

The Pros and Cons of English-medium Instruction in Higher Education in an EFL Context¹

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Abstract: English learning has gained a momentum considering its notable role and status worldwide; therefore, the widespread view is that the medium of education is to be English, as higher education in this era aims at preparing students for an international career. Some opponents, however, claim that English-medium instruction (EMI) puts certain burden on learners' as well as teachers' shoulders. Considering this disparity, this study purports to delve into 146 undergraduate students' perceptions on EMI at a state university in Turkey where EMI started to be implemented for the first time and it also aims to reveal whether gender affects their beliefs on EMI. A composite questionnaire including 5-point Likert scale and open-ended questions were administered to 146 students. Data were analyzed through SPSS version 21 using descriptive statistics, frequencies and independent-samples t-test. As for the open-ended responses, deductive qualitative analyses were made. Overall, findings showed that 63 % of the students in the English language teaching department and 59.26 % of the students registered in other departments believe that the instruction at higher education needs to be conducted in English. More specifically, accessing to a wide range of resources easily, employment opportunities, and contribution to academic success have been mostly appreciated upsides of EMI. Conversely, a high number of participants noted that EMI prevents being involved in the subject matter and comprehending it fully. Lastly, gender seems to be influential in EMI at a statistically significant level. In language learning contexts, the path to follow might be to help learners to be highly proficient to be equipped well enough to follow the content in their majors during their studies. This can be best achieved by a great collaboration between content and language specialists while exploiting such gaining of EMI as accessing to different resources and finding jobs as global citizens.

Keywords: English Medium Instruction, EFL, EAP, advantages, disadvantages

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Introduction

English holds a central position in language learning milieu worldwide. As widely accepted, English is the international language of the era and it is a widely recognized medium of communication in international platforms, leading it to be the lingua franca of the age (Crystal, 2012; Graddol, 1999). Today, the role and status English has gained in the field of higher education is outstanding (Reagan, 2009). Although it has been challenged with counter arguments and opposing views (Pennycook, 1998; Phillipson, 1992; Phillipson & Skuttnab-Kangas, 1999; Tollefson, 2002; Tollefson & Tsui, 2004), the common premise is that English is the language of science and business, and so the medium of education should be English providing the aim of the education is to prepare students for an international career. It is also argued that with the globalization in education, the need for the English-medium of instruction is inevitable.

The notion of English-medium of instruction is mainly based on Bilingualism and Content and Language Integrated Learning (CLIL) and Immersion programs. There exists a wide range of definitions of EMI concept, but the definition in this study referred is as follows:

The use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English (Macaro & Curle & Pun & An, & Dearden, 2018, p.37).

Despite many definitions and numerous studies on EMI, the advantages and the disadvantages of such an education in English as a Foreign language (EFL) environment is still under scrutiny as it always has a primary concern at the center of sociolinguistics as well as educational realities in Turkey ((Macaro, 2017; Selvi, 2014). That is why; there is still a need to shed light onto the current case in Turkey in relation to the positive aspects and the downsides of it. Based on this need, the present study aims to reflect the pros and cons of EMI at a higher education.

English-Medium Instruction in Secondary and Tertiary Education in Turkey

The presence of foreign languages both as subjects and as media of instruction started to be put into practice in Secondary Schools in Turkey; that is, some missionary schools that used different foreign languages as media of instruction had emerged in the late nineteenth century and some of the prominent ones are as follows: (Selvi, 2014).

- Robert College (1863)
- Lycée Impérial Ottoman de Galata-Sérai (1868)
- Üsküdar American College (1871).

An important turning point in the context of secondary schools was the foundation of Education Colleges (Maarif Koleji, later renamed as Anatolian High Schools). These highly-regarded state schools offered intensive foreign-language (English) education consolidated by instruction in two languages regarding the content areas (Sarıçoban, 2012).

Middle East Technical University (METU or Orta Doğu Teknik Üniversitesi), the first institution of higher education that provided English-medium instruction, was established in Ankara in 1956. At that time, the other institutions started to offer foreign-language courses as part of their curriculum. This was implemented in another university, Boğaziçi University (formerly Robert College), and this higher education institution became a role model for some foundation-funded universities, such as Bilkent University, established in Ankara in 1984. Since that time, both public and private universities have been offering intensive English courses to prepare all first year students who could not pass English-proficiency examination. These courses are planned to cover one year program of English classes to get students to prepare for their departmental courses and subject matters which are conducted in English language.

Despite some opponents of English-medium Instruction, some scholars highlighted the positive aspects of such an instruction ranging from social,

linguistic, national, international and academic advantages. These include but not limited to linguistic development (Doiz & Lasabagaster, & Sierrra, 2011), pedagogical effectiveness, academic advantages, the global connectedness, Turkey's application for EU membership (Crystal, 2012; Selvi, 2014), preparing students for similar experiences abroad (Alptekin & Tatar, 2011), leading them to be a world citizen (Alptekin & Tatar, 2011; Macaro & Akıncioğlu, 2018), acculturation (Sayarı, 2007), improving local students' proficiency in a foreign language (Turhan & Kırkgöz, 2018), providing students with specialized language, accessing to references in the foreign language, improving students' work/career prospects (Brown, 2014; Macaro & Akıncioğlu, 2018; Turhan & Kırkgöz, 2018; , facilitating the pursuit of postgraduate degrees abroad, attracting international students and teachers (Doiz & Lasabagaster & Sierrra, 2011), motivating both teachers and students (Lasagabaster, 2016), offering more exposure to English and more chances to acquire it, bringing about cognitive advantages (İbrahim, 2001).

On the other hand, the use of English as a medium of instruction in Turkish context has been perceived as a great threat by many scholars as Selvi (2014) points out. These embody neglecting and looking down upon Turkish, unnecessarily prolonging education with an additional year for intensive English, unbalanced teaching of courses, increasing the cognitive load, and encouraging rote learning (Demircan, 2006), the reduced ability to understand the content due to the lack of language proficiency (Arslantunalı, 1998; Köksal, 2002; Macaro, 2017; Macaro & Akıncioğlu, 2018), learners' alienation from their own society (Duman, 1997; Sinanoğlu, 2000), Englishization of Turkish society (Duman, 1997; Sinanoğlu, 2000), and inadequate language skills (Coleman, 2006). These drawbacks are either based on the ideas of the authors based on such solid arguments as literature review and historical evidence or the research findings of the relevant study.

