

T.C.
ULUDAĞ ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ
YABANCI DİLLER EĞİTİMİ ANABİLİM DALI
İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI

AN INVESTIGATION ON TURKISH MEDICAL STUDENTS'
EAP NEEDS
(YÜKSEK LİSANS TEZİ)

Neslihan ÖNDER

BURSA 2012

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Danışman: Yrd. Doç. Dr. Esim GÜRSOY

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EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

Yabancı Diller Eğitimi Anabilim Dalı, İngiliz Dili Eğitimi Bilim Dalı'nda 700860002 numaralı Neslihan ÖNDER'in hazırladığı "An Investigation on Turkish Medical Students' EAP Needs" konulu Yüksek Lisans Tezi Çalışması ile ilgili tez savunma sınavı, 07/03/2012 günü 14:00–16:00 saatleri arasında yapılmış, sorulan sorulara alınan cevaplar sonunda adayın tezi çalışmasını başarılı olduğuna oybirliği ile karar verilmiştir.

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07/03/2012

This thesis is dedicated to my lovely mother Sevinç ÖNDER with the hope that one day she will realise that the hours I spent studying and the determined effort I put for the honesty & truth are certainly worthwhile.

“Just as no medical intervention would be prescribed before a through diagnosis of what ails the patient, so no language teaching program should be designed without a through needs analysis. Every language course should be considered a course for specific purposes, varying only (and considerably, to be sure) in the precision with which learner needs can be specified...”

(Michael H. Long, 2005)

“Tell me what you need English for and I will tell you the English that you need.”

(Hutchinson & Waters, 1987)

ÖZET

Yazar	: Neslihan ÖNDER
Üniversite	: Uludağ Üniversitesi
Anabilim Dalı	: Yabancı Diller Eğitimi
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Bu boylamasına çalışma, Uludağ Üniversitesi Tıp Fakültesinde okuyan öğrencilerin Tıbbi İngilizce öğretimi ile ilgili ihtiyaçlarını belirlemeyi amaçlamaktadır. Öğrenci ihtiyaçlarını belirlemek için eleştirel ihtiyaç analizi uygulanmıştır. Veriler, tıp alanında eğitim gören öğrencilerden ve bu alanda çalışan uzmanlardan toplanmıştır. Tıp öğrencilerinin Tıbbi İngilizce öğrenimi ihtiyaçları ile ilgili geçerli ve güvenilir bir tablo çizmek için etnografik metot, yansıma raporu ve ana veri toplama aracı olarak da anket ve görüşme olmak üzere dört tür veri toplama aracı kullanılmıştır. Bu araştırmanın özel amaçlar için İngilizce öğretimi literatürüne en büyük katkısı, tıp öğrencilerinin eğitim ortamlarına özel olarak geliştirilen yeni bir anket oluşturulması ve anketten toplanan verilerin ayrıntılı görüşmelerle zenginleştirilmesidir. Tıp öğrencilerin aktif katılımını artırmak amacıyla, öğrencilere Mesleki İngilizce dersi ile ilgili beklentileri ve ihtiyaçları sorularak ortaya çıkan kompozisyonlardan bir anket geliştirilmiştir. Bu yeni ölçme aracının geliştirilmesinde izlenen yöntem, özel amaçlar için İngilizce öğretimi literatüründe daha önce kullanılmamış bir yöntemdir. Araştırmanın diğer önemli bir katkısı da çalışmanın güvenilirliği ve geçerliği için üçgenleme yönteminin kullanılmasıdır. Çalışmada toplam 525 katılımcı -186 katılımcı veri toplama araçlarının pilot çalışmasında, 339 katılımcı ise ana çalışmada- yer almıştır. Anket sonuçlarına göre Mesleki İngilizce dersini öğretecek olan

öğretim elemanın nitelikleri, İngilizce öğrenirken kullanılan metot ve stratejiler ve Tıbbi İngilizceyi kullanacakları ortamlar öğrenciler için öncelikli öneme sahiptir. Öğrencilerinin Tıbbi İngilizce öğrenme ile ilgili eksiklikleri ve problemleri de belirlenmiştir. Görüşmelerden elde edilen verilerde, akademisyen ve öğrencilerin sorulara verdikleri cevaplar karşılaştırıldığında, öğrenci ihtiyaçları belirlenirken öğrencilerin kendilerine danışılacak kadar güvenilir bir kaynak olabileceğidir. Bu çalışmadan ortaya çıkan veriler, Türkiye’de akademik ve profesyonel amaçlar için Tıbbi İngilizce derslerinin geliştirilmesinde kullanılabilir.

ANAHTAR KELİMELER:

Tıbbi İngilizce öğretimi, eleştirel ihtiyaç analizi

ABSTRACT

Yazar	: Neslihan ÖNDER
Üniversite	: Uludağ Üniversitesi
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This longitudinal study aims to diagnose the EAP needs of Turkish medical students regarding Medical English in the Faculty of Medicine at Uludag University. Ongoing critical needs analysis was employed to identify needs. The data was collected from medical students and specialists in medicine. To obtain a valid and reliable picture of the medical students' EAP needs, four different types of instrument were used, namely ethnographic methods, reflective journal, and as main data collection instruments questionnaire and interview. The principal contribution of the study to the field of ESP is a new questionnaire, which was developed specifically to the teaching context of Turkish medical students, and the findings of the questionnaire were enriched with in-depth interviews. To promote active involvement of the medical students, a questionnaire was developed from students' essays through asking what their expectations and needs are. The procedure that was followed while developing a new questionnaire has not been carried out in ESP literature before. Equally importantly, the findings are the results of the triangulation of data and method to ensure the reliability and validity of the findings. 525 participants -186 participants for piloting the instruments and 339 participants in the main study- involved in the study. The questionnaire results revealed that the qualifications of the instructors, the methods and strategies they use were very important and the settings

where Medical English is used were considered top priority among medical students. Medical students' shortcoming and problems related with learning English were also identified. Interview data analysis answered the question whether students could be a reliable source to refer to. When academics' and students' responses were compared, the analysis showed that students were highly likely to be a reliable source to consult to identify their learning needs in higher education. The findings obtained from this study can be used to develop Medical English courses for academic and professional purposes in Turkey.

KEY WORDS

Teaching Medical English, critical needs analysis

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This experience also taught me how to be an independent researcher as a scholarly writer and also to collaborate with the researchers and academics from other countries for future studies. Equally importantly, I learnt to see my strengths and weaknesses when conducting research.

The long journey is over now and this thesis was submitted in the first month of 2012 to bring me good luck for publications as a young academic.

Neslihan ÖNDER

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

1.0. INTRODUCTION	1
1.1. Background of the study	1
1.2. Statement of the problem	4
1.3. The purpose of the study	4
1.4. Significance and contribution of the study	5
1.5. Research questions	6
1.6. Structure of the dissertation	6

CHAPTER 2 REVIEW OF RELEVANT LITERATURE

2.0. REVIEW OF RELEVANT LITERATURE	7
2.1. English for Specific Purposes (ESP)	7
2.1.1. Definition and purpose of ESP	7
2.1.2. Classifications of ESP	9
2.2. Needs and needs analysis in ESP	11
2.2.1. Needs analysis	11
2.2.2. Types of needs analysis	12
2.2.3. Methodology in needs analysis	15
2.3. Critical pedagogy and critical thinking	18
2.3.1. An introduction to critical thinking and critical pedagogy... ..	18
2.3.2. Critical thinking and critical pedagogy in the context of EAP in higher education	20
2.3.3. The relationship between critical pedagogy, critical needs analysis and rights analysis	21
2.4. EAP, learner autonomy and rights analysis	24
2.4.1. Characteristics of a critical EAP practitioner and learner	25
2.5. Sample studies regarding needs analysis in the literature	26
2.6. Conclusion	30

CHAPTER 3 METHODOLOGY AND PROCEDURE

3.0. METHODOLOGY AND PROCEDURE	33
3.1 Research Setting	33
3.1.1. Participants	34

3.1.2. Description of the study and data collection procedure	37
3.2. Data collection instruments	39
3.2.1. Ethnography and classroom observation	39
3.2.2. Reflective journal and field notes	39
3.2.3. Questionnaire	42
3.2.4. Interview design and procedure	48
3.3. Validity and reliability of the instruments	50
3.4. Action research	51
3.4.1. Data collection methods and diagnosing the problem	51
3.4.2. Action research plan	52
3.5. Data Analysis	52
3.5.1. Quantitative method/Statistical methods	52
3.5.2. Qualitative Methods	54
3.5.2.1. Transcribing and coding the interview data	54
3.6. Practical Issues and Constraints	55
3.7. Conclusion	56

CHAPTER 4 RESULTS AND DISCUSSION

4.0. RESULTS AND DISCUSSION	57
4.1. What are the perceived needs of Turkish medical students with regard to learning Medical English as a foreign language in the Faculty of Medicine?	57
4.2. Are there any differences between the first and second cohort of Turkish medical students' perceptions regarding learning Medical English? If so, what are the differences?	69
4.3. Are there any differences between the perceptions of academics (i.e., dean content instructors, research assistants) and medical students regarding EAP needs in the Faculty of Medicine? If so, what are the differences?	103
4.4. What are the perceptions of doctors in a private hospital and Bursa Health Directorate?	114

CHAPTER 5 CONCLUSION

5.0. CONCLUSION	117
5.1. Summary of the main findings	117
5.2. Pedagogical implications of the study.....	118
5.3. Limitations of the study.....	120
5.4. Recommendations for further research	120

References	121
Appendices	132

LIST OF TABLES

Table 2.1 Types of needs	14
Table 3.1 High school students are graduated from	36
Table 3.2 New students in the Faculty of Medicine	36
Table 3.3 Key dimensions of observation	40
Table 3.4 Samples from the raw data	44
Table 3.5 Participants involved in the interview	49
Table 3.6 Total number of the participants in the interview	50
Table 4.1 Overall response for Questionnaire part A	59
Table 4.2 Overall response for Questionnaire part B	60
Table 4.3 Overall response for Questionnaire part C	61
Table 4.4 Overall response for Questionnaire part D	63
Table 4.5 Overall response for Questionnaire part E	64
Table 4.6 Overall response for Questionnaire part F	65
Table 4.7 Overall response for Questionnaire part G	65
Table 4.8 Overall response for Questionnaire part H	66
Table 4.9 Descriptive statistics for the eight aspects showing students' needs for learning Medical English	67
Table 4.10 Regression analysis of the derived construct A	84
Table 4.11 Regression analysis of the derived construct B	86
Table 4.12 Regression analysis of the derived construct C.	89
Table 4.13 Regression analysis of the derived construct D.	91
Table 4.14 Regression analysis of the derived construct E.	94
Table 4.15 Regression analysis of the derived construct F.	96
Table 4.16 Regression analysis of the derived construct G.	99
Table 4.17 Regression analysis of the derived construct H.	101
Table 4.18 Result of multivariate analysis of covariance	102
Table 4.19 Summary of outsider participants' comments regarding Medical English	105
Table 4.20 Summary of outsider participants' comments regarding Medical English	115

LIST OF FIGURES

Figure 1.1 The tree of ELT	2
Figure 2.1 Classification of ESP	10
Figure 3.1 The relationship between three parties	34
Figure 3.2 Phases of research including pre-pilot, pilot and main study and the tools employed	38
Figure 4.1 Mean scores of the eight aspects of students' needs for learning Medical English	58
Figure 4.2 Distribution of responses to questions regarding qualifications of the instructor	69
Figure 4.3 Distribution of response to questions regarding self-perceived shortcomings	72
Figure 4.4 Distribution of response to questions regarding methods and strategies	73
Figure 4.5 Distribution of responses to questions regarding attitude towards English learning	75
Figure 4.6 Distribution of responses to questions regarding where English will be used	77
Figure 4.7 Distribution of responses to questions regarding problems in English learning	78
Figure 4.8 Distribution of responses to questions regarding importance of English	79
Figure 4.9 Distribution of responses to questions regarding purpose of acquiring competence in English language	81
Figure 4.10 Distribution of the scores on the derived construct A (Qualification and skills of the teacher) among old and new students	83
Figure 4.11 Distribution of the scores on the derived construct A (Qualification and skills of the teacher) among males and female of old and new students	84
Figure 4.12 Distribution of the scores on the derived construct B (Self-perceived short-comings of the students) among old and new students	85
Figure 4.13 Distribution of the scores on the derived construct B (Self-perceived shortcomings of learning medical English) among male and female students of the three type of schools	87
Figure 4.14 Distribution of the scores on the derived construct C. Methods and strategies of learning English among new and old students	88
Figure 4.15 Distribution of the scores on the derived construct C (Methods and strategies of learning English) among male and female old and new students	89
Figure 4.16 Distribution of the scores on the derived construct D. Affective domain: Attitude towards learning English among new and old students ...	90
Figure 4.17a Distribution of the scores on the derived construct D. Affective	

domain: Attitude towards learning English among old male and female students of the three types of schools	92
Figure 4.17b Distribution of the scores on the derived construct D. Affective domain: Attitude towards learning English among old male and female students of the three types of schools	92
Figure 4.18 Distribution of the scores on the derived construct E. Awareness of settings where English will be used among new and old students	93
Figure 4.19 Distribution of the scores on the derived construct E. Awareness of settings where English will be used, among male and female students of the two groups of students	94
Figure 4.20 Distribution of the scores on the derived construct F. Awareness of problems during medical English learning process, among new and old students	95
Figure 4.21 Distribution of the scores on the derived construct F. Awareness of problems during medical English learning process, among male and female students of the two group of students	97
Figure 4.22 Distribution of the scores on the derived construct G. Awareness of importance of English	98
Figure 4.23a Distribution of the scores on the derived construct G. Awareness of importance of English, among old male and female students of the three schools	99
Figure 4.23b Distribution of the scores on the derived construct G. Awareness of importance of English, among new male and female students of the three schools	100
Figure 4.24 Distribution of the scores on the derived construct H. Purpose of acquiring competence in English language among new and old students ...	101

