimed to explore how EMI instruction affected students' success in the departmental courses.

Table 7
Effects of EMI on Students' Success in Lessons

Question	Themes
1 - Effects of EMI on Success in Lessons	Positive ($f=103$) Negative ($f=49$) Partly negative ($f=32$) Hard but beneficial for me ($f=24$) Challenging ($f=12$) Depends on the teacher ($f=6$) Sometimes I do not understand ($f=6$) Missing data: ($f=13$)

According to majority of the participants, such instruction has positive effects ($f=103$) on their education. For some students, it is hard but beneficial ($f=24$) for their future; it is good when they understand the teacher ($f=2$); and the positive or negative effect depends on the teacher ($f=6$). However, students' responses also included further details about the negative or potentially negative effects of English medium instruction in their career. For instance, some students mentioned some negative aspects with the themes that included "negative" ($f=49$); "partly negative" ($f=32$); or "sometimes I do not understand because language becomes a barrier" ($f=6$).

Table 8
Use of Turkish Sources

Question	Themes
2 - Use of Turkish sources	Yes ($f=119$) No ($f=71$) Sometimes ($f=18$)

When the participants were asked whether they used Turkish sources when they study for their courses, majority of students replied as yes ($f=119$) while a large group of students replied as no ($f=71$). Those who used Turkish sources reportedly did so to understand the content better ($f=101$). While some students stated that they used Turkish sources only sometimes ($f=18$), some others reported that using Turkish sources was not something they preferred as "Since the exams are in English, use of

Turkish sources is confusing" ($f=6$), "it is waste of time" ($f=2$), and "translation takes a lot of time" ($f=6$).

Table 9
Contribution of EMI to Comprehension

Question	Themes
3 - Contribution of English instruction to comprehension	Depends on the teacher ($f=101$) Good ($f=89$) Good when simplified ($f=28$) Lack of instructional techniques ($f=14$) Use of only PowerPoint for instruction ($f=12$) Missing data ($f=25$)

The students were asked about the contribution of English instruction to their comprehension. The theme with the highest frequency indicated that comprehension "depends on the teacher" ($f=101$). Some students stated that the contribution is "good" when the instruction is simplified ($f=28$) and "bad" when there is lack of instructional techniques or the instruction is done mainly instructing through the PowerPoint slides ($f=14$ and $f=12$ respectively). Other students mentioned that the contribution is "good" ($f=89$), such instruction is "challenging" ($f=6$), the effect is "negative" ($f=3$), "there is no difference between Turkish and English" ($f=4$), and "personal efforts are important" ($f=5$).

Table 10
Contribution of EMI on Skills Improvement

Question	Themes
4 - Effects of EMI on English Skills Improvement	Positive ($f=153$) Vocabulary knowledge ($f=30$) Not much ($f=23$) Exposure ($f=23$) Listening ($f=17$) None ($f=11$) Missing data ($f=13$)

The participants were asked how EMI affected the improvement of English skills. According to majority of the participants the effect is positive ($f=153$). Some participants mentioned the role of exposure to the language through English medium instruction ($f=23$), yet a few students also mentioned lack of interaction by saying "Good Exposure, insufficient interaction/production" ($f=4$). On the other hand, some improvements mentioned in terms of the skills were listening ($f=17$), reading ($f=9$), speaking ($f=6$), and writing ($f=6$). While some students stated that their vocabulary knowledge improved ($f=30$), some others thought there was no improvement ($f=11$).

The participants were asked how their pre-university education contributed to their knowledge of English. Only some participants indicated that it was "very good" ($f=37$) or good ($f=31$). Some of these students also stated that they did not need to attend the PYP thanks to the education they had received before. However, to a

great majority, pre- university education was “not sufficient” ($F=43$), had “no effects at all” ($f=45$) or “had only little effect” ($f=46$).

Table 11

Contribution of Education before University

Question	Themes
5 - Contribution of the Education Before University to the knowledge of English	Little ($f=46$) None ($f=45$) Not sufficient ($f=43$) Very Good ($f=37$) Good ($f=31$) Missing data ($f=20$)

Table 12

Views about the Effects of EMI on Work Life after Graduation

Question	Themes
6 - the Effects of EMI on Work Life after Graduation	I think it will enhance finding a job ($f=173$) I think it will help me to get promotion in my work life ($f=143$) I don't think it will have effects on my work life ($f=20$) I am worried about field-specific knowledge ($f=13$) It will help me to go abroad ($f=3$) It will help me to follow international sources ($f=2$) Missing data ($f=3$)

A great majority of the participants ($f=173$) think that EMI will enhance the chances of finding a job, and another great majority ($f=143$) think that it will help them to get promotion in their work life. On the other hand, 20 students think it will have no effects on their career, and 13 students are worried about field-specific knowledge in case they miss some of the content knowledge due to language barrier.