The advantages and the drawbacks have been debated by the scholars in the field, but not at a satisfactory level considering the lack of involving students' ideas. In addition to different views on EMI on different sides, such a system might be experienced differently by two genders. Gender issue has not been raised enough

in higher education especially when EMI is a requirement for the learners as highlighted by some recent studies (Lasagabaster, 2016; Macaro & Curle & PunAn, & Dearden, 2018). Gender issue in EMI context did not attract much attention though language learning is considered to be female-dominant area as Macaro and Akıncioğlu (2018) pointed out in their recent article. They also added that assumed advantage of EMI on the part of female learners during their job hunting has not been considered to be worth gauging. Only a study by McMullen (2014) tried to look into whether gender makes a difference in their beliefs about EMI and he/she revealed that females seemed to hold more positive ideas on EMI. However, this scarcity of the research on gender issues in EMI entails the need for further examination of this issue. In addition to the need to investigate gender issue, learners from different departments could change the pattern in attitude towards EMI. According to Macaro, Curle, PunAn, and Dearden (2018), different content areas could make a difference in terms of the stakeholders' beliefs on EMI. Therefore, the learners using English for their prospective jobs actively as a teacher and the students in other departments could hold different points of view on the advantages and the disadvantages of this system as compared in this study.

At a local level, the implementations in a context where EMI has been used for a long time has remained unexplored in Turkey. As some of the requirements such as qualified academics, effective course books or all the other requirements are of great importance when scrutinizing EMI at tertiary level (Macaro, 2017), the first university to implement this system becomes an issue of research. In this vein, the long-existing system at Middle East Technical University needs to be explored in depth to research into the positive and negative sides from the perspective of the stakeholders, specifically students in language departments and the ones studying the other majors.

The Purpose of the Study

This study presents research that investigates the advantages and disadvantages of English-medium instruction (EMI) on the part of the learners in a Turkish

context where the EMI implementations started for the first time and have been used for a long time. In particular, the study aims at revealing the perceptions of undergraduate students on the positive aspects and downsides of EMI at a higher education. As Middle East Technical University (METU) is the first university that implemented such an approach in language teaching in Turkish context, it was used as a sample university in the present study considering its long- existing solid system. The participants are 70 undergraduate students at English Language Teaching (ELT) department and 76 undergraduate students in other departments. The study also looks into whether there is a difference between the perceptions of ELT students and the ones from the other departments. In addition, whether gender makes a difference on the students' perceptions about EMI will be explored.

Research Questions

1. What is the perception level of ELT students and the students at other undergraduate programs with regard to the advantages of English-medium Instruction (EMI)?
2. What is the perception level of ELT students and the students at other undergraduate programs with regard to the disadvantages of English -medium Instruction (EMI)?
3. Is there a significant difference in participants' perception level with respect to their gender?
4. What is the overall opinion of the undergraduate students on whether instruction at universities should be conducted in English-medium?

Methodology

Setting and Participants

This research was conducted in April 2016 through a survey administered to 70 ELT students and 76 students studying in different departments from various faculties at an undergraduate level (the number of the participants from each

department is presented in Appendix 1). The participants who have different backgrounds are all native speakers of Turkish.

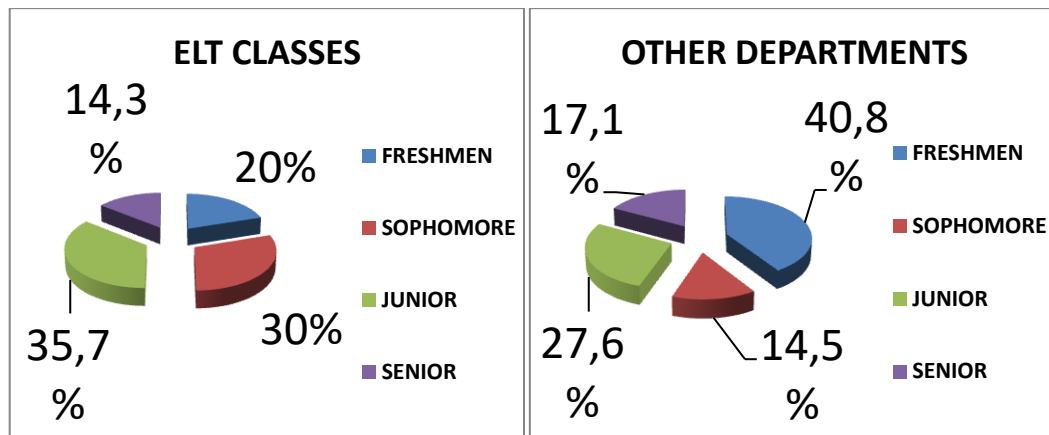


Figure 1. Classes of the participants in both groups.

As shown in the figure above, the participants in the ELT department are composed of 20% of freshmen students, 30% sophomore, 35.7% junior and 14.3% senior students. The lower participation of the senior students results from the fact that they attend their internship programs in different elementary and high schools. When it comes to the students at different departments, 40.8% of them are freshmen, 14.5 % of them are sophomore, and 27.6% of them are junior and 17.1 % of them are senior students. The high number of the freshmen students comes from their willingness to reflect their opinions on EMI. The researcher ensured that the distribution of the participants, however, did not affect the results.

Instruments

The research is a descriptive study, the data of which was collected through a 5 point Likert survey (The survey questions are presented in appendix 2). The survey questions were prepared and adapted by the researcher based on the literature (Cummins, 2000; Coyle & Hood, & Marsh, 2010) and the questionnaires used before (Arkin, 2013; Selvi, 2014). The validity and the reliability were checked based on cronbach's alpha scores ($r=.8$) and expert (PhD) opinions. Ten close items in the questionnaire aim to cover different advantages (see appendix 2, Part B , specifically, the items with odd numbers), ten of them also measure the

disadvantages of EMI system (see appendix 2, Part B , the items with the even numbers). Each item aims at measuring perceptions on different advantages, including overall benefit (Qs1), learning the foreign language better (Qs3), cognitive development (Qs 5), better academic success in general (Qs 7), accessing to different sources, learning about cultures (Qs 9), having prestige (Qs 11), easy access to sources (Qs 13), contribution to one's own academic success (Qs 15); better employment opportunities (Qs 17); better success in the professional life (Qs 19). Although some items such as 7 and 15 seem to measure the same construct, item 7 measure the effect of EMI on students' general academic success at EMI universities; however, item 15 measures the respondents' own personal experience in terms of the effect of EMI on the academic success. Ten items on different disadvantages or negative views purport to measure students' beliefs on such drawbacks as scientific and academic effect on L1 (Qs 2); low academic achievement in disciplinary studies (Qs 4); rote learning (Qs 6), limiting disciplinary knowledge (Qs 8); belief in the abolishment of EMI (Qs 10); extra burden on the student (Qs 12); difficulty in understanding the materials (Qs 14); not understanding the lectures(Qs 16); belief in teaching the second language separately (Qs 18); the negative effect on one's own culture (Qs 20). Open ended questions were also addressed to the participants to write down their specific views on the contributions and the repercussions of it (see appendix 2, part C).