LIST OF ABBREVIATIONS

- AR : Action research
- EAP : English for Academic Purposes
- ELT : English Language Teaching
- EMP : English for Medical Purposes
- EOP : English for Occupational Purposes
- ESP : English for Specific Purposes
- GE : General English
- PSA : Present situation analysis
- TSA : Target situation analysis

CHAPTER 1– INTRODUCTION

1.1 Background of the study

English language teaching (ELT) encapsulates a number of branches, including English for Specific Purposes (ESP), English for Academic Purposes (EAP) and General English (GE) as shown in the ELT tree in Figure 1.1. ESP provides contexts to meet specific needs and purposes of learners. Hutchinson and Waters (1987) point out that “the foundation of ESP is the simple question: Why does the learner need to learn a foreign language?” (p. 19). ESP courses are

“...those in which the aims and the content are determined, principally or wholly, not by criteria of general education (as when ‘English’ is a foreign language subject in school) but by functional and practical English requirements of the learner. ESP courses focuses on “functional and practical English language requirements of the learner” (Stevens, 1977, p. 90)

Many researchers (e.g., Dudley-Evans & St. John, 1998; Hutchinson & Waters, 1987; Hyland, 2006; McDonough, 1984; Stevens, 1977) discussed the commonalities and differences between teaching ESP and GE. ESP is narrower in focus than GE; therefore, ESP is based on a tailored-to-fit instruction (Belcher, 2006) and highlights practical implications and practice in teaching English (Hyland, 2006).

It is widely accepted that needs analysis has been introduced to the literature through ESP, which is a distinct and vital prerequisite as a key instrument for an effective programme design (see Allwright, 1982; Basturkmen, 2010; Dudley-Evans & St. John, 1998; Hutchinson & Waters, 1987; Long, 2005; Nunan, 1988; Richards, 2001; West, 1994 but see van Hest & Oud-De Glas, 1990). Thanks to the ESP movement, needs analysis drew close attention and even affected teaching GE although there are very few needs analyses due to scant attention in GE teaching. The notion of need “tends to be

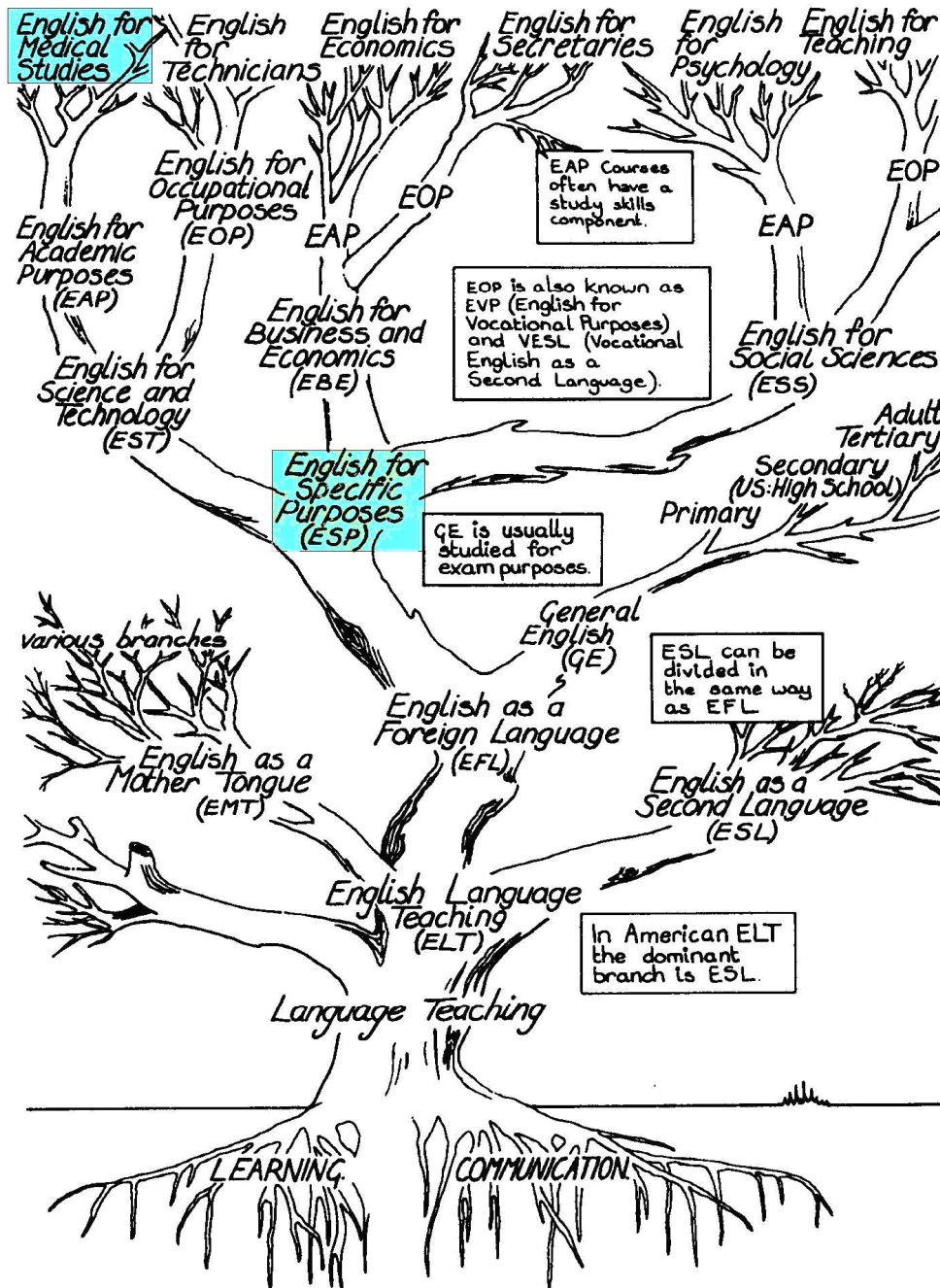


Figure 1.1. The tree of ELT (Hutchinson & Waters, 1978, p.17)

associated with ESP, and is neglected in the General English classroom” (Seedhouse, 1995, p. 59). There are various kinds of needs analysis including target situation analysis, deficiency analysis, present-situation analysis and critical needs analysis, which will be described in the following chapter in detail. This study will mainly focus on critical needs analysis highlighting the view that students should be encouraged to talk about their opinions, suggestions, aims and needs as a reflective practice, which is an important aspect of critical needs analysis (Benesch, 2001). Critical needs analysis, also known as rights analysis, focuses on democratic participation and power relations for everybody, and accepts students as members of society (Benesch, 2001). It can be perceived as a component of critical pedagogy and critical EAP.

Recently, critical EAP, as a result of the use of critical pedagogy, has a growing importance in ESP. Critical pedagogy in education demystifies the inequalities, and encourages learners to question, in order to democratise both their learning process and their work life. In the context of critical EAP, Benesch (2001) examines the term ‘needs analysis’ and proposes ‘rights analysis’ for the learners’ needs and accepting that critical EAP depends on needs analysis and critical needs analysis.

“My point [is] that EAP curricula [are] based strictly on institutional requirements, with no input from students. Yet, instead of labelling "needs" as such, EAP researchers referred to them as student "needs" as if what students required [is] identical to, or congruent with, academic requirements. The reason I proposed "rights" [is] to distinguish academic requirements and what students might see as their own needs. It [is] my way to make room for student input and action in shaping their academic experience” (S. Benesh, personal communication, 07 November, 2010).

Given the significance of needs analysis in the literature, language *needs* has never been clearly defined and remains ambiguous (Reichnerich, 1983), which leads to various interpretations. West (1994), for example, suggests that the underlying reason why ‘language needs’ cannot be clarified is that this term embodies various concepts, including

necessities and demands (Hutchinson & Waters, 1987; Reichterich, 1973), learning strategies (Allwright, 1982) and lacks (Allwright & Allwright, 1977) although needs are conventionally defined as “the gap between what is and what should be” (Brindley, 1989, p. 65).

Richards (2001) suggests that needs analysis can be used for a variety of purposes:

- “to find out what skills a learner needs in order to perform a particular role...
- to identify a gap between what students are able to do and what they need to be able to do
- to collect information about a particular problem learners are experiencing” (p. 52).

Indeed, the underlying purposes above may have a considerable effect on course design. The crux of the matter is that the significance of the reciprocal cooperation between parties (i.e., students, instructors, administrators), called needs analysis triangle, to reach all the parties in education by triangulating data for more reliable results. It is also notable that, recently, the focus of needs analysis has changed. Early needs analysis focused on occupational language but later researchers have paid attention to academic language (West, 1994) as EAP.

1.2 Statement of the problem

Current literature on needs analysis pinpoints that there is often lack of research on improving data collection methods and equally importantly insiders’ perspectives in identifying needs tend to be overlooked. Different data and/or methods can be triangulated to focus on both insiders’ (i.e., students, academics) and outsiders’ (i.e., experts) views (see Long, 2005; West, 1984). However, very few studies used triangulation (e.g., Jasso-Aguilar, 1999).

1.3 The purpose of the study

The present study aims to diagnose the needs of Turkish medical students regarding Medical English course in the Faculty of Medicine at Uludag University by proposing a newly designed questionnaire specific to the teaching context of Turkish medical students

that acted as the basis of the interviews with the students and specialists. Face-to-face interview data was collected to supplement the questionnaire findings to allow all the stakeholders (i.e., students, academics, doctors) to voice their perceptions on the needs of medical students and also to provide new insights into the literature regarding critical needs analysis and how power relations in EAP classrooms could be balanced.

1.4 The significance and contribution of the study

Needs analysis is fundamental to ESP; however, empirical studies with regard to needs analysis still have some limitations particularly concerning their methodology, which is of vital importance to ensure the reliability and validity of the findings. For example, the validity and reliability issues of the instruments and results are rarely discussed and largely under-researched (Long, 2005; van Hest & Oud-de Glas, 1990) and surprisingly triangulation of the data and method has rarely been employed in the previous research. West (1994) criticizes that how little attention is paid to the learners as a source of information in needs analysis. Accordingly, the principal contribution of the study is to help address this niche, the researcher has employed a new questionnaire from the essays of medical students that has been newly devised with regard to her teaching context of Turkish medical students in the Faculty of Medicine. This study also concentrates on the process of why and how this instrument was constructed by indicating its validity and reliability to reveal medical students' needs. The additional insight of this study is that a set of qualitative and quantitative techniques have been employed by collecting detailed information regarding learners' present and target needs from all the stakeholders. To my best of knowledge, this study is the first attempt in the literature about triangulating both methods and data as a longitudinal study by comparing Turkish medical students' needs in two different periods of time. Given these contribution, the findings may have significant implications for course design and for the implementation of ESP programmes in order to meet medical students' needs in academic and professional settings, while also responding to the changing needs (Richterich & Chancerel, 1977) in mainstream EAP classrooms.

Based on the findings, this study draws tentative conclusions that may contribute to the literature concerning the methodology in critical needs analysis.

1.5 Research questions

This study aims to investigate the following research questions:

1. What are the perceived needs of Turkish medical students with regard to learning Medical English as a foreign language in the Faculty of Medicine?
2. Are there any differences between the first and second cohort of Turkish medical students' perceptions regarding learning Medical English? If so, what are the differences?
3. Are there any differences between the perceptions of academics and medical students regarding EAP needs? If so, what are the differences?
4. What are the perceptions of doctors in private hospital and health directorship?