Table 13

Views about the Education Received at PYP

Question	Themes
7 - Effects of PYP on current Education	The Language here is academic ($f=47$) Good ($f=45$) Very good ($f=35$) Little ($f=20$) Not efficient ($f=17$) Missing data ($f=50$)

The students were asked what they thought about the education they received at PYP. While some participants thought that the education they received at PYP was “very good” ($f=35$), “good” ($f=45$), or “moderately good” ($f=16$), some others thought that it was “not efficient” ($f=17$), had “little effect” ($f=20$), or it had “no effect at all” ($f=3$). Some students emphasized that the language they learned at PYP was not technical ($f=47$) like in their departments; they even stated that the English at PYP and the English in the department were like two different languages ($f=8$), and that they developed mainly their listening and speaking ($f=12$) and writing skills ($f=5$) at PYP.

Discussion

The present study aimed to find out differences between students' self-efficacy levels according to age, gender, class standing and medium of instruction and explore students' perspectives regarding their self-efficacy throughout their study at full/partial EMI degree programmes.

The literature documents a dearth of research into the relationship between medium of instruction and students' self-efficacy for English. In this sense, the current research makes a unique contribution by reporting students' self-efficacy for English by medium of instruction at tertiary level. Overall interpretation of the quantitative data analyses contributes to the limited amount of findings showing that students enrolled in EMI programmes do not have significantly higher self-efficacy perceptions in comparison to partial-EMI students. Salili and Tsui (2005) found that EMI students' self-efficacy declined in time especially after course content reached at a higher difficulty, and Chinese medium instruction students were reportedly more intrinsically motivated in learning their subjects. On the other hand, Tripathi's (2013) study showed that EMI students' self-efficacy levels were higher than those of non-EMI students. However, these results may seem to conflict with the present findings, yet a number of factors need to be taken into consideration in order to get an in-depth understanding of full/partial EMI outcomes (Macaro et al., 2018). There was an increasing trend, from PYP year to 4th year at university, in students' English self-efficacy. Findings showed no differences in terms of gender. On the other hand, class standing was found to be a strong predictor of self-efficacy in EMI or partial EMI settings. The fourth-year students demonstrated the highest levels of self-efficacy in English, which could be related to the length of exposure in an EMI program. Finally, a significant difference was found between the students' age and self-efficacy for English; those aged 24 and over had the highest self-efficacy for English.

The qualitative data showed that majority of the participants acknowledged the positive effects of EMI for their career, and great majority of the participants think that EMI will help them to find a good job or get promotion in their work life. These findings are in line with various studies in literature that indicate positive beliefs and attitudes towards EMI (Aguilar & Rodriguez 2012; Costa & Coleman, 2013; Galloway et al. (2017); Hu, Li & Lei, 2014; Macaro & Akincioglu, 2017). Arkin (2013) found that according to students' perspectives EMI contributes to improvement of language skills and to better opportunities for future career; however, the same study also emphasized that English medium instruction and learning is not smooth and problem-free and thus dynamics of classroom teaching and learning should be investigated more deeply. Only a small number of students were found to think that EMI would have no effects in their work life, and another small group reportedly felt worried about their field-specific knowledge in comparison to non-EMI groups of students. Aguilar (2015) investigated how engineering lecturers view their teaching experience in an EMI programme. Despite some pedagogical challenges mentioned by the students, studying through English seemed to positively affect their self-efficacy. It seemed that students' willingness to learn via English outweighed the pedagogical challenges. The present study also indicates similar findings; belief in the potential advantages of graduating from an EMI program outweighs the challenges.