After making the necessary editions based on the expert opinion and the reliability analyses, the survey was delivered by Google forms to the students of the researcher (convenient sampling) and the participants also sent them to different students that they know in METU (snowball sampling). When it was not possible to get enough data from the ELT department, some of the questionnaires were given by hand. In general, "purposeful voluntary basis sampling" was used. The survey also included open ended questions, which was employed to triangulate the data.

Data Collection and Data Analysis Procedures

After the survey questions were prepared and checked, it was administered to the undergraduate students online through e-mails, social networking sites or with the help of the lecturers in the departments. The survey was given to the students in Turkish in order that language would not put a barrier to understand the questions. The collection of data took about one week to collect all data. It was sent to about 800 students and 147 of them responded.

The data gathered from the questionnaire were analyzed quantitatively using Statistical Packages in Social Sciences (SPSS) Version 21 and Microsoft Excel 2010. In order to analyze the results for the first and second research questions, the data was analyzed quantitatively using percentages and frequencies of each question as presented in Appendix 3 and Appendix 4.

To find out whether there is a significant difference between the genders of the students, sum score of all participants and their means were calculated. The data was also checked for whether it is normally distributed or not via histogram and skewness. After ensuring the normal distribution, Independent samples t test was performed for this question. When it came to the open-ended questions, they were analyzed based on content analysis in relation to the advantages and disadvantages referred in the Likert scale questions (deductive qualitative analysis).

Results

In the following section, data gathered from the questionnaire will be discussed separately in relation to the research questions.

To answer research question 1, all the items including positive aspects of EMI are analyzed based on the frequency level and the percentages. All the details are presented in appendix 3 and 4. While presenting the findings in the tables in the appendices, the percentages of “Strongly Agree” and “Agree” were added and

named as “Agree”; whereas, the percentages of “Strongly Disagree” and “Disagree” were added up and called as “Disagree” in the reporting of the tables below or in the figures. If any additional idea on each question came up in the open-ended question part, the striking quotations from each group of participants were presented at the end of the relevant question.

Research Question 1: *What is the perception level of ELT students and the students at other undergraduate programs with regard to the advantages of English-Medium Instruction (EMI)?*

The detailed findings on descriptive results are presented in Appendix 3, two groups have different and similar ideas on the items of the advantages. The highest scores in the ELT and the other departments and the lowest scores indicating disagreement on the relevant advantage will be described respectively in the following part. However, while presenting the highest or the lowest scores for each department, the finding on the other party will also be pointed out to compare them. Here is the highest score for the ELT group:

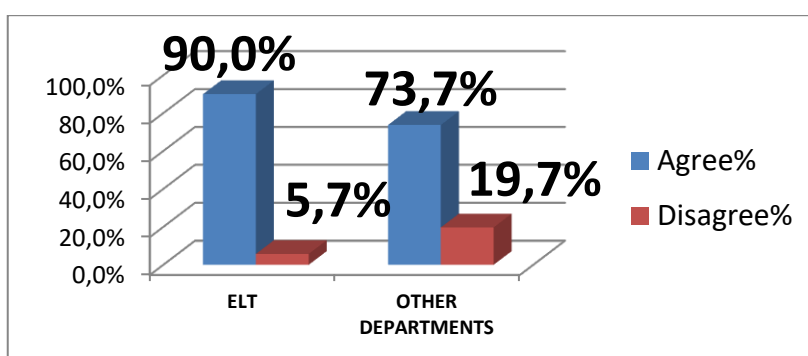


Figure 2. Qs 3. English-medium instruction is an effective way of learning the foreign language.

As seen in the table in the appendix and the bar chart above, the highest mean scores (ELT; Mean= 4.39; STD=.87) and the agreement percentages (90%) seem to fall on question 3 for the ELT group. When looking into both groups, both parties are in agreement with the idea that EMI is an effective way of learning English

(OTHERS; Mean= 3.87; STD= 1.2). This is also apparent in open-ended questions. Here is a sample quotation from an ELT student who also supported this idea:

Student 43 (ELT): English medium instruction at least gets us familiar with the spoken discourse and improves this aspect[....]We, as Turks, already have difficulty in speaking...Being exposed to the real English contributes to one's self-improvement to a great extent and this consolidates and empowers our speaking skills.

Student 1 (Other Department): (The positive side of EMI) is it enables you to be competent in your field and you can keep track of the up-to date developments.

As for the highest score for the others , when scrutinizing the descriptive statistics and the highest percentages of item 13, it is clearly seen in the table in the appendix, a great majority of the participants in both groups (ELT: 84.3 %; OTHERS: 90.7%), but mostly in the other departments, contend that EMI enables them to access to many resources. The bar chart below also illustrates the highest score for the other departments:

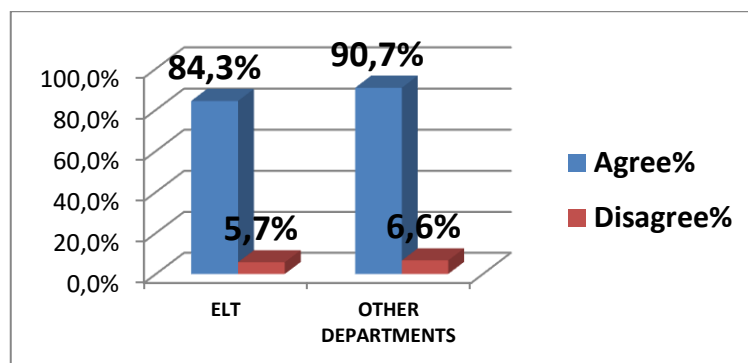


Figure 3. Qs 13. EMI makes it easier to access disciplinary sources and materials.

This point was also made several times in the personal opinion part. Here is a sample quotation on this:

Student 50 (Other Department): In recent days, as English is used as a lingua franca, the latest research and publications are being done in English.

Therefore, to be competent in the field, to reach global resources is a must and this can be achieved through EMI.

This result about the question 13 might be attributed to the fact that these students are still doing their academic studies. Their views about EMI might change if they are asked the same questions when they graduate and start working. The main point here is that the most outstanding advantage seems to be the availability of resources and the opportunity to access to them easily on the part of the undergraduate students' fields and you can keep track of the up-to -date developments...