1.6 Structure of the dissertation

The dissertation consists of five chapters. Following the introductory chapter, Chapter 2 will review the relevant literature related with ESP and previous empirical research. Chapter 3 presents a detailed research design of the study including the rationale for the choice of research tools. Chapter 4 will elaborate and discuss the research questions, and this chapter will further investigate and discuss the results of the analyses, accompanied by a detailed analysis of the data. Finally, Chapter 5 will summarise the results, discuss the significant pedagogical implications of the main findings for ESP/EAP classrooms, present the limitations of the study and make recommendations for future studies.

CHAPTER 2 – REVIEW OF RELEVANT LITERATURE

In this chapter, the relevant literature will be reviewed in the areas of ESP, EAP, English for Medical Purposes (EMP) and GE, including a consideration of needs analysis, critical needs analysis, rights analysis, critical thinking in the context of teaching EAP in higher education. Specifically, the first section focuses on the definition, purpose and various classifications of ESP, and also the relationship between ESP, EAP, EMP and GE (2.1). The second section investigates the definition of needs and needs analysis and particularly types of needs analysis and the methodology. Included in this chapter are the data collection for needs analysis, the effects of social context on determining needs, the changes that needs analysis has undergone in ESP, and also the relationship between needs and rights analysis (2.2). The third section explores the description of critical pedagogy and critical thinking, and the characteristics of a critical EAP/ESP practitioner and student (2.3). The fourth section focuses on EAP, learner autonomy and rights analysis (2.4). The fifth section summarizes relevant sample studies pertaining to needs analysis in Medical English teaching, which is the main research of interest to this study, in the context of EAP and English for Occupational Purposes (EOP) (2.5). The literature review concludes with a brief summary (2.6).

2.1 English for Specific Purposes

2.1.1 Definition and purpose of ESP

ESP, also known as languages for specific purposes, has flourished as a separate dynamic discipline within the overall field of ELT since its early beginnings in the 1960s. Because GE does not meet the learners' specific language needs, ESP has paved the way for new insights into teaching and learning. From the outset, the definition of the umbrella term, ESP, and the ESP courses have been continuing topics of discussion among researchers for years; therefore, there have been various attempts to define ESP with different foci in the literature. (e.g., Basturkmen, 2006; Belcher, 2004; Brumfit, 1980;

Dudley-Evans & St. John, 1998; Flowerdew, 1990; Hutchinson & Waters, 1987; Hyland 2006; Mackay & Mounthford, 1978; McDonough, 1986; Munby, 1978; Orr 2001; Richards 2001; Robinson, 1980; Strevens, 1977, 1988; Swales, 2000; West, 1994). In the literature, Munby's definition of ESP course is considered a starting-point to revitalise and highlight learner needs:

“ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner, rather than by nonlearner-centred criteria such as the teacher's or institution's predetermined preference for general English or for treating English as a part of a general education” (Munby, 1978, p. 29).

Hutchinson and Waters (1987) suggest that ESP should aim to equip learners with the competence and skills needed to communicate in the target situation. They further argue that the only way to make ESP completely learning-centred is through the use of the communicative approach, which can be realised thanks to the real analysis of students' needs and expectations or the analysis of real negotiation with students in an ESP context.

Strevens (1988) uses absolute and variable characteristics in his definitions, which were modified by Dudley-Evans and St. John (1998). After modification, absolute characteristics include three and variable characteristics consist of four dimensions that provide insights into the world of ESP:

- “1. ESP is defined to meet the specific needs of the learner;
2. ESP makes use of the methodology and activities of the disciplines it serves;
3. ESP is centred on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities.

And the variable characteristics include:

1. ESP *may be* related to or designed for specific disciplines;
2. ESP *may use*, in specific teaching situations, a different methodology from that of general English;
3. ESP is likely to be designed for adult learners;

4. ESP is generally designed for intermediate or advanced students” (p. 4-5).

In line with the variable characteristics, Richards (2001) explains the differences between the purposes of learning GE and ESP explicitly:

“In contrast to students learning English for general purposes for whom mastery of the language for its own sake or in order to pass a general examination is the primary goal, the ESP student is usually studying English in order to carry out a particular role, such as that of foreign student in an English-medium university, flight attendant, mechanic, or doctor” (p. 28).

On the other hand, although few, some researchers (e.g., Flowerdew 1990) claim that ESP has not established itself as a clear area within ELT. ESP is “...not any new body of dogma but is essentially a pragmatic response to a developing situation...” and “...a shift of emphasis in ELT syllabus” (Mackay & Mountford, 1978, p. 1). Researchers also have different opinions as to whether ESP is a new approach. According to Brumfit (1977), ESP is not a new approach but is a new emphasis in teaching, whereas Hutchinson and Waters (1987) suggest that ESP should be considered as an approach to language teaching directed by specific reasons, therefore, it is not particularly a language product.

When the different definitions of ESP are scrutinised in the literature, it is evident that most of the definitions include the purpose of ESP, which is a fundamental and central tenet, and also may lead to an explanation why ESP has emerged in contextualised language teaching. All in all, different definitions of ESP tend to provide an answer to the question as to why ESP and ESP courses have emerged.

2.1.2 Classifications of ESP

Since ESP is a material and teaching-led movement (Dudley-Evans & St. John, 1998), most of the contributions in the literature suggest that ESP concentrates on practice, and addresses the needs of learners in preparing particular teaching materials and developing appropriate teaching methods. This characteristic leads to different taxonomies related to meeting specific needs. According to a number of researchers (e.g., Dudley-Evans & St.

John, 1998; Hutchinson & Waters, 1987; Mackay & Mountford, 1978; McDonough, 1984; Robinson, 1991; Strevens, 1977 to name a few), ESP has two sub-divisions: EAP and EOP.

EAP is a branch of ESP and targets university students who are studying English for specific purposes. It involves teaching learners to use language appropriately for study purposes. ESP can be thought of in connection with a job or a profession. These occupational courses can be in two forms: pre-experience and post-experience courses, which indicate if the learners have experience in their professions or jobs which can affect their knowledge of specific English. Educational ESP exists as disciplined-based ESP and school subject ESP. Disciplined-based ESP is regarded as EAP in higher education, which is in the context of a discipline (e.g., medicine). And also, it is further divided into *pre-study*, when learners are learning English during their education, or *in-study*, after they completed their studies. EAP encompasses various fields of study, including English for medical purposes (see Figure 2.2).

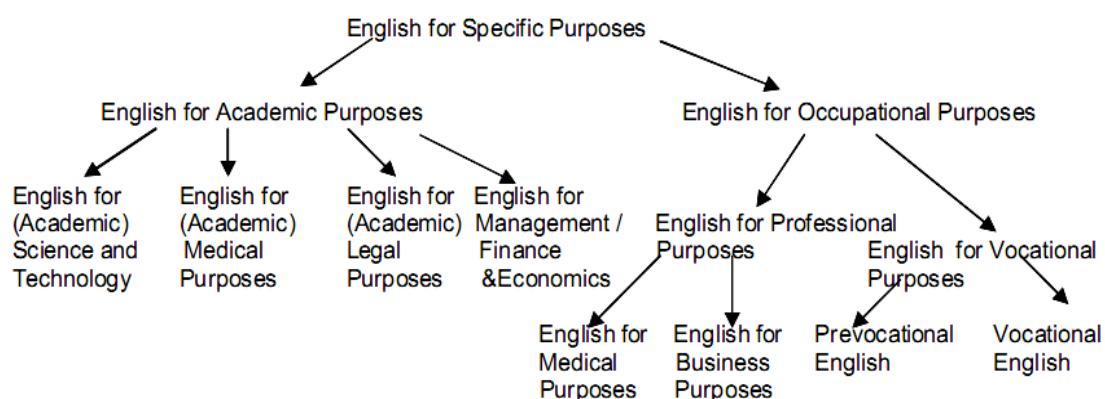


Figure 2.1. Classification of ESP (Dudley-Evans and St. John, 1998, p. 6)

There is a consensus in the literature that the terms, EAP and EOP, can be explained in terms of their purposes. The former refers to English for academic and study purposes, including learners from different fields such as students who are studying medicine, engineering or agriculture. On the other hand, the latter refers to English for professional and vocational purposes, including people who are in employment.

For example, when the needs of a practising doctor or a nurse in hospitals are discussed in terms of Medical English, ESP is for occupational purposes. However, educational aspects are of paramount importance when university students who are studying medicine are considered, so in this context, English is for academic purposes. Medical students' writing and reading needs (i.e., articles and clinical reports) are EAP needs, while practising doctors may have different needs (i.e., interacting with a patient, presentations for conferences, or writing a medical article), which is considered EOP (Dudley-Evans & St. John, 1998). This distinction affects the needs of the target groups, as do the aims, materials, methodology and course design, despite the fact that the distinction between EAP and EOP may sometimes be subtle, for "people can work and study simultaneously" (Hutchinson & Waters, 1987, p.16) indeed.

2.2 Needs and needs analysis in ESP

The definition of *needs* is both ambiguous and imprecise (see Chambers, 1980; Reichertich, 1983). It is not simple and easy to understand, and has never been clearly defined, since needs can change quickly (Richterich & Chancerel, 1977). Common controversial topics concerning needs in ESP are the definition of needs, the question of whose needs we ought to be concerned with, and how to determine and establish needs. The definition, although subjective, highlights the gap between current states and desired future states (Jordan, 1997). The problem in defining needs is the question: the specification of who needs what.

2.2.1 Needs analysis

Needs analysis, also referred to as needs assessment, is considered an on-going process of questioning to revise the effectiveness of the objectives and course design. In this study Brown's (1995) definition is used that is compatible with the methodology of the present study. Needs analysis refers to

“...the systematic collection and analysis of all subjective and objective information necessary to define and validate defensible curriculum purposes that satisfy the

language learning requirements of students within the context of particular institutions that influence the learning and teaching situation” (p. 36).

Learners can have different language and learning needs. Therefore, this growing field of specialisation has a marked effect on the development of each language programme in ESP through the use of needs analysis. The realisation is that a practitioner’s intuition is not sufficient to identify the needs of students paved the way for new specific contexts, and highlighted the significance of needs analysis. Therefore, ESP courses focus on tailoring and satisfying the needs of learners by providing appropriate teaching materials to carry out a manageable task within a reasonable time and with a reasonable amount of effort.

When the history of the needs analysis is scrutinised, the scope and focus of needs have changed from occupational to academic needs (West, 1994). Therefore, there is an urgent need to question the steps in needs analysis in order to diagnose and understand the academic and occupational needs of language learners. Such an advance is crucial in ESP (Onder, 2010). In addition, a number of researchers (e.g., Allwright, 1982; Basturkmen 2006, 2010; Belcher, 2004; Benesch, 2001; Berwick, 1989; Bosuwon & Woodrow, 2009; Brown, 1995; Dudley-Evans & St. John, 1998; Finney, 2002; Gillet, 1989; Graves, 2000; Hutchinson & Waters, 1987; Hyland, 2006; Johns, 1991; Jordan, 1997; Long, 2005; Mackay & Mounford, 1978; Munby, 1978; McDonough, 1984; Nunan, 1988, 1996; Richards, 2001; Richter & Chancerel, 1977; Robinson 1991; Seedhouse, 1995; Strevens, 1977; West 1994; Wilkins, 1976) suggest that needs analysis is a vital prerequisite in creating effective course curricula and materials to meet the needs of learners. Instead of the necessities of an external syllabus, the needs and feelings of the learner highlighted in ESP and ESP courses should be developed on the basis of a needs analysis (Robinson, 1980).

2.2.2 Types of needs analysis

In the 1970s, with Munby’s (1978) approach, NA became the centre of attention among researchers and paved the way for the growth of ESP in language teaching. As expected after all the discussions, needs analysis has embodied various types:

Target situation analysis (TSA): Target situation analysis focuses on the learners' needs at the end of a language course. Munby's (1978) *Communicative Syllabus Design* is the most widely known needs analysis, which focuses on target situation analysis. Schutz and Derwing (1981) summarise the profile of communicative needs considering Munby's description as personal information, including learners' background, educational or occupational objectives, setting where the target language will be used, interactional variables that are based on the role relationships to be involved in the target language, communicative means, dialects, target level, anticipated communicative events and also keys in which communication takes place. Other researchers (e.g., Chambers, 1980), similarly, highlighted the characteristic of needs analysis as communication in the target situation.

Deficiency analysis: Since target needs analysis alone provides limited direction to classroom practitioners, needs analysis embodies deficiency analysis that focuses on the differences between target language use and the current learner proficiencies to reveal needs (Allwright, 1982; Jordan, 1997).