When the participants were asked about the effects of EMI on their comprehension, the factor mentioned by the highest number of students was the "lecturer." They believed that they could understand better when EMI lecturers simplified the topic, gave examples from real life, used body language, etc. Earlier research (Hu et al., 2014; Macaro & Akincioglu, 2017) reported that a considerable number of students indicated their lecturers' crucial role in determining how successfully students learn the subject contents. As reported by Rogier (2012), the lecturers in departments do not specifically use instructional techniques to improve students' language proficiency. While exposure to meaningful input can help improve students' foreign language competence (van Kampen, Admiraal & Berry, 2018), various researchers such as Dafouz-Milne et al. (2014), Huang (2012), Lueg and Lueg (2015), Sert (2008) and Storch and Hill (2008) highlighted the need for more empirical research into the pedagogical practices employed in EMI programmes. When the participants were asked whether EMI had effects on their language skills, majority of them indicated positive effects, and exposure to English reportedly contributed to this improvement. For a group of students, the positive effects were limited to listening skill and technical vocabulary they learned for their departments. Improving language skills through such way of being exposed to English is open to debate. As suggested by Kirkpatrick (2017), EMI programmes must ensure to provide students with systematic, ongoing English development courses which are integral to their degree. In a similar vein, as reported by Wolff (2006; p. 153), only exposure is not sufficient; learning does not occur when the learner only receives the incoming stimuli but does not use his constructive abilities. Language learning is enhanced when communication and interaction are central to the process (Dearden, 2015). Hence, proficiency in a second language requires the use of the target language as a "medium of communication" (Little, 1999: 28), not merely as a "medium of instruction".

In fact, the participants' responses to the open-ended questions implied lack of interaction and communication in classes; they mentioned the inefficiency of instructing the course mainly through the PowerPoint slides. Aguilar and Rodriguez (2012) suggested CLIL training for content teachers to provide them with some general guidelines that include "providing/ asking students to do summaries or mind maps with highlighted keywords and conceptual relationships, preparing a glossary of basic terminology, relying on the meaning-constructing role of code-switching and broadening opportunities of interaction." (p. 12).

Majority of the participants indicated that they used Turkish sources while studying for their EMI courses; they reportedly did so to understand their courses better. On the other hand, for another large group of participants, this way of studying is not necessary. For them, using Turkish sources is meaningless because the exams are in English; studying Turkish sources is reportedly waste of time. The use of L1 in EMI classes was widely supported by the university students in a study by Kim, Kweon and Kim (2017). Tam (2011) concludes that students learn best in their first language; they are unlikely to have as great a level of proficiency in another language, which might disadvantage students. On the other hand, Rogier (2012) reported that students generally do not feel that studying in English causes problems for them, but teachers do not feel EMI students' language ability meets academic expectations. Overall perceptions of the students participating in the present study regarding the

effects of EMI were found to be positive. Sercu (2004) also found that both students and lecturers favoured English medium instruction with the belief that it improves students' English language skills and draws international students to the institution. On the other hand, the study reported that as English medium instruction leads to more superficial processing of disciplinary content, the introduction and process of English medium instruction should be closely monitored.

The participants were asked about their educational background in terms of learning English. They were asked to indicate the role of their pre-university English education in their university life. For a number of students, the effect was good enough for them to pass the proficiency exam. However, to a great majority of students, their pre-university education had little or no effects on their university education in terms of English. Generally, embarking on PYP with low English proficiency and motivation and late start in learning English are among the factors that affect progress (Akpur, 2017; British Council/TEPAV, 2015). Limiting EMI preparation only to the PYP, which lasts around eight months only, is a practice that should be considered seriously.

Finally, the participants were asked to evaluate the education provided to them in the PYP. Although many students reportedly thought that it was good or very good, several students mentioned the fact that the academic language they needed to use in their department was quite different from the language they had learned at PYP. That the curriculum is lacking in relevance and that classes are not delivered at the time in a student's academic career are reported to be the factors causing preparatory schools to fail to address the low proficiency level problem (British Council/TEPAV, 2015). The participants of the present study mostly originated from public schools, where they are offered relatively limited General English classes. As reported by Macaro, Akincioglu, and Dearden (2016), this case causes the majority to have relatively low levels of Academic English or, at least, not at a level enabling them to thrive on an EMI programme. Given the lack of General English command of students and the Academic English they need at departments, English language support to be provided to students should not be limited with preparatory problem but continue across all the levels in their university education.

In this study, there are a few limitations that should be noted. The results of this study were primarily based upon the participants of a small state university which has less than 2000 students. Main limitations are the lower sample size of the 4th year and partial-EMI students. Additionally, the absence of participants from non-EMI programmes could be a limiting factor. The specificity of this study's setting, reduced to one state university, constitutes a gap for future replication in other private and state universities. Based on the participants' remarks, it can be useful for higher education institutions to offer opportunities by which EMI lecturers can enrich their pedagogical knowledge. Research focusing on EMI lecturers' self-efficacy for teaching in English and common pedagogical practices they employ can be identified as a key area in need of further investigation. Further research could be extended to investigate students' academic achievement and self-efficacy across all levels of university education in full-EMI, partial-EMI and non-EMI contexts.

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