While EMI brings about the opportunity to access to a variety of resources and being able to get more employment opportunities, the participant students do not think some of the advantages of EMI as effective as suggested. Considering the lowest scores or disagreements on the advantages in the ELT group, as highlighted in Appendix 3, about two thirds of the participants in both groups (ELT: 57,2 %; OTHERS: 60,5%) believe that they could have more academic achievements in their education through EMI. Here is the illustration for the lowest score on the advantages for the ELT group:

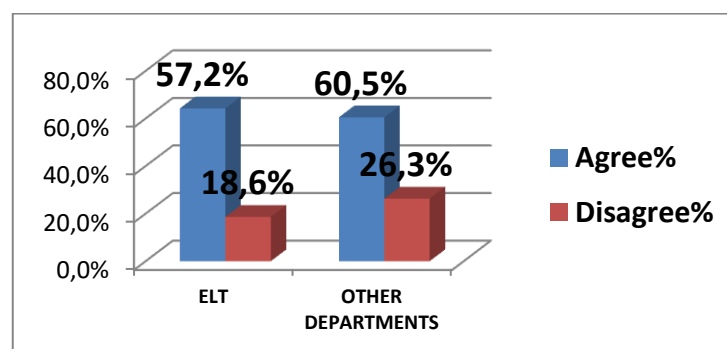


Figure 4. Qs 7. English-medium disciplinary learning helps students to succeed more in their academic studies.

The lowest score on the ELT group was not reflected in the open-ended questions as much. That is, with regard to the contribution of EMI to academic success, the

students did not particularly point out this aspect in the open-ended questions; however, few of them referred to the fact that such an instruction debilitates academic achievement as the language puts a barrier for them to internalize the discipline. Here is a sample excerpt:

Student 10: (Other departments): The focus shifts from the subject matter to the language itself, so it reduces the academic success.

Below is the figure displaying the lowest score on the other groups:

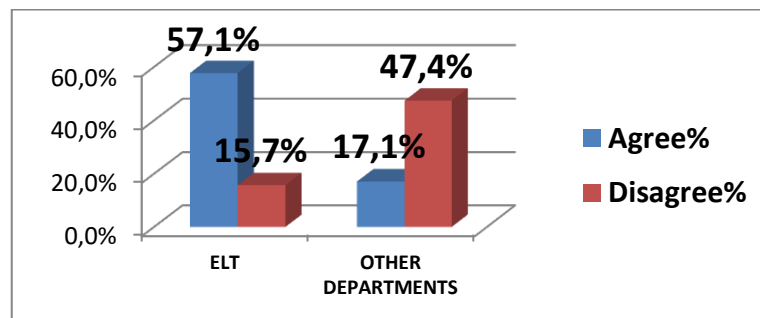


Figure 5. Qs 15. English-medium instruction affects my academic success in a positive way.

As to the lowest mean scores in the other departments(ELT= 3.63; OTHERS= 2.64), almost half of the students from the other departments (47,4%) do not believe that EMI contributes to their academic success though ELT students find it effective to use EMI for their academic success. This might result from the fact that they feel less competent in the language and this causes them to comprehend the subject matter less. This aspect was reflected in the open-ended questions to a great extent:

Student 5(Other Departments): Listening to the lectures and taking notes become more challenging in this way.

Student 9 (Other Departments): A decrease in students' success.

Student 63 (ELT): A lack of comprehension in main courses or misunderstanding in those subject matters.

Research Question 2: *What is the perception level of ELT students and the students at other undergraduate programs with regard to the disadvantages of English -medium Instruction (EMI)?*

In order to find out the ideas of the participants in both groups on the disadvantages of EMI, the questions with the even numbers were analyzed with descriptive statistics and the results are shown below in relation to the open-ended questions' analysis. While analyzing the results in SPSS, these items were reversed but to show the results clearly, the figures below demonstrate the real reflection of the participants' ideas as they exist in the surveys. The percentages of "Strongly Agree" and "Agree" were added and named as "Agree"; whereas, the percentages of "Strongly Disagree" and "Disagree" were added up and called as "Disagree" in the figures. If any additional idea on each question came up in the open-ended question part, the striking quotations from each group of participants were presented at the end of the relevant question.

In terms of the disadvantages of EMI, students in both groups mostly have similar patterns if examined in detail in the table in appendix 4. The highest mean score for the ELT group can be observed in question 16 which measures whether the students have difficulty in understanding the lectures delivered in English (ELT; Mean= 3.97; STD= 1); OTHERS ; Mean= 3.21; STD= 1.21). Here is the figure showing the highest score for the ELT group:

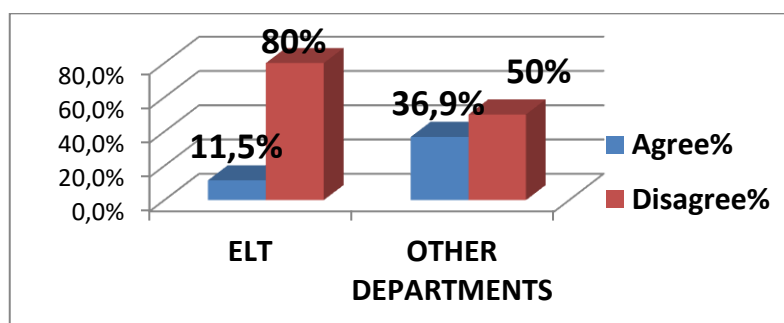


Figure 6. Qs 15. English-medium instruction affects my academic success in a positive way.

In this question, 80% of the students in the ELT department disagree with the statement that they have trouble with understanding the lectures in English. Half of the students in the other departments disagree with this item (50%), meaning that the other half have difficulty or they are not sure about this challenge. This result again results from the lack of proficiency in the students' language skills in the other departments and this hardship was observed in some of the open-ended questions' responses:

Student 57 (ELT): The negative side of the EMI is that from time to time, I cannot understand what the lecturer says, to a full extent...

Student 67(Other Department): EMI could be useful only if the lecturers are competent in the language.

Student 81 (Other Department): When you finish the preparatory school at an average level, especially for social science students, reading the journals and books in English, listening to the lecturer, and understanding the questions in the exams and being able to answer them are difficult.

As *Student 81* states, students who finish the preparatory year with an average level of English seem to struggle for feeling involved in the basic requirements of English medium instruction such as understanding the exam questions.

Looking into the agreement range in the other department, the highest mean score fall into question 20 (Mean=3.89; STD= 1.15) which asks whether EMI influence their cultural values negatively. Below are the details of this finding:

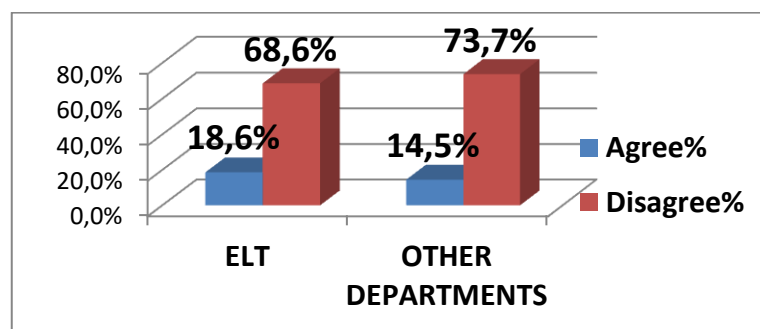


Figure 7. Qs 20. English-medium instruction negatively affects me in keeping my own cultural values.