Present-situation analysis (PSA): Richterich and Chancerel (1977) propose the use of present-situation analysis in which learners take responsibility for their learning and they are the source of information. It can be seen as a complement of target situation analysis.

Learning-centred approaches: In this approach "learning is determined by the learner (and thus probably does not truly exist); whereas learning-centred involves learning as a process of negotiation between individuals and society" (Jordan, 1997). It is likely that learners' felt needs can conflict with the perceptions of other parties, including practitioners, sponsors or the managers. ESP practitioner should be aware of such differences. There is "little point in taking an ESP approach, which is based on the principle of learner involvement, and ignoring the learners' wishes and views" (Hutkinson & Waters, 1987, p. 58).

Strategy analysis/Learning needs analysis: Strategy analysis refers to strategies that learners use to learn a language. Allwright (1982), who is the pioneer, focuses on learner

autonomy, and suggests giving the responsibility for identifying needs to the learners themselves. Learners' own perceptions regarding their needs are important in terms of strategy analysis. He divides this process into *needs*, *wants* and *lacks*.

Means analysis: Means analysis focuses on the setting in which language is used. (Holliday & Cooke, 1982). Holliday (1984) suggests four steps in means analysis: (1) lesson observation; (2) use of notes to report the lesson; (3) summary of the observations and (4) present the findings in a communicative device. The main issue with means analysis is that "what works well in one situation may not work in another" (Dudley-Evans & St. John, 1998).

Participatory needs analysis: Robinson (1991) suggests that "...where students have already started their specialist studies, they can report to the ESP practitioners on the needs which emerge in the course of those studies" (p. 15).

Moreover, according to Dudley-Evans and St. John (1998), similar to Richard's (2001) suggestion, current needs analysis aims to cover the following types of needs:

Table 2.1

Types of needs

Definition	Types of needs
A. Professional communication about the learners: the tasks and activities learners are/will be using English for	target situation analysis and objective needs
B. Personal information about learners: factors which may affect the way they learn such as previous learning experiences, cultural information, reasons for attending the course and expectations of it, attitude to English	wants, means, subjective needs
C. English language information about the learners: what their current skills and language use are	present situation analysis-which allows us to assess
D. The learners' lacks: the gap between (C) and (A)	lacks
E. Language learning information: effective ways of learning the skills and language in (D)	learning needs
F. Professional communication information about (A): knowledge of how language and skills are used in the target situation	linguistic analysis, discourse analysis, genre analysis
G. What is wanted from the course	—
H. Information about the environment in which the course will be run	means analysis

2.2.3 Methodology in needs analysis

Since needs can be various depending on the learners' background, aims, priorities, job requirements or culture, there has also been an on-going debate on the methods employed to define such needs. It is well-known that needs analysis obtains both subjective and objective information through its data collection methods. If these needs are identified, they can be a basis to improve teaching by providing goals and objectives and also for developing materials, tests and teaching activities (Brown, 1995). Considering these variables, interpretations, assumptions or instincts, evaluating needs from outside can be misleading when it comes to designing a course. Therefore, there is a consensus on collecting data through triangulation, which increases the reliability and the validity of data (Brown, 1995; Jordan, 1997). Similarly, as Pratt (1980) highlights the fact that needs analysis is "an array of procedures for identifying and validating needs, and establishing priorities among them" (p. 79).

When the types of needs are considered, a variety of different methods and also resources are available and recommended. Brown (1995) suggests twenty four different methods to collect data for needs. These are grouped into six main categories: existing information, tests, observations, interviews, meetings and questionnaires. On the other hand, Jordan (1997) lists fourteen procedures for collecting data, including documentation, tests, questionnaires, forms/checklists, interviews, record-keeping and observation.

Collecting data from various sources by triangulating resources as part of a mixed research method is obviously essential to provide vital evidence for needs analysis. Richterich and Chancerel (1977) suggest that in a need analysis not only the learners but also the practitioners, employers and other stakeholders should take part in the process, since they may have different needs. For example, when analysing the needs of learners, the questions should not be asked of only learners, but should be asked of the teaching staff as well, and also third parties if available. Analysing learners' needs, practitioners' needs and administrators' needs are suggested in EAP programmes, and it is one of the main characteristics of a communicative curriculum (see Breen & Cadlin, 1980). Therefore,

mainly ESP curriculum designers or practitioners use needs analysis to investigate learner needs to specify the content of course syllabi and to set out aims.

Authentic texts are significant in ESP (Brown, 1995; Dudley-Evans & St. John, 1998; West, 1991) and can be employed to put new insights into needs analysis, since learners may be exposed to different kinds of written or spoken texts in the future when the learners' target work-places are considered. Hyland (2006) criticises that there is scant interest in using authentic texts as data collection methods and he further points out that questionnaires and surveys are overused despite their limited reliability when it comes to defining needs, and suggests the need to analyse authentic texts. However, it is worth highlighting that the time, the resources and the privacy available may affect which data collection procedure the researcher will employ.

Questionnaires are the most common instrument used by researchers to reveal learners' needs. Many of the research methods related to needs analysis involve structured or semi-structured interviews and written questionnaires, although these approaches have been heavily criticised (see Brown, 1992; Long, 2005; West, 1994). In addition, despite the critical importance of needs analysis in ESP, there has been little research (see Long, 2005; van Hest & Oud-de Glas, 1990) on methodology reported in the literature. The research is either into comments on the results of a needs analysis, or some claims about the most appropriate needs analysis methodology, without offering any proof. However, when the most up to date studies are compared to previous studies, the methods employed in needs analyses are improving, despite the fact that it is a slow process (Long, 2005). To sum up, although a number of researchers have highlighted the significance and necessity of needs analysis, and the urgent need for new insights into its methodology as discussed above, methodology with regard to needs analysis has been heavily questioned and criticised for a variety of reasons. The key points in the criticisms focus on the question of whether or not learners are reliable sources to refer (Chambers, 1980; Long, 1996), which will be one of the crucial aims of the study to answer Chamber's question. Lack of necessary information regarding the validity or reliability of the instruments is also another crucial deficiency in

any discussion of data collection methods (West, 1994). Some characteristics of ESP are under debate including if the course should be designed just considering the students' needs (Anthony, 1997). What is more, there are a number of problems with regard to conducting a needs analysis, including management problems, the nature of the data identified by needs analysis, and the relationship between the findings and the content of the curriculum. There are other criticisms of needs analysis as well. For example, Hutchinson and Waters (1987) suggest that the awareness of the need characterises the situation. Therefore, the concept of 'learner needs' is open to interpretation.

“Any real needs analysis is liable to suffer from a number of drawbacks, such as the lack of a common language between informant/student and teacher and lack of information regarding job specification either because the student is novice or trainee in his subject or because there is no access to the employee/subject specialist teacher” (Robinson, 1980, pp. 30-31).

One of the striking criticisms relevant to the aim of the present study comes from Chambers (1980) who highlighted that “...whoever determines needs largely determines which needs are determined” (p. 27). Similarly, Dudley-Evans and St. John (1998) suggest that “the findings from a needs analysis are not absolute but relative and there is no single, unique set of needs. The findings depend on who asks what questions and how the responses are interpreted” (p. 126). Surprisingly, however, when the data collection methods are examined, the items in the questionnaires and the questions in the interviews are prepared without any input from learners. Therefore, this will also raise a critical question in this study since the people in charge of the educational process put their choices in front of the learners and expect them to choose, indeed. It should be questioned if they really are the learners' choices as needs or the choices of people in charge.

The literature covers a variety of needs analyses approaches that cast some light on the importance of needs and methodology when it comes to identifying needs (e.g., Basturkmen 1998; Benesch, 2001; Bosuwon & Woodrow 2009; Chia, Johnson, Chia &

Olive, 1999; Corcos & Storey 2001; Ferris 1998; Holme & Chalauisaeng 2006; Huang, 2010; Richterich & Chancerel, 1977; Shi, So-mui & Mead 2000).

2.3 Critical pedagogy and critical thinking

“The principal goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done; men and women who are creative, inventive and discoverers, who can be critical and verify, and not accept, everything they are offered.”

(Jean Piaget, Swiss philosopher and scientist, 1988)

2.3.1 An introduction to critical thinking and critical pedagogy

In the present study, in contrast to the previous studies regarding needs analysis, critical pedagogy and critical thinking in education are addressed in terms of the relevance of the data collection methods to the characteristics of critical pedagogy.

Critical thinking is one of the terms in education that researchers widely discuss but cannot reach a consensus about. According to Crawford (1978) there are 20 principles that can be found with regard to teaching English as a foreign language/second language in critical pedagogy. Some of the principles that are relevant to the present study regarding critical pedagogy include:

1. Presenting students' situation as a problem to reflect about and to act on, which is the purpose of education,
2. Practitioners' participation and contribution in teaching as a life-long learner,
3. Practitioners' role as an individual presenting the problem,
4. Creating a learning atmosphere where students can have the right and the power to express themselves and make decisions.

Critical thinking focuses on mostly some certain common issues, including questioning, self-reflection, contexts and inequalities, as the following definitions by a number of researchers reveal: “serious skepticism” (Luke, 1992, p. 49); “critical thinking is cultural thinking” and “may well be in the nature of social practice” (Atkinson, 1997; p. 89);

dealing with power, social inequalities and injustices (Benesch, 2001); “problematizing practice” (Pennycook, 1999, p. 341), “reflective scepticism” (McPeck, 1981, p. 8), refusing “taken-for-granted components of our reality” (Dean, 1994; p. 4); “skilled critical questioning” (Brookfield, 1987, p. 92) and “reasonable and reflective thinking that is focused on deciding what to believe or do” (Ennis, 1992, p. 22).

Some researchers posit that critical reflection promotes questioning the process that human beings experience, including race, culture and ethnic differences; however, it is a challenging task for practitioners to decide “...what it means to teach students who come from different racial and cultural backgrounds than their own” (Howard, 2003, p. 198). Dewey (1910) also defined critical thinking as “...active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends” (p. 6). On the other hand, cognitive and developmental psychologists associate critical thinking with problem solving. Poster (1989) connects critical theory with “a world of pain” and suggests that “critical theory springs from an assumption that we live amid a world of pain, that much can be done to alleviate the pain, and that theory has a crucial role to play in that process” (p. 3). Scriven and Paul (1997) defines critical thinking in the view of National Council for Excellence as “critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesising, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action” (p. 1).

A working definition of critical thinking in the context of the present study comes from Benesch (1993) and Pennycook (2001). Benesch (1993) associates critical thinking with a *democratic learning process by examining power relations and social inequities in the field of democracy* and, similarly, Pennycook (2001) defines critical thinking as “...turning a sceptical eye toward assumptions, ideas that have become ‘naturalised’, notions that are no longer questioned” (p. 7). Resnick (1987) states that although defining critical thinking is challenging but listing key features of higher order thinking (see Bloom, 1956, on

taxonomy of educational objectives) is easier. However, after all these definitions, according to Fox (1994) critical thinking, which represents some social practices, is not a simple term to define like thinking techniques to talk easily among people. On the contrary, it is a voice between people that is learned intuitively, and is connected with cultural elements, texts and even the history of countries. Although everybody assumes that they know what critical thinking means, few people can define it or talk about critical thinking and seem to understand one another (Atkinson, 1997).

Some researchers, including Kennedy, Fisher and Ennis (1991), focus on critical thinking in education and suggest that education systems lack critical thinking and critical pedagogy. As a result, people have a tendency towards taking teaching and learning for granted of what is available and do not feel a need to question their education. As opposed to Benesch's (2001) suggestion, they highlight the fact that students cannot fully take part in a democratic society and cannot think critically in such a way as to meet the demands of the world, and that this is due to a lack of higher order thinking ability. Therefore, training in critical thinking is important to education around the world and should be the primary task of education (Michael & Scriven, 1985).

2.3.2 Critical thinking and critical pedagogy in the context of EAP in higher education

Critical pedagogy is considered as an approach to teaching and curriculum development by many researchers (see Benesch, 2001; Crookes & Lehner, 1998; Pennycook, 1990). There are a number of different approaches to critical thinking in terms of critical pedagogy in English for academic purposes at university level. When critical thinking and critical pedagogy are discussed as a form of social and political practice, pedagogical processes and the realities of the world collide due to the cultural differences. International students, who were brought up in different educational cultures, need to develop the ability to think critically, although it may be challenging (Thompson, 1999). Crawford, Saul, Mathews and Makinster (2005) argue that "...the most successful classrooms are those that encourage students to think for themselves and engage in critical thinking" (p. 4) and they further

highlight the fact that motivated students are able to think critically. The criticism Benesch (1993, 1996, 2001) and Pennycook (1997) put forward in education includes political neutrality of EAP. Benesch (2001), Pennycook (1997) and Gieve (1998) criticise traditional EAP teaching and highlight that critical questioning is necessary in higher education. University students should question what is happening and think critically by

“examining the reasons for their actions, their beliefs, and their knowledge claims, requiring them to defend themselves and question themselves, their peers, their teachers, experts, and authoritative texts, both in class and in writing” (Gieve, 1998, p. 126).