Interestingly, though, most of the participants in both groups agree that EMI affects their cultural values in a negative way. The percentage of agreement is higher on the part of the students from the other departments (ELT: 68.6%; OTHERS: 73.7%). This might result from the fact that ELT students feel more attached to the language and its cultural values. Interestingly, the open-ended questions show responses from only ELT students:

Student 33(ELT): One feels detached from his/her own cultural values

When it comes to the lowest mean scores in terms of the disadvantages of EMI, both groups' ideas go hand in question 18. As seen in the figure below, almost half of the students from the other departments agree that teaching English as a separate class would be better, similarly 42.8 % of the ELT students agree with this statement. About 30 % of the ELT students seem to be unsure about this statement. This might result from the fact that students need supplementary English classes to be competent in the language. Below is the figure showing the agreement range:

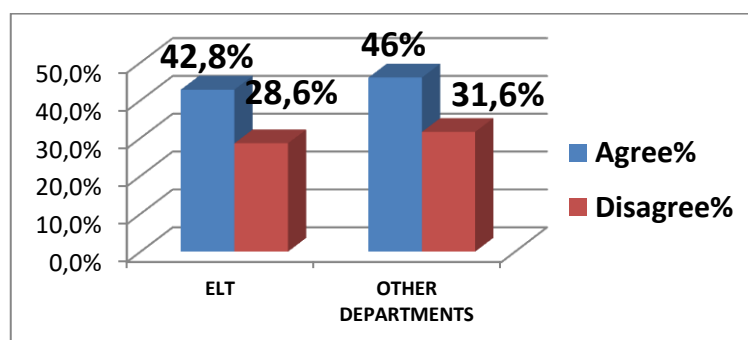


Figure 8. Qs 18.It would be better to teach English in an active way instead of using English-medium instruction.

Here are the quotations supporting intense English instruction rather than EMI.

Student 48 (ELT): I am for the intense English instruction rather than EMI. When the instruction is not in the native language, the students cannot use their full capacity; in addition, the subject matter- which they can understand easily in their L1- makes understanding slower when it is in a

foreign language. Also, their participation is not much when students feel incompetent in the foreign language.

Student 3 (Other Department): I find it more useful to teach English intensively rather than EMI.

Research Question 3: *Is there a significant difference between all participants' perception level and their gender?*

In order to answer whether there is a significant difference between the genders of all participants and their perception level of EMI, independent samples t test was performed. In order to run the test, the sum points of the agreements on the advantages and also the total score of the disagreements on the disadvantages-by reversing the items- were computed based on the mean scores, and then added and labelled as "overall perception towards EMI". These total scores were used as the "test variable" in the independent samples t test. Here are the findings of the test:

Table 1. The Relationship between the Participants' Gender and their perception of EMI.

Gender	N	Mean	STD	t	df	p	Cohen's <i>d</i>
Female	92	3.70	.62	1.99	89.24	.05	.035
Male	54	3.44	.82				

An independent samples t test was conducted to compare the beliefs of female and males on English Medium Instruction and as illustrated in Table 1, there is a statistically significant difference between females ($M= 3.70$, $STD= .62$) males ($M= 2.44$; $STD= .82$) in terms of their perception on EMI with a large effect size. ($d=.035$) (Cohen, 1988, p. 284). This might be because of the general tendency to be more successful in language skills on the part of the females. This might imply that males can be treated with care when EMI is used at universities.

Research Question 4: What is the overall opinion of the undergraduate students on whether instruction at universities should be conducted in English-medium?

In order to answer this question, the percentages of all agree and disagree range are added to show whether they have a positive attitude towards EMI or a negative attitude. For this question, 20 questions were used; however, the responses towards the disadvantages of EMI, i.e. the items with the odd numbers, were reversed and the agreement ranges were added. The results are as below:

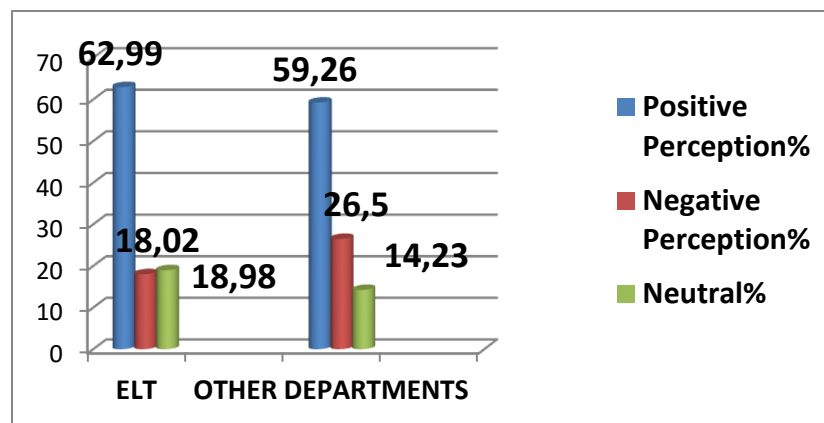


Figure 9. The average perception scores for both groups.

As seen from the Figure above, while 62.99 % of the participants from the ELT department think that English needs to be used as a medium of instruction, 59.26 % of the students from the other undergraduate programs contend that EMI should be used as a medium of instruction at universities. This implies that students are in favour of EMI as the advantages seem to outweigh the disadvantages on their parts.

Limitations of the Study

This research was conducted with 70 students at ELT and 76 students from other departments at Middle East Technical University in Turkey. The main limitation of the study was the number of participants. As the study presents a limited number of students' perceptions about the benefits and pitfalls of English-medium instruction, so it would not be appropriate to generalize the results of this study to all universities where the medium of instruction is English or any higher

education in the world. If the study had been conducted at more universities with more participants, it would have been possible to get more reliable data. The data could be analyzed in a deeper way if it had been possible to administer surveys to lecturers and conduct interviews with them or make some observations in their classroom. Because of the time constraints and the limited number of the voluntary participants, it was not possible to do it. In a further study, this could also be added to this study by contrasting the present results with the ones in the future.

The linguistic (both in L1 and L2), cultural, national, international and social effects of EMI were added to the survey questions; however, sociolinguistic aspects such as whether EMI impacts participants' national identity or nationality were not included in survey questions. Also, whether EMI is detrimental to thinking abilities in L1 and whether it causes any brain-drain were not incorporated in the present study. In a further study, these aspects could be added to present a wider perspective on this issue.

Discussion and Conclusion

The purpose of this study was to investigate undergraduate students' perceptions of English-medium instruction at a Turkish university. The study specifically explored the opinions of undergraduate students from the ELT department and other departments. In addition, the study provided information about how their department and their genders affect their perception levels.

The overall results indicate that 63 % of the students in the ELT department and 59.26 % of the students in other departments think that the instruction needs to be conducted in English-medium at universities. This finding is line with Macaro and Akıncioğlu (2018) in the sense that Turkish students at a tertiary level are content with their medium of instruction in English. By and large, this implies the students' positive attitude towards EMI and they attribute this positive motivational orientation to different reasons.

With regard to the specific questions, an important benefit reported by the students is that EMI makes it easier to access disciplinary sources and materials. Both in the close items in the survey and the open-ended questions, a great number of the students (ELT: 84.3 %; Other Departments: 90.7%) made a point that they can read and learn more and keep track of the recent developments globally through such an instruction. The reason is well-evidenced in Reagan's (2009) argument: " (In the past) The assumption was that the scholar needed to be able to access publications in his/ her discipline in a variety of languages. It has now become commonly assumed by many, perhaps most, in the academic community that this is no longer necessary, since anything important will be published in English"(p.75). The result in the present study is in line with Alptekin and Tatar (2011), Görgülü (1998) and Doiz et al., (2011) in the sense that the students can keep up with the developments through materials in English, which prepares students as a world citizen.

Another notable upside of EMI seems to be the job opportunities students have after graduation. This is well-evidenced with 87.1 % agreement for the ELT students and 85.5 % of the agreement score on the part of the students from the other departments. This result is also in alignment with Crystal (2012), Doiz et al. (2011), Macaro and Akıncioğlu (2018) and Selvi (2014) in that EMI paves the way for better employment opportunities. As international companies or even the state institutions demand high proficiency in English, students try to make use of EMI as a preparation for their work life since being able to access to earning more money, being eligible for a job, prospective academic career and also achieving a higher status become appealing for graduates of EMI (Turhan & Kırkgöz, 2018). This advantageous aspect of EMI, however, was not found in Brown (2014)'s study which was conducted in Japan. In this research, the contribution of EMI to work life was revealed to be only 15 %, meaning that only 15 % of the students in such an instruction type gained an advantage of finding a well-paid and international job. Similar to the Asian context in this study (Brown, 2014), the

perceived positive side revealed in the present study needs to be explored in depth with a clear and solid evidence of its contribution to learners' work life. For this reason, employees as well as employers who have received EMI could be of further research to analyze the real-life upsides of such an instruction.

Concerning the disadvantages of EMI, students gave more critical responses about its influence on learners' L1 competencies. To illustrate, while ELT students are not too discontent with the effect of EMI on the native tongue, 42.1 % of the students from the other departments agree that EMI influences scientific and academic development of Turkish in a negative way. On the other hand, 40.8 % of the students from the other departments disagree with this item. This is similar to the controversy among the scholars who are for and against the EMI as to the detrimental impact of it. While Coleman (2006) , Demircan (2006), Duman (1997) and Kırkgöz (2005) strongly argue that EMI plays a debilitating role on the development of the native language; Wong (2010) and Selvi (2014) note that EMI does not affect native language negatively. The reason for the variety of ideas with respect to the native language might be to do with many causes ranging from the lecturer, instructional methodologies to even the personality of the learners. As the qualitative data did not lend itself to drawing clear conclusions, it is difficult to examine the specific factor playing role in these controversy among the participants.

Another noteworthy finding on the disadvantages is that 50% of the students from the other departments agree that EMI affects their achievements in a negative way. They associate this failure with the incompetency in the language, which results in not being able to comprehend and internalize the subject matters to a full extent. This is one of the most common disadvantages mentioned in the literature (İbrahim, 2001; Macaro&Akıncioğlu, 2018; Sert, 2008). This is most probably because of their lack of proficiency in the language. This result is similar to Atik (2010), Hellekjaer and Westergaard (2003), Lasagabaster, 2016 and Sert (2008) in the sense that EMI decreases comprehension skills of the students, thereby leading to the failure problems in academic studies. As regards the question on *whether*

English-medium instruction negatively affects students' achievements in their disciplinary studies, 38.5 % of the ELT students disagree with this statement, this means that some of the ELT students think that EMI influences their academic achievements negatively. The interesting point hereby is that all participants also believe in the undeniable effect of EMI on their language proficiency, implying that even language students need supplementary courses for English language proficiency to solidify EMI.

Another different finding is that 68.9% of the ELT and 73.7 % of the other participants do not believe that EMI affects their cultural values in a negative way. Such a disadvantage does not go parallel with the arguments of Duman (1997) and Sinanoğlu (2000). The students rather appear to see EMI as a cultural richness as proposed by Görgülü (1998) and Sayarı (2007). This notion is also in line with the idea of global Englishization and the fact that English has become more global (Hult, 2010; Reagan, 2009).

All in all, about 63% of the ELT students have a positive perception while 59.26 % of the students from other departments have a positive attitude towards EMI. This might mean that the advantages of EMI outweigh the disadvantages on the part of the students; however, there seems to be some pitfalls about this instruction such as the negative effect of EMI on the students' successes in their departmental studies. This is in neatly tied with their low proficiency level in English, especially for the ones in other departments. To solve this, additional English classes where students could be exposed to more departmental terms might be added to their curricula in content-based instruction (Macaro & Akincioglu & Dearden, 2016). This can be best achieved by training both language instructors and the content instructors in collaboration.

Pertaining to the negative effect of EMI on native language improvement, students could be provided with some publications in Turkish as well to familiarize them with the terms in Turkish. To make students in other departments more involved

in lectures, the professors could prepare their syllabi depending on the students' needs and levels. Also, the competency of the lecturers could be ensured so that the success of EMI could be achieved easily (Macaro, 2017). Students could be provided with extra guidance through suggested websites or research assistants. Furthermore, male students' negative attitude could be explored in detail through interviews and they can be provided with some workshops or training sessions on the benefits of EMI.

The best route to follow would not be either Turkish or English approach but to embrace both ways to promote highly proficient bilinguals. Such an approach need to incorporate excellent command of language, subject and pedagogical content knowledge, students with appropriate language proficiency and most importantly a commitment on the part of the students and the teachers (Macaro, 2017). Alternatively, collaboration between language specialists and content instructors could make much more solid contributions to the effective process (Macaro & Akincioglu, & Dearden, 2016). This way, students could be exposed to English and they can take the advantage of the aforementioned benefits of EMI; on the other hand, they can internalize subject matters and they can be affected by the setbacks of EMI at a minimum level. However, ELT students need to be trained with EMI as they will take on their professional identity as language teachers in the future (Demirezen, 2007). In essence, in order to exploit an effective EMI approach, all these aforementioned points need to be taken into account with great care.