2.3.3 The relationship between critical pedagogy, critical needs analysis and rights analysis

Traditional ESP classrooms are criticised for providing traditional ESP that is not grounded in a clear theory and which mostly depends on assumptions in teaching English. The same shortcoming is also available in needs analysis, which can be compensated for with new insights into possibilities to operate democratically in schools, at work or in daily life. Benesch (1996) compares needs analysis and critical needs analysis and criticises the approach due to its identification and description of “existing elements of the target situation” (Benesch, 1996, p. 723). Therefore, she suggests critical needs analysis as an alternative approach to traditional needs analysis, as a way to focus on inequalities both inside and outside the organisation, considering the hierarchical positions and that the “target situation is a site of possible reform” in critical needs analysis (p. 723). Pennycook (1994), similarly, posits that the “transformative” (p. 691) characteristics of critical needs analysis are significant, which aims to question inequalities in education. Benesch (2001) also critiques the use of “needs” to describe academic requirements and offers “rights” with the suggestion that EAP curricula are based strictly on institutional requirements without any input from students.

“The choice of rights as a descriptor is a way to counterpose needs with a more explicitly political term, one that underscores power relations in academic settings.

Needs is a psychological term suggesting that students require or want what the institution mandates. It conflates the private world of desire and the public world of requirements, rules, and regulations. It implies that students will be fulfilled if they follow the rules” (Benesch, 2001, p. 61).

The reason why she proposes *rights* is to distinguish academic requirements from what students may see as their own needs. Rights analysis, as a component of critical EAP, was proposed by Benesch. Rights analysis is an examination of power relations in an academic milieu, which paves new ways for democratic participation in life and outside the classroom, including both pedagogy and the curriculum. In contrast to needs analysis, which focuses on institutional requirements, rights analysis focuses on possibilities for change and encourages student engagement to be conscious of their rights (Benesch, 1999). In addition, rights analysis underscores inequalities about power relations among learners, instructors, decision makers and organisations from a critical perspective, and promotes questioning learning consciously by creating a critical environment where learners can raise questions and can critique the opinions and applications they are not favour of. When Benesch (1999) compares needs analysis with rights analysis, she suggests that the former refers to realising an aim, whereas the latter is “...a search for alternatives to strict adherence to those requirements” (p. 45) by highlighting the fact that rights leaves open the possibility of change and that rights analysis is more political than needs analysis. Moreover, she suggests that although needs analysis focuses on practical realities, it ignores social realities, including inequalities. It is also notable that social cooperation and democratic participation are two significant characteristics of right analysis and critical pedagogy.

Right analysis merges EAP and critical pedagogy, and depends on a discussion of power between students’ own felt needs and institutional demands, and also equality between language and content instructors. Benesch (1999) also indicates the political nature of syllabus design in EAP by highlighting democratic participation and power relations. Rights are negotiable and they are “...a way to conceptualize more democratic

participation for all members of an academic community” (Benesch, 2001, p. 62). She highlights the fact that institutions decide about their requirements, and they assume that these requirements are beneficial to the learners even without negotiation, and that there is no need to attempt to ask the learners themselves and to talk about needs in the form of externally imposed rules. Therefore, rights analysis, in the context of critical EAP can provide an effective learning environment by encouraging learners “...to participate more democratically as members of an academic community and in the larger society” (Benesch, 2001, p. 61).

Benesch (2010) conducted a study to answer the following question: How can we implement critical pedagogy in terms of material development, which concentrated on compensating for the lack of critical pedagogy in university education? Her study is a notable example of how to choose and use materials in collaboration with the students, and to figure out the characteristics and the roles of a critical EAP instructor. Her study on military recruiters provided a real example of how four skills -listening, reading, speaking and writing- could be embedded within a critical EAP classroom. The course started with a question from a socio-political context: “Should colleges be allowed to bar military recruiters?” in an ESL reading classroom in 2006 (Benesch, 2010, p.116). The researcher, firstly, introduced the topic to the student: Military recruitment on U.S. college campuses. Then she gave a reading which addressed the question, and two short essays, one arguing in favour of recruitment, and the other against recruitment. She wanted students to write short essays arguing for or against by encouraging them to choose their sides in order to engage them in a real life experience. Students met in groups to show each other their writing before the class. They wrote the parts that they wanted to share on the blackboard when the class started. Six students expressed their opinions against and three students for. Then, she analysed the anti-military recruitment essays by grouping the answers according to the content. The third step included the discussion process. She wanted volunteer students to summarise their writing by reading their argument. The first student wanted to speak, not read, and his classmates also engaged in the debate with his question if there was anybody

in the classroom who was recruited. The students who had had a similar experience joined the discussion. The fourth step was a follow-up discussion which promoted the exchange of opinions among the students. At the end of the class, Benesch (2010) shared her opinion that at first she was against recruitment, but after reading the essays and listening to their answers, she started to think about the possibilities that can create an opportunity to discuss such socio-political topics. The final step focused on self-reflection. She asked herself if the process in the course encouraged the students to consider the issue of military recruitment and their positions in terms of choices. She was being *reflective* as a *critical* EAP practitioner. She also questioned herself about her approaches towards material selection and presentation:

“I may have more pedagogical tools, but I would be guided by students’ responses to the introductory materials rather than the tools themselves... that is, critical teaching is an exploratory dialogue of unknown outcomes, through which teachers and students learn from each other, not a transfer of knowledge from teacher to student through materials” (Benesch, 2010, p. 123).

2.4 EAP, learner autonomy and rights analysis

Considering the characteristics of rights analysis, it can be connected with learner autonomy in mainstream EAP classrooms, and can even be a particularly effective way to create a scaffolding environment. Questioning can promote autonomy by providing the learners with the opportunity to take charge of their responsibilities about their own learning. Since right analysis offers a possibility for a reciprocal relationship and for the process by encouraging learners to be interrogators and to be critical, for practitioners to be facilitators and collaborators, both learners and practitioners should have various roles in this process. They should actively take part in the negotiation on critical work.

2.4.1 Characteristics of a critical EAP practitioner and learner

“ESP courses, and the institutions around the world which offer them, are so varied that there can be no single model for ESP [practitioners].”

(Robinson, 1991)

Teaching context and culture may provide learners and practitioners with some personal characteristics. Hence, considering the fact that critical thinking and rights analysis have a number of common characteristics, both critical EAP practitioners and students tend to have some specific characteristics, including questioning, autonomy, and consciousness, which are embedded and central to critical mainstream EAP classrooms.

Critical practitioners actively encourage students to question their lives. Questioning may pave ways for talking about problems and looking for solutions, so students who tend to question the education system can be described as *interrogators*. Since EAP curricula are based strictly on institutional requirements, students may need to be *resistant* (Benesch, 2001) to the institutional demands when their learning needs and expectations clash. In addition, it is evident that being an *interrogator* can be a characteristic of an *autonomous* learner (see Holec, 1981; Little, 1991 for learner autonomy) because learners are trying to take charge of their own responsibilities concerning learning, and they are questioning the system in order for it to meet their needs.

If the teaching environment can offer an embracing milieu to encourage learners to question the characteristics of the learning environment with which they are not satisfied, it may facilitate critical thinking. Therefore, the EAP practitioners' role is really significant when it comes to creating an environment that is open to questioning. The practitioners in this context can be described as *gatekeepers*. ESP practitioners, in the role of gatekeeper, also should be aware of the ethics which can be regarded as a step against injustice in power relations. “EAP is at the point in its history where it is ready to consider its ethics” (Benesch, 2001, p. 136). What is more, EAP practitioners may support the learners' reactions and try to help them by negotiating as a *facilitator* and may think about the

difficulties learners face and try to improve the conditions by being *reflective*, which is one of the components of critical thinking. Flexibility in EAP is necessary, especially in terms of topic selection (see Benesch, 2001) by offering different options to the students and adding learners' opinions and felt needs. Consequently, EAP practitioners should be *flexible*. In addition, they should be sensitive to the demands of self othering, of analysing the situation/status quo (Benesch, 2010).

2.5 Sample studies regarding needs analysis in the literature

Needs analyses are carried out to identify the learners' needs regarding academic and occupational purposes by employing various sources and using multiple methods to collect data in order to validate the results. A number of needs analyses are descriptive in that they focus on learners' needs in different contexts. However, there is little research into critical needs analysis and rights analysis. This section will focus on sample relevant studies in the context of needs analysis regarding Medical English, including descriptive needs analysis, critical needs analysis and rights analysis, through providing information on the purpose of the research, information on participants, data collection methods and results to contextualise the steps in a needs analysis.

a) Descriptive needs analysis

Swales (2000) commented on Chia, Johnson, Chia, and Olive's (1999) study as being a good contribution to the descriptive needs analysis of medical students by emphasising the fact that research into medicine in particular is thin. Chia, et al., (1999) criticised the available English courses in Taiwan with the explanation that the courses were developed without carrying out needs analysis. They investigated the English needs of college students in a medical context in Taiwan. The purpose of the study was to describe the perceptions of medical students and faculty members in order to reveal the language needs of these students. The survey covered questions, which would reveal the importance of English, both in the students' study and in their future careers and their needs concerning English skills, and their suggestions in order to develop an English programme based on

the results to satisfy the specific needs of the students. They specifically aimed at (1) identifying and describing the perceptions of the needs of medical students and faculty members (2) proposing requisites based on the survey results in order to improve the current English teaching programme in such a way as to meet the needs of medical students. 349 medical students and 20 faculty members in the medical programme took part in the study. The researchers did not use a triangulation method for data collection, although this is strongly suggested in the literature in order to ensure the reliability and validity of the data in terms of NA (Long, 2005) as discussed before. Two questionnaires were employed for the study, based on instruments by Zughoul and Huseyin (1985) and Guo (1987) which were translated into Chinese, and piloted on ten participants including six medical students and four faculty members. Some modifications were made based on the feedback from the pilot study. The students' questionnaire which consisted of 23 questions, was similar to the questionnaire for the faculty members. The topics were presented in five sections: "[T]he importance of English in college and professional careers, perceived language skill needs and problems, the activities needed in a freshman language course, and suggestions for development of course content as well as demographic information" (Chia et al., 1998, p. 110). The questionnaire that faculty members filled in consisted of 16 questions and did not cover demographic information. It took almost 20 minutes to complete the questionnaires both for the students and for the faculty members. The results were explored according to the students' perceptions with regard to English skill improvement and the activities required in the course. The results revealed that listening was the most perceived need among the freshmen. Faculty members focused on listening skills to understand daily conversation mostly (59.9%), radio and TV programmes (30.7%), and lectures (8%). As for reading, speaking and writing, most of the students focused on reading newspaper and magazines, undertaking everyday conversations, and writing reports and research papers. Most of the students were of the opinion that the materials for freshman should be relevant to the medical field. However, writing was the least needed. The findings also cast light on the fact that students were

conscious of the significance of learning English, although faculty considered English more important.

b) Developing an English course for clinical training based on an NA

Shi, Corcos and Storey (2001) carried out a needs analysis to develop an English course for medical students, which was limited to the speaking skills, by using the transcripts of videos and audio tapes of ward teaching from students' clinical training in the Faculty of Medicine in Hong Kong. Given the problems with the existing curriculum, the study aimed at (1) analysing the discourse to indicate how lecturers lead students in their clinical training by the use of video recordings of ward teaching; (2) identifying problems in student-lecturer dialogues as spoken discourse; (3) developing relevant materials and tasks based on the results of the analysis of the discourse situation. The researchers focused on language errors which lead to problems in communication in order to develop explicit instructions and tasks. The observation and videotaping of the students' performance in ward teaching was employed. In addition, clinical training textbooks were examined for discourse moves in clinical training. Five ward-teaching sessions were videotaped and one was audiotaped, and six hours of data was collected. This included grammatical errors, interruptions, repetitions, pauses and unfinished utterances. The data was transcribed, and the transactions between patient-student/lecturer and lecturer/student were identified by developing a coding system. Two researchers coded the six sessions independently; however, due to some disagreement, they worked together to do the coding. Moreover, the total number of words and the turn length of speakers' and lecturers' questions were also analysed. Discourse analysis revealed that tutors guided students while taking and presenting the case, conducted physical examinations and made diagnostic hypotheses which included the ability to match register, recite the chronology of a medical history using appropriate linking words and tenses, and also describing examination techniques.

c) Needs analysis to promote the skills of independent reading

Holme and Chalauisaeng's (2006) study aims to promote the skills for learner independence in reading by assessing the strengths and weaknesses of the procedure within a programme whose larger objective was to promote the skills of independent reading. They claimed that learners can determine their own learning goals if they are independent learners, which would improve a learner-centred classroom and create opportunities for the learners to take responsibility for their own learning. The researchers described the adaptation of participatory appraisal techniques on pharmacology students who were in their second year of a pharmacology degree, to reveal the strengths and weaknesses of the procedure in a university in Thailand. They employed a set of *qualitative needs analysis techniques* grouped under the heading of Participatory Appraisal (PA), done by adapting Participatory Rural Appraisal (PRA) to examine the needs of an academic reading class.

“The attraction of PRA techniques lay in how they recognised the integrity and knowledge of the community targeted for intervention, and understood that the purpose of a training intervention was not simply a one-off transfer of skills and knowledge, but the creation of an enduring knowledge base” (Holme & Chalauisaeng, p. 404).

Their hypothesis was that PA techniques can promote a learner-centred classroom, a positive attitude to language learning, and can increase motivation by making the learners autonomous in terms of their future acquisition of academic reading skills. They have employed triangulation by combining both a qualitative and quantitative approach. Two qualitative approaches were used: participant observation and semi-structured interviews. Participant observation was carried out using video and audio recordings, and also by making field notes. Semi-structured interviews were employed on students and some staff on three occasions: in the beginning, in the middle and at the end of the course. Two questionnaires acting as quantitative instruments were adapted and used pre- and post-course. The questionnaires included a modified with a seven point rating Likert scale from

1 (strongly disagree) to 7 (strongly agree). The results indicated that the learners' awareness with regard to taking responsibility for their own learning increased, and encouraged them to move away from teacher dependence. In addition, learners were more capable of improving their reading with regard to their academic studies.

d) Needs analysis to identify requests in the target situation during clinical teaching

Blumenfeld and Miller (1991) aimed to identify requests expressed during clinical teaching in settings, including residents' work rounds, attending rounds, morning report, and interns' clinic in a university-based general medicine service. The participants were physicians, medical house staff, and medical students in a general medicine training programme. In order to reveal the objective needs, the researchers collected their data from various sources, including (1) anthropological observation on communication among the target participations, (2) field notes that were kept regarding their expressions of a need for information and also (3) a coding system that was developed to describe the information requested as part of the study. During 17 hours of observation, five hundred and nineteen information requests that were recorded were selected for analysis. 454 questions regarding information requests related to clinical activity were analysed since sixty-five requests were not related to clinical issues. The results revealed that most of the questions (74%) were about patient care. Among the questions, 52% of the requests were related to information that could be found in the medical records. 23% of the questions were easily answerable by using library, a textbook, a journal, or MEDLINE. 26% of the questions were regarding the synthesis of patient information and medical knowledge.

2.6 Conclusion

In this chapter, first, the relationship between ESP, EAP, GE and EMP have been discussed in detail by indicating the main differences between teaching ESP and GE. Second, NA and its methodology in the literature have been explained, together with the

remaining issues that have not been explored before. Finally, sample research into NA regarding Medical English was provided.

As the foregoing discussion suggests, although needs analysis is fundamental to ESP (Long, 1995; Richards, 1990; Seedhouse, 1995), *there is little research on the needs of learners by employing a new methodology*. For example, one of the common characteristics of the questionnaires regarding NAs is that the items in the questionnaires are built by the researchers or organisations involved. However, Chambers (1980) suggests that “...whoever determines needs largely determines which needs are determined” (p. 27). Chamber’s statement leads to other questions that will be addressed in terms of the present study: Is it fair to talk about learners’ needs by preparing the questions, questionnaires and giving the choices according to our perceptions, and then identifying them as learners’ needs? Considering this gap in the literature, the present study aims to diagnose the needs of Turkish medical students through promoting critical thinking and learner autonomy. The study proposes an alternative data collection method to identify the felt needs using learners’ own voices to provide new insights into the needs analysis, and how power relations in EAP classrooms can be balanced. In line with this methodology, the aim of the present study is to reveal the needs, wants, expectations, lacks of Turkish medical students regarding Medical English, by providing them with a scaffolding milieu to allow them to express themselves. This study can be considered as preliminary due to the instruments that are newly developed.

The present study aims to diagnose the needs of medical students, who are learning Medical English in the Faculty of Medicine at Uludag University in Turkey, while also promoting learner autonomy and critical thinking via a new critical needs analysis. In order to realise the research aims, the researcher, specifically, will attempt to address the following research questions:

1. What are the perceived needs of Turkish medical students with regard to learning Medical English as a foreign language in the Faculty of Medicine?

2. Are there any differences between the first and second cohort of Turkish medical students' perceptions regarding learning Medical English? If so, what are the differences?

3. Are there any differences between the perceptions of academics and medical students regarding EAP needs? If so, what are the differences?

4. What are the perceptions of doctors in private hospital and health directorship?

The next chapter will describe the methodology of the current research, including data collection methods, the tools used, and also data analysis.

CHAPTER 3 – METHODOLOGY AND PROCEDURE

INTRODUCTION

In this chapter, the data collection methods, the instruments and procedures are presented. The first two sections aim to contextualise the research environment and also provide information regarding the main characteristics of the participants. First, information on the research setting is provided, including the profile of the informants in the study and a description of the research and data collection procedures (3.1). Second, data collection instruments/tools are introduced particularly how the questionnaire is developed, validated and conducted is described (3.2). Third, the validity and reliability of the instruments in the context of the investigation are discussed (3.3). Fourth, an action research plan to meet the observed needs of the learners is presented (3.4). Fifth, data analyses are provided (3.5). Finally, practical issues and constraints are discussed (3.6). The chapter finishes with a brief summary (3.7).

3.1 Research setting

The present study was carried out in the Faculty of Medicine at Uludag University in Turkey between February 2009 and 2011. Medical English in the context of EAP is an elective course in the first three grades in the Faculty of Medicine. The course is chosen by a number of students each term. For example, in 2009-2010, 193 out of 205 students and 295 out of 326 students chose the course in the first grade in 2011-2012.

Medical English course has a prerequisite for all students in the department. The School of Foreign Languages at the university prepares English proficiency examination, which focuses on grammar, reading and vocabulary. Students must pass the examination, which is at the beginning of autumn term, with a minimum of 70 out of 100, which is considered to indicate an intermediate level of proficiency. If students do not take the examination or fail it, they must attend English preparatory classes for a year, and pass the proficiency

examination at the end of the spring term in order to start their education in the Faculty of Medicine.

Students have a right to evaluate the teaching and are encouraged to take an active role in their own learning. They talk about their learning needs and give feedback about their teaching to the instructors in the departmental meetings. There is one medical student for each grade as student representative.

In the present teaching context, the researcher, who has been working as a course coordinator of Medical English I and II for the first grade medical students, is an intermediary between students and content instructors in order to support the teaching (see Figure 3.1). Medical English courses in the second and third years are coordinated by the content instructors. Within the department, the academics are collaborative and willing to improve their teaching. Each instructor develops his/her material, prepares a course pack, and shares them with the course-coordinators in the meeting. They also scrutinise the course content and course objectives at the beginning of each term.

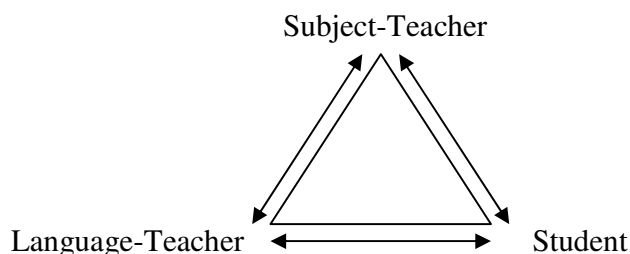


Figure 3.1. The relationship between three parties (Swales, 1985, p.138).

3.1.1 Participants

Three groups of participants have been included in this study. The first group is made up of *academics* (Dean of the Faculty, content instructors, research assistants and Medical English course coordinators, who are doctors). The second group is made up of the *students* who have taken Medical English as an elective course. The third group encompasses doctors in a private hospital, and in the Bursa Health Directorship. The first and second group was considered *insiders*, who were working or studying at the Uludag University,

whereas the third group was *outsiders*. The underlying reason why the researcher has attempted to reach different groups of participants is that all participants can provide valuable insightful data thanks to their experience. The first group –*academics*- have teaching experience and play various roles in the Department from organising meetings with students to preparing the curricula; therefore, they are familiar with the teaching context and the students' profiles as insiders, and may make a valuable contribution to the present study. The second groups –*students*- are the target group who has a right to express their needs with regard to Medical English. Students are from different countries, but all have a high proficiency in Turkish, which is determined by an examination as a requirement to study in Turkey. The third group –*doctors*- in public and private hospitals may represent the working life for the students' target situation needs in their future work context. All in all, all the parties will be a chain in the research, in order to reveal the present and target needs of the students. Research participants as stakeholders strengthen the outcomes of the research because "...getting the right information from the right people" (Horowitz, 1986, p. 460) is a significant issue when it comes into identifying students' EAP needs.

183 informants (students) participated in the pilot study to develop a questionnaire and three informants (two students and one content instructor) were involved in piloting the interview questions. In total, 186 informants took part in the piloting main instruments to prevent potential problems (see Appendix A for the reliability of the questionnaire in the pilot study).

206 students, who were not the students in the pilot study, had followed the Medical English course at least for one year, took part in the questionnaire in the main study as shown in Table 3.1.

The number of female students (N=98) was similar to the number of male students (N=108), and the informants' average age was 20.14 years.

Table 3.1

The high schools that students are graduated from

Number of participants: 206 (Female : 98 Male : 108)									
Average of age: 20.14									
Type of High School	Anatolian	Anatolian teacher	International	General	Military	Private	Science	Super	Other
Number	93	17	25	8	1	26	31	4	1
%	43.7	8.3	12.1	3.9	0.5	12.6	15	1.9	0.5

When students' high schools were examined, students mainly graduated from Anatolian High School (43.7%), Science High School (15%) and Private School (12.6%).

In addition to the first group of students, the same questionnaire was employed with new students who started their education in the Faculty of Medicine at the end of September in 2010 as soon as students were registered. 118 of the students were involved in answering the questionnaire. The number of female (N=54) and male students (N=64) was similar (see Table 3.2). Most of the students had graduated from Science High School (33.1%), Anatolian High School (32.2%) and Private Schools (16.9%).

Table 3.2

New students in the Faculty of Medicine

Number of participants: 118 (Female : 54 Male : 64)									
Average of age: 18.97									
Type of High School	Anatolian	Anatolian teacher	Foreign	General	Military	Private	Science	Super	Other
Number	39	6	7	6	0	20	39	0	1
%	32.2	5.1	5.9	5.1	0	16.9	33.1	0	0.8

All in all, a total of 525 participants (186 in the pilot study and 324 students in the main study and three participants in the piloting the interview questions and 30 (15 of them were students who participated in the questionnaire as well, so were not added to the total number of participants twice) participants took part in the main interview in the study.

3.1.2 Description of the study and the data collection procedure

The researcher collected all the data between February 2009 and October 2010 after receiving ethical approval from the Bursa Clinic Ethical Committee both for the pilot study in December 2009 and the main study in January 2010. The data collection procedures are discussed in this section. This study is longitudinal in terms of both the data and the design. The data from students were collected for two distinct time periods and students were comparable since they were drawn from the same population (Menard, 2002). The analysis involved some comparison of data between periods (i.e., 2009 and 2011). Accordingly, this longitudinal study served us two purposes, namely to describe the change between old and new students and explain the relationship (Dörnyei, 2007). The participants were fully informed as to the purpose of the study and confidentiality was assured. Participants gave informed consent, both for the questionnaires and the interviews for the pilot and main studies. In order to triangulate the findings, prevent the risk of providing subjective information, to collect more accurate, empirical qualitative and quantitative data, and to answer the research questions properly, ethnographic techniques were used. One feature of an ethnographic approach that is employed in the present study is triangulation, the use of multiple methods, in this case *observation, informal conversation, reflective journal, a new questionnaire* and *in-depth interviews*. The researcher aimed to understand the context and needs fully to provide an insightful set of findings.