Lasagabaster (2016) states that EMI could promote ideal L2 selves of both learners as this kind of an instruction enables learners to find jobs in an international platform or they can be fluent speakers of English when they learn the content in English. However, the present study shows that gender exerts statistically significant difference in favor of female learners. Macaro and Akıncioğlu (2018) as well as McMullen (2014) find a similar finding in that females hold a more positive stance towards EMI as they believe that it enables them to get into a more elite

group. This finding might be to do with females having more motivation to learn English or their common language proficiency as Macaro & Akıncıoğlu (2018) point out. A further study might examine the relationship between their motivational orientations. The perception towards EMI across genders such as finding a good job or being able to access international sources might be linked to inner or outside motivational patterns, so they might have made a difference across both genders. As gender issue in EMI contexts is quite difficult to find in the studies, its connection with other variables in educational contexts and also the underlying reasons for the disparity between the females and the males' opinions in relation to EMI practices need to be examined with detailed analysis.

As Macaro (2017) and Selvi (2014) highlight, there is no hard-nose evidence in choosing the one side of the continuum. To be able to decide whether EMI is a friend or a foe, we need to take each context uniquely into consideration, including the teaching pedagogy employed, the competency level of the instructors and their professional support, and also students' motivational orientations and belief systems. If the students do not believe in the benefit of EMI and put no effort into the process, there is no point in "friend or foe" issue. To conclude, in this context, where the system has been used for more than 60 years, students seem to be content with the upsides of EMI and if implemented with some care, it could lend itself to realize its proposed advantages for the long run.

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Appendix 1: Participants from Different Undergraduate Program

N		N		N		N		N	
Psychology	9	History	2	Industrial Engineering	5	Food Engineering	2	Mechanical Engineering	7
Aerospace Engineering	3	Electrical and Electronics Engineering	13	Petroleum and Natural Gas Engineering	4	Environmental Engineering	3	Philosophy	4
Geological Engineering	2	Business Administration	1	Economics	2	Mathematics	2	Early Childhood Education	1
Political Science and Public Administration	2	Elementary Science Education	1	Chemical Engineering	2	Computer Engineering	7	Civil Engineering	2
International relationships	2								

Note: N= The number of the participants

Appendix 2: The Survey

This survey aims to explore the perception of the students' who receives education at English-medium universities. This research is designed to come to a common conclusion and to get a general idea. Participating in the survey study depends on

a voluntary basis. Your responses as well as your ideas are really appreciated. Your responses will be evaluated only by the researcher and the data will be used in scientific publications. It takes approximately 10 minutes to finish answering the questions in the survey. Your responses will definitely be kept confidential.

Thank you very much for your participation.

Sibel Çağatay, ODTÜ-YDYO-Lecturer

PART 1: Demographic Information

Please circle the option that best describes you or your case. You can fill in the blanks if necessary.

Gender: Female ☐ Male ☐

Department :

Grade:

Freshmen: ☐ Junior: ☐

Sophomore: ☐ Senior: ☐

The Type of Your High School

Regular High School ☐ Anatolian High School ☐

Anatolian Vocational School ☐ Science School ☐

Private School: ☐ Anatolian Teachers' Training High School: ☐

Others: ☐

How long have you been learning English?

1-5 years: ☐ 6-10 years: ☐ 10-15 years: ☐ 16 + years: ☐

The recent English exam you took:

(IELTS, TOEFL, PROFICIENCY, YDS, KPDS, ÜDS):

Your score:

PART 2: THE PERCEPTION OF STUDENTS ON ENGLISH-MEDIUM INSTRUCTION AT UNIVERSITIES

Please read the statements below and mark the best alternative that best fits into your own opinion.

5: Strongly Agree; 4: Agree; 3: Not Sure; 2: Disagree; 1: Strongly Disagree

ITEM	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
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Qs 1. English-medium instruction in tertiary education is beneficial	5	4	3	2	1
Qs 2. English medium instruction affects the scientific and academic development of the native tongue.	5	4	3	2	1
Qs 3 .English-medium instruction is an effective way of learning the foreign language	5	4	3	2	1
Qs4.English-medium instruction negatively affects students' achievements in their disciplinary studies	5	4	3	2	1
Qs 5. English-medium instruction affects students' cognitive development in a positive way.	5	4	3	2	1
Qs6.English-medium instruction increases rote learning	5	4	3	2	1
Qs7.English-medium disciplinary learning helps students to succeed more in their academic studies.	5	4	3	2	1
Qs 8. English-medium instruction limits students' disciplinary knowledge.	5	4	3	2	1
Qs9.English-medium instruction contributes to the learning of English culture	5	4	3	2	1
Qs 10. There should be no English-	5	4	3	2	1

medium instruction in tertiary education.					
Qs 11. Going to a university where the medium of instruction is English helps one to have prestige in the society.	5	4	3	2	1
Qs 12. It is extra burden for me learning disciplinary terms in both English and Turkish.	5	4	3	2	1
Qs 13. EMI makes it easier to access disciplinary sources and materials.	5	4	3	2	1
Qs 14. I find it difficult to understand course materials in English-medium instruction.	5	4	3	2	1
Qs 15. English-medium instruction affects my academic success in a positive way.	5	4	3	2	1
Qs 16. I cannot understand English-medium lectures.	5	4	3	2	1
Qs 17 Graduating from a university where the medium of instruction is English provides one with better employment opportunities	5	4	3	2	1
Qs 18.It would be better to teach English in an active way instead of using English-medium instruction.	5	4	3	2	1
Qs 19. Teaching departmental courses in English enables the graduates of university to be successful in their occupations at an international platform	5	4	3	2	1

Qs 20. English-medium instruction negatively affects me in keeping my own cultural values.	5	4	3	2	1
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PART 3: PERSONAL OPINION:

1. What are the positive sides of English-medium instruction at your departments?

.....

2. What are the positive sides of English-medium instruction at your departments?

.....

3. Anything you want to add:

.....