The study was conducted in three main phases. The 1st phase was the pre-pilot study in which an ethnographic research method was employed in order to familiarise the researcher with the setting that the main participants were involved in, and to determine the research aim and problems. The most suitable qualitative design for studying the research problem –

ethnography- focuses on “...an entire cultural group. Granted, sometimes this cultural group may be small (a few teachers, a few social workers), but typically it is large, involving many people who interact over time” (Cresswell, 2007, p. 68). The underlying reasons why ethnographic research was employed here are: ethnography involves (1) extended observation of the group by immersing the researcher in the classroom of the learners and (2) a critical approach (Madison, 2005). The 2nd main phase of the research included a pilot study that integrated qualitative and quantitative research. Its aim was to pilot the instruments, including the newly developed questionnaire and interview questions, to see potential problems and to make necessary modifications before undertaking the main study.

After factor analysis (i.e., “to identify clusters of key variables and to identify redundant items” Cohen, Manion & Morrison, 2007, p. 342), which will be discussed later in this section in detail, the questionnaire and the interviews were conducted in the 3rd phase (the main study) to reveal the present and future needs of the Turkish medical students by triangulating the research methods as shown in Figure 3.2.

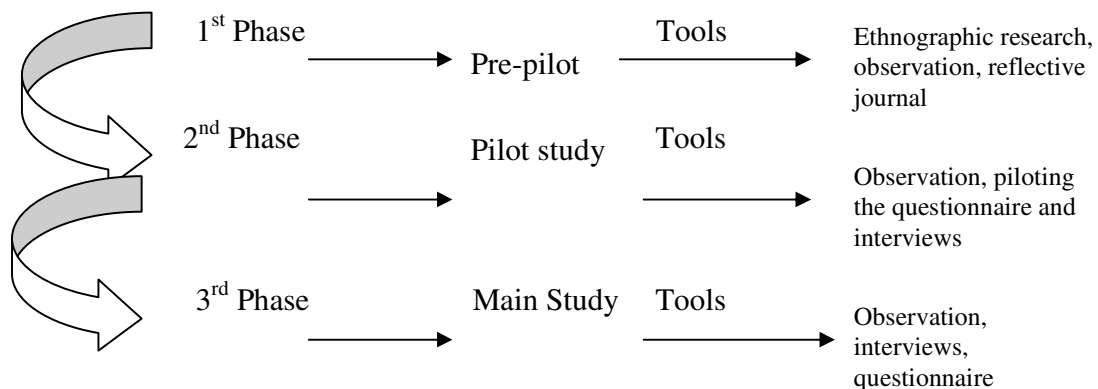


Figure 3.2. Phases of research including pre-pilot, pilot and main study and the tools employed

In these three phases overall, participants were interested in the research; therefore, data was collected smoothly thanks to participants’ active involvement.

3.2 Data collection methods

3.2.1 Ethnography and classroom observation

Observation is here defined as “the conscious noticing and detailed examination of participants’ behaviour in a naturalistic setting” (Cowie, 2009, p. 166). At first the researcher was a complete observer. In other words, she was a nonparticipant-observer and was uninvolved in the setting (Cowie, 2009) for a month, in order to become familiar with the teaching context, medical students and the culture of the department. Later, she was a full participant and was involved in all classroom activities as a course coordinator, namely as a participant-observer, to investigate her classroom. It is a common form of observation in ethnographic studies, (Dörnyei, 2007) and is a key data collection method employed in ethnography (Cowie, 2009). The observation was unstructured in the teaching environment where English is being used to explore to be familiar with the teaching atmosphere and the problems students had.

3.2.2 Reflective journal and field notes

The researcher kept a reflective journal in the form of field notes for three months for regular reflection and evaluation after each course to guide her actions as a reflection. The field notes were about the classroom, the students and the interactions that occurred. The notes about the research setting were detailed and rich and provided accurate information for the research report regarding all stages of the research. Following Cowie (2009, p. 172), five dimensions were considered, as indicated in Table 3.3.

Some excerpts from the reflective journal kept during the study (see Appendix B for additional excerpts from reflective journal) include:

.....

Actors: Students were on time and ready for Medical English class. They seem to be willing to learn a lot.

Table 3.3

Key dimensions of observation

Dimension	Definition
1. Space	The physical place or places
2. Actors	The people involved
3. Activities	A set of activities people did
4. Goals	The things that people were trying to accomplish
5. Feelings	The emotions felt and expressed

Space: There were almost 200 students but the class is not noisy at all. The sound system is working very well. Although it is a big lecture hall, the sitting is planned in a way that we can see each other in the classroom...

.....

Activities: The reading parts were related with the topics Alzheimer and Schizophrenia. In the first hour, we brainstormed about Alzheimer to exchange opinions. We read the passage on Alzheimer and paraphrased the sentences that the author built up. Some of my students said that they have difficulty in understanding when I talk in English and while they are reading passages. I liked the way that students ask their questions sincerely when they do not understand or they hesitate. I tried to encourage them to focus on the general idea both in reading and listening. And later, I talked about the strategies they can use when they deal with a reading passage. It took almost two hours to examine the paragraph, so we will study other paragraphs in the following weeks. My aim was to scaffold students understanding while they are coping with the passages that are related with their field of study. While I am talking about learning strategies concerning reading, I gave some clues for the exam, too. I emphasized the fact that (1) they should focus on the main idea and (2) if there are some unknown words, they can try to guess from the context by concentrating

on words that they are already familiar with rather than unknown words. They were all ears, maybe because I talked about mid-term examination.

.....

This is a new week. The word of the week was “stimulant”. We have studied the word with its collocations as usual (such as cardiac stimulant, cerebral stimulant, respiratory stimulant and stimulation). I have given the example before introducing the new word “Stimulating effects of coffee and tea” I think it is a good example to remember the meaning of the word since as Turkish people we like drinking coffee and tea. Later, before starting the reading part we have talked about the topic Schizophrenia. The lesson notes included the definition...They found the pronunciation of schizophrenia a bit difficult but I tried to repeat the word many times to make them get used to its pronunciation. While they were asking questions I noticed that they tend to pronounce the word and the classroom burst into laugh due to the sound when schizophrenia is pronounced.

.....

We tried to guess the words. When I showed the word of “occurrence”, some students said that they feel as if they know the word. I have given further examples. They remembered the word ‘occur’. Knowledge of derivation was also very effective in teaching vocabulary and boosting confidence.

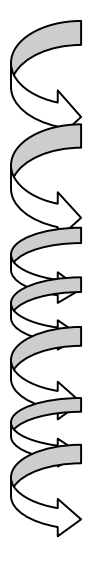
.....

This is a new week. The words of the week were “morbidity and mortality”. I focused on cognitive strategies and presented the new terminology by guessing the meaning from the context. At first my students found it difficult but later they said that these strategies could work and it made the passages easy to understand. I talked to my students that these are two common words in Medicine. They were very attentive while I was explaining the definition and highlighting the difference. This notice had a noticeable effect on students. As I promised to discuss reading passages regarding the national English examinations they need to pass, the course notes was all about reading passages related with UDS for health sciences.

.....

3.2.3 Questionnaire

Given the crucial discussion in Chapter 2 “...whoever determines needs largely determines which needs are determined” (Chambers, 1980, p. 27), in contrast to previous questionnaires used in needs analyses research, the researcher developed a new questionnaire specific to the target teaching context in line with Chamber’s (1980) valuable suggestion when identifying medical students’ needs. And also, the questionnaire was designed to act as the basis of the interviews, which provided to triangulate the data that was collected from students and to reveal specialists’ perceptions. It is worth mentioning that while questionnaires have some significant advantages, they have also some serious limitations that must be highlighted. First, a questionnaire is “too easy to produce unreliable and invalid data by means of an ill-constructed questionnaire” (Dörnyei, 2007, p. 115). Second, it provides a rather thin description of the topics (Dörnyei, 2007), so it is not possible to go into any detail (Kasunic, 2005). Interviews were conducted to complement the questionnaire and to prevent any potential criticisms, which will be discussed later in this chapter. The researcher undertook the following steps to design a new questionnaire:

- 
1. Asking an open-ended question as: “What are your expectations and needs regarding Medical English?” and students wrote essays.
 2. Main themes and sub-themes were analysed from the essays to develop an item pool.
 3. An item pool was created.
 4. Feedback from lecturers was collected to ensure content validity.
 5. Feedback from students was collected.
 6. A pilot study was carried out (on 183 students).
 7. Factor analysis & reliability assessment was conducted (Cronbach’s alpha).
 8. Main study was carried out (324 students responded the questions in the questionnaire and 30 interviewees took part in the interview.).

The main instrument employed to collect data was the 5-point Likert scale questionnaire, which was considered to be the most suitable technique for this research as a means of collecting information from the large number of students in the Department. Medical students as respondents were asked to respond to each item using a 5-point Likert scale (such as ⑤top priority ④priority ③low priority ②not a priority ①absolutely not a priority) and higher item scores indicated a more favourable attitude. The scale allowed students to identify the degree of importance, the degree of relevance, the degree of priority of the items that were extracted from their essays. The questionnaire also contained a short section regarding the participants' background information, including their gender, age, grade and the high school they were graduated from. The questionnaire makes distinguished this study from previous studies in the literature. This was because, in the present study, while developing the questionnaire, learners had a critical say in talking about their needs, wants and expectations, and about aspects that were lacking regarding Medical English. Accordingly, the ambiguous term needs in EAP was revisited by the learners themselves. This can be viewed as a potential example of critical needs analysis/rights analysis and as an attempt to prevent inequality about power relations between learners and practitioners (see Benesch, 2001). The researcher asked medical students for their needs and expectations with regard to Medical English with the question "What are your expectations and needs from Medical English?" at the beginning of term, and 193 students wrote essays which were full of suggestions and recommendations during the term allowing the researcher to collect relevant data and to regard needs analysis as an on-going process. Through their own words, sentences and voices the use of medical students' essays was an intervention to promote learner autonomy and critical thinking as indicated in the two samples of raw data in Table 3.4.

Piloting the questionnaire, field testing (Dörnyei, 2007), required various steps. After analysing the raw data, the main themes and categories in the essays were classified.

Table 3.4

Samples from the raw data

Student A

... I want to be a prominent surgeon in the world. Some people may laugh at this. I am aware of the fact that I need to speak English fluently to realize my aim. Therefore, Medical English is vital to my future profession in order to access resources in English and to study/work abroad. My expectations with regard to the course cover learning a number of words, doing practices, and I want my knowledge in English to be permanent. I need to learn idioms, medical words and collocations, etc. In addition, I will be pleased if you use visual materials during the Medical English course....

Student B

I think English is a necessary language to take part in international conferences... I believe that a good doctor should know English very well.... Moreover, English is an accepted language in international conferences. I feel that I am lacking in medical vocabulary. That is why I have chosen Medical English voluntarily and without hesitation. I hope to express myself in Medical English and understand articles.

Ten domains existed that students wrote on with regard to their needs and expectations in terms of Medical English:

- A- Structure and vocabulary knowledge
- B- Characteristics of classroom and interaction
- C- Language proficiency
- D- Settings where English will be used
- E- Individual aims
- F- Shortcomings
- G- Methods and strategies
- H- Characteristics/qualifications of the instructor
- I- Linguistic characteristics
- J. Affective domains

A new questionnaire was developed by creating items from the essays that the students had written. The data was analysed for the pilot study (see Appendix C, for the

questionnaire in the pilot study). Feedback was collected several times from the stakeholders until all the parties were satisfied to improve the main data collection instrument, which affected the quality of collected data. Accordingly, each item was checked from the viewpoint of *formatting, clarity of the questions, instructions, content of the questions, measurement and assessment, language teaching and medical education* by eight experts from the relevant fields in order to investigate content validity. This involved two lecturers from Educational Sciences, three lecturers from English Language Teaching, and three lecturers from the Faculty of Medicine.

A questionnaire must be clear and comprehensive so that respondents could answer effectively (Stone, 1993). Therefore, the second feedback was collected from the students in case there was any part that was not clear with regard to the items in the questionnaire. It was a precaution to check the clarity of the questionnaire items, instructions, layout and also the readability level (Cohen, et al., 2007). All in all, it was necessary to ensure that respondents understood despite the fact that the items were created from students' own essays. The researcher gave some information to the students about the research aims, and intimated that she wanted help in order to reveal if the text used in the questionnaire is easy to understand and there are words difficult to understand since students in the target group were from different countries. The researcher and 11 students including five Turkish and six international had a meeting to address this issue on 23 December 2009. Students read the questionnaire silently and took notes regarding their questions, unknown words and ambiguous structures or sentences. The meeting took almost an hour and the written comments were discussed in groups to improve the questionnaire. Students highlighted some important issues that were taken for granted in the preparation of the questionnaire questions by the researcher. All the students had a consensus on the problem in understanding the abbreviations (e.g., KPDS, UDS). Since all instructors, who examined the pilot questionnaire, were academics, they had experienced these examinations and they were used to using the abbreviations rather than the long form. However, the feedback from the students revealed that they did not know what the abbreviations mean in the

questionnaire. When the researcher shared the full form of the abbreviation, they explained that they heard these examinations but did not distinguish the purposes of each examination. Another feedback was on some items including the questions numbered 23, 60, 70, 72 and 76 which were found complicated to understand. The feedback both from academics and students were examined in light of literature and suggestions were seriously taken into account to make fundamental changes.