Appendix 3: The Perception On The Advantages Of EMI

Item No			SA	A	NS	D	SD	\bar{x}	STD
Qs1	ELT	F	30	42.9	18.6	8.6		3.94	.91
		%	21	30	13	6			
	OTHERS	F	28	26	12	7	3	3.91	1.12
		%	36.8	34.2	15.8	9.2	3.9		
Qs 3	ELT	F	39	24	3	3	1	4.39	.87
		%	55.7	34.3	4.3	4.3	1.4		

Qs 5	OTHERS	F	31	25	5	9	6	3.87	1.2
		%	40.8	32.9	6.6	11.8	7.9		
Qs 5	ELT	F	15	28	18	8	1	3.69	.98
		%	21.4	40	25.7	11.4	1.4		
Qs 7	OTHERS	F	18	23	23	6	6	3.54	1.17
		%	23.7	30.3	30.3	7.9	7.9		
Qs 7	ELT	F	16	24	17	13		3.61	1.04
		%	22.9	34.3	24.3	18.6			
Qs 9	OTHERS	F	24	22	10	15	5	3.59	1.29
		%	31.6	28.9	13.2	19.7	6.6		
Qs 9	ELT	F	29	25	7	8	1	4.04	1.05
		%	41.4	35.7	10	11.4	1.4		
Qs 11	OTHERS	F	9	32	12	13	10	3.22	1.25
		%	11.8	42.1	15.8	17.1	13.2		
Qs 11	ELT	F	15	28	15	10	2	3.63	1.06
		%	21.4	40	21.4	14.3	2.9		
Qs 13	OTHERS	F	18	34	12	5	7	3.67	1.18
		%	23.7	44.7	15.8	6.6	9.2		
Qs 13	ELT	F	31	28	7	4		4.23	.85
		%	44.3	40	10	5.7			
Qs 15	OTHERS	F	47	22	2	1	4	4.41	1.00
		%	61.8	28.9	2.6	1.3	5.3		
Qs 15	ELT	F	18	22	19	8	3	3.63	1.11
		%	25.7	31.4	27.1	11.4	4.3		
Qs 17	OTHERS	F	8	5	27	24	12	2.64	1.15
		%	10.5	6.6	35.5	31.6	15.8		
Qs 17	ELT	F	33	28	8	1		4.20	.73
		%	47.1	40	11.4	1.4			
Qs 19	OTHERS	F	34	31	5	4	2	4.20	.96
		%	44.7	40.8	6.6	5.3	2.6		
Qs 19	ELT	F	29	33	3	3	2	4.33	.92
		%	41.4	47.1	4.3	4.3	2.9		
Qs 19	OTHERS	F	39	28	5	3	1	4.33	.87
		%	51.3	36.8	6.6	3.9	1.3		

Note. \bar{x} = Mean Score; STD= Standard Deviation; F= Frequency; SD= Strongly Disagree;

D=Disagree; NS= Not Sure; A=Agree; SA= Strongly Agree.

Qs 1 English-medium instruction in tertiary education is beneficial

Qs 3 English-medium instruction is an effective way of learning the foreign language

Qs 5 English-medium instruction affects students' cognitive development in a positive way.

Qs 7 English-medium disciplinary learning helps students to succeed more in their academic studies.

Qs 9. English-medium instruction contributes to the learning of English culture.

Qs 11 Going to a university where the medium of instruction is English helps one to have prestige in the society.

Qs 13 EMI makes it easier to access disciplinary sources and materials.

Qs 15 English-medium instruction affects my academic success in a positive way.

Qs 17 Graduating from a university where the medium of instruction is English provides one with better employment opportunities

Qs 19. Teaching departmental courses in English enables the graduates of university to be successful in their occupations at an international platform

Appendix 4: The Perception on the Disadvantages of EMI

Item No			SA	A	NS	D	SD	\bar{x}	STD
Qs 2	ELT	F	7	22	21	16	4	3.17	1.07
		%	10	31.4	30	22.9	5.7		
	OTHERS	F	11	20	13	19	13	2.96	1.34
		%	14.5	26.3	1.71	25	17.1		
Qs 4	ELT	F	11	19	8	25	13	3.11	1.02
		%	7.1	31.4	32.9	22.9	5.7		
	OTHERS	F	11	19	8	25	13	2.87	1.36
		%	14.5	25	10.15	32.9	17.1		
Qs 6	ELT	F	7	24	17	17	5	3.16	1.12
		%	10	34.3	24.3	24.3	7.1		
	OTHERS	F	16	25	9	12	14	3.22	1.42

Qs 8	ELT	%	21.1	32.9	11.8	15.8	18.4	3.31	1.08
		F	8	28	15	16	3		
	OTHERS	%	11.4	40	21.4	22.9	4.3	3.29	1.39
		F	17	25	8	15	11		
Qs 10	ELT	%	22.4	32.9	10.5	19.7	14.5	3.60	1.09
		F	13	31	16	5	5		
	OTHERS	%	18.6	44.3	22.9	7.1	7.1	3.66	1.21
		F	22	25	16	7	6		
Qs 12	ELT	%	28.9	32.9	21.1	9.2	7.9	3.33	1.13
		F	9	30	9	19	3		
	OTHERS	%	12.9	42.9	12.9	27.1	4.3	3.39	1.39
		F	19	26	8	12	11		
Qs 14	ELT	%	25	34.2	10.5	15.8	14.5	3.93	.96
		F	20	34	8	7	1		
	OTHERS	%	28.6	48.6	11.4	10	1.4	3.26	1.25
		F	13	27	9	21	6		
Qs 16	ELT	%	17.1	35.5	11.8	27.6	7.9	3.97	1.00
		F	22	34	6	6	2		
	OTHERS	%	2.9	8.6	8.6	31.4	48.6	3.21	1.21
		F	11	27	10	23	5		
Qs 18	ELT	%	14.5	35.5	13.2	30.3	6.6	2.74	1.16
		F	4	16	20	18	12		
	OTHERS	%	5.7	22.9	28.6	25.7	17.1	2.64	1.30
		F	5	19	17	14	21		
Qs 20	ELT	%	6.6	25	22.4	18.4	27.6	3.79	1.17
		F	23	25	9	10	13		
	OTHERS	%	32.9	35.7	12.9	14.3	4.3	3.89	1.15
		F	27	29	9	7	4		
		%	35.5	38.2	11.8	9.2	5.3		
		F							

Note. \bar{x} = Mean Score; STD= Standard Deviation; F=Frequency; SD= Strongly Disagree;

D=Disagree; NS= Not Sure; A=Agree; SA= Strongly Agree

Qs 2. English medium instruction affects the scientific and academic development of the native tongue.

Qs 4. English-medium instruction negatively affects students' achievements in their disciplinary studies.

Qs 6. English-medium instruction increases rote learning

Qs 8. English-medium instruction limits students' disciplinary knowledge.

Qs 10. There should be no English-medium instruction in tertiary education.

Qs 12. It is extra burden for me learning disciplinary terms in both English and Turkish.

Qs 14. I find it difficult to understand course materials in English-medium instruction.

Qs 16. I cannot understand English-medium lectures.

Qs 18. It would be better to teach English in an active way instead of using English-medium instruction.

Qs 20. English-medium instruction negatively affects me in keeping my own cultural values.