After the important modifications that were suggested by the lecturer, the questionnaire for the pilot study covered 77 questions in all. The researcher announced the research a few days in advance with a preparation of a notice to give information on the purpose, significance and nature of the questionnaire to invite participants to take part in the study on the scheduled days. When the students came, the researcher gave some information concerning the research and wanted them to ask any questions if there are any items they did not understand. In addition, they did not write their names on the questionnaire, so the confidentiality was assured and they signed the consent form. To collect data for detailed analysis, the raw instrument was applied with the participation of 183 medical students from first, second and third grades almost in 50 minutes to assess the questionnaires' effectiveness and potential caveats in collecting data in the pilot study.

As explained above, the tool embodied 10 domains and these domains included totally 77 items in the pilot study. The items were close-ended questions with ordered choices (Likert response scales). The decision about these domains was reached by considering the consensus based on the previous studies and theoretical background in the relevant literature. Items were extracted from the sample essays that represent the target population that was medical students whose needs were in question. To check the intercorrelated measures among the items in order to identify the major dimensions, a factor analysis is conducted to extract ten factors. As a result of the factor analysis, the items to be removed were identified and representative sample items were available for reliable data. In the first run, scree test (i.e., a test to identify the optimum numbers of significant factors) result indicated that the number of initial factors extracted was too small to reflect the dimensions

of the tool that are necessary to determine the needs of the students in a wide range. For that reason, the data were forced to extract ten factors. During this procedure, the statistical and the conceptual assumptions of the test were taken into consideration. Regarding the factor loadings after the first factor analysis items that have factor loadings less than +0.33 and items that have significant cross-loadings were left out. With the items meeting the expected level of significance (items having factor loading greater than 0.33 without significant cross-loading), the analysis was repeated. Variables for factor analysis were measured at the ordinal level (five-step scale) and the number of cases is adequate enough to show the normality (183 participants). Test results for the appropriateness of the factor analysis are the following:

Kaiser-Meyer-Olkin test measure of sampling adequacy 0.724 (Good) and Bartlett's test of sphericity $p=0.000$ also were utilized to evaluate the applicability of principal components analysis. A factor analysis may not be valid if the Bartlett's test of sphericity is not significant. The correlation matrix is not an identity matrix. In other words, there are significant correlations. After factor analysis, there were 45 questions in the questionnaire and the items were collected according to their factor loadings for the main study (see Appendix D, for the newly designed questionnaire). The questionnaire in the main study had the following eight domains that are compatible with the steps Dudley-Evans and St. John (1998) suggested. The key difference in the present study is the focus on the qualifications of the instructors, which has not been addressed before in the previous studies as needs. Eight domains are:

- A- Qualifications of the instructors
- B- Shortcomings
- C- Methods and strategies
- D- Affective domains
- E- Setting (where English is used)
- F- Problem (during Medical English learning process)
- G- Importance of English

H- Aims regarding language competence

The questionnaires were completed in the presence of the researcher as self-administrative questionnaires, which was helpful due to some unexpected queries of the students.

3.2.4 Interview design and procedure

It is well-known that interviews are valuable to researchers. Complementary to the use of the observation, reflective journal and questionnaires, interviews were used in the research to elicit additional in-depth information (Cohen, et al., 2007). A semi-structured interview (i.e., a *compromise* between structured and open interview, Dörnyei, 2007) was conducted since it allows the interviewer sufficient flexibility to reach unexpected answers of the interviewee (Mackey & Gass, 2005; Richards, 2009). The questions in the questionnaire were used with small modifications in the interviews (see Appendix E). The researcher provided a context where participants could reflect their experiences as an insider perspective. The interview questions were strategically organised and planned (i.e., a given question within a given topic), which helped interviewees guess the next question, allowing the interviews to move fluently.

Two students and one instructor took part in piloting the interview questions. To recruit research participants, an announcement was written for the students and the academics were informed concerning the research at the university and also health directorship and private hospital was informed via telephone. In the main study, 30 interviews were conducted with participants, including (1) a Dean, (2) four Medical English course coordinators, who are also content instructors, (3) four doctors in private hospitals, (4) one doctor from Bursa Health Directorship, (5) a research assistant and (6) fifteen students as shown in Table 3.5 and 3.6. All interviews were transcribed.

Table 3.5

Participants involved in the interview

Position	Code
Dean	P.D.1
Course coordinator 1	P.C.2
Course coordinator 2	P.C.3
Course coordinator 3	P.C.4
Course coordinator 4	P.C.5
Course coordinator 5	P.C.6
Content instructor 1	P.I.7
Content instructors 2	P.I.8
Content instructors 3	P.I.9
Research assistant 1	P.R.10
Medical Student 1	P.S.11
Medical Student 2	P.S.12
Medical Student 3	P.S.13
Medical Student 4	P.S.14
Medical Student 5	P.S.15
Medical Student 6	P.S.16
Medical Student 7	P.S.17
Medical Student 8	P.S.18
Medical Student 9	P.S.19
Medical Student 10	P.S.20
Medical Student 11	P.S.21
Medical Student 12	P.S.22
Medical Student 13	P.S.23
Medical Student 14	P.S.24
Medical Student 15	P.S.25
Doctor from Bursa Health Directorship 1	P.H.26
Doctor at Private Hospital 1	P.P.27
Doctor at Private Hospital 2	P.P.28
Doctor at Private Hospital 3	P.P.29
Doctor at Private Hospital 4	P.P.30
Total	30

Table 3.6

Total number of the participants in the interview

Number of participants: 30							
	Dean	Course Coordinators	Doctors in private hospitals	Doctor from Health Directorship	Content Instructors	Assistants	Students
#	1	5	4	1	3	1	15
%	3.3	16.67	13.33	3.33	10	3.33	50

3.3 Validity and reliability of the instruments

The term validity is used to be defined as a demonstration that a particular instrument measures what it aims to measure. However, recently, validity has a number of definitions that includes many terms such as triangulation, richness, depth, careful sampling, appropriate statistical treatments of data and honesty. Reliability here refers to “...dependability, consistency and replicability over time, over instruments and over groups of respondents” (Cohen, et al., 2007, p. 146). Validity and reliability are significant issues for an effective research. Collecting data from different sources was an attempt to ensure the validity of the findings. Considering the benefits of triangulation - mixed/multiple methods research-, which is of vital importance to an experimental study, the researcher adopted mixed/multiple method research by interrelating qualitative and quantitative data. Method and data triangulation can provide strong evidence concerning the validity of the research (Dörnyei, 2007). Three types of evidence regarding the validity of the questionnaire were achieved, including content, construct, and face validity:

1. Face validity has been ensured in designing the questionnaire.
2. Content validity was obtained from experts’ comment/feedback.
3. The question of accuracy for the questionnaire was carried out through an intensive interview method for the validity of the questionnaire following Belson (1986).

In addition, Cronbach’s alpha was performed for the internal consistency reliability of questionnaire. Cronbach’s alpha ranged from 0.6820 in the case of item H to 0.8061 in the

case of item B, giving justification for the derivation of a composite score for the items A to H by averaging the responses of the constituent items.

3.4 Action research

In addition, during the construction of the items pool, the observation and the writing of reflective journal, an action research (AR) plan was prepared on technical and semi-technical vocabulary to meet the students' needs and to ensure a better understanding of the educational environment in terms of the effectiveness of teaching as it applied to this research during 2009-2010. AR is defined here as a critical reflection of a practitioner and practical intervention/value to illuminate and resolve a problem regarding Medical English for the improvement of learners as a part of an on-going needs analysis (Onder, 2011). The researcher aimed to compensate for the deficiencies of English medical terminology to improve students' technical (e.g., comorbid), semi-technical (e.g., lead to) vocabulary knowledge, and their reading comprehension in terms of medical texts.

The feedback written by students during the first weeks of the course revealed that 73 out of 143 students perceived medical terminology, including technical and sub-technical words, as a deficiency. They also expressed their perceived needs in the questionnaire concerning unknown words in the medical reading texts. From the first day onwards, the questions were all about unknown words. Therefore, the instructor felt a need to keep a reflective journal and to observe the students in order to discover the problems facing them and how they addressed them.

3.4.1 Data collection methods and diagnosing the problem

The researcher adopted a mixed method research, triangulation, by interrelating qualitative and quantitative data to better understand and diagnose the problem, and to investigate students' views (Creswell, 2009; Dörnyei, 2007). Thus, in order to improve the teaching, and to deal with the problem, the practitioner observed the classroom during the term. She kept a reflective journal to discover the problems students have considered the feedback from the students seriously; collaborated with the content instructors regularly;

read articles regarding vocabulary learning strategies and also prepared pre- and post-tests to reveal the efficiency of the process. This process helped the practitioner to diagnose the problems that students expressed which mainly included:

- paucity in using vocabulary learning strategies,
- a tendency towards translating the text into L1,
- a common belief that if they do not know one or two words in a text, it is difficult to grasp the main idea.

3.4.2 Action research plan

After collecting the necessary information concerning the problem, the practitioner devised a plan that aimed to foster the development of effective vocabulary learning strategies and to promote learner autonomy with real life activities. To fulfil the research aims, some actions were realised through training students on vocabulary learning strategies including (1) a cognitive strategy involving guessing the meaning from the context, (2) activation strategy by using target words in different contexts; teaching (3) collocations, (4) derivations, (5) synonyms and antonyms of the target words, (6) raising awareness on the significance of Medical English through activities (e.g., exchanging opinions in English on the importance of health and recent developments in the field) and (7) preparing group work for the Medical English wall newspaper.

3.5 Data Analysis

3.5.1 Quantitative method/statistical methods

The instruments that was analysed quantitatively were the questionnaire, designed in the context of present study, which were addressed to the students. The data from the questionnaire were analysed using the Statistical Package for Social Sciences (SPSS 11). First, percentages, means and standard deviations of the items in the questionnaire were calculated. Second, Pearson's Chi-square test was used to reveal if the differences in the participants' answers were significantly different.

Chi-square test was employed to compare the proportion of old and new students in different categories of opinion groups (such as *Very important*, *Important*, *Somewhat important*, *Unimportant* and *Completely unimportant*). Chi-square test requires that the expected frequency in each cell is at least one and not more than 20% of the cells should have expected frequency less than five, for its validity. Whenever this requirement was not met, nearby categories were clubbed together.

Reliability analysis was carried out to estimate Cronbach's alpha, an index that tries to assess to what extent the constituent items measure an underlying construct. Cronbach's alpha ranges from 0 to 1 and an alpha of at least 0.7 is considered to be suggestive of an underlying construct. The composite scores for the constructs were derived by adding the responses of the constituent questions and dividing the sum by the number of constituent questions. Though the number of constituent questions ranged from 3 to 10, normality was assumed for the derived scores invoking central limit theorem. But majority of the responses were concentrated in one or two categories in the Likert scale and hence the derived scores were negatively skewed to some extent. But this was ignored and independent t-test was employed to compare the derived scores between old and new students, as the test is robust against small departures from normality.

Multiple regression analysis was used to describe the relationship of student category (old/new), gender, age and type of schools with the derived scores using dummy variable coding. For example, student category was coded as Old = 1 and New = 0, so that the regression coefficient of this indicator variable will give the average difference in the mean score between Old and New students (Old–New). Similarly gender was coded as male = 1 and female = 0. Age was taken as a continuous predictor. Two indicator variables was created for type of schools, one to indicate Anatolian school (school code 2 & 3) and another to indicate other school (school code > 3) and the regression coefficient would give the average difference of these schools from science schools. Multiple regression analysis would give a measure of the effect (individual contribution) by way of regression coefficient and its significance, after *controlling* for the effect of other variable in the

model. Grade was not included in the regression model as all the new students were of first grade.

Box plot was used for graphical presentation of the derived scores. The bold line marked across the box indicate the median score and the length of the box in the plot represents the inter-quartile range (IQR), and the non-outlier range shown by the whiskers on either side of the box is 1.5 times the IQR. The non-outlier range represents 2.7σ limit (99.3% of the observations) under assumption of normality. Observations between 1.5 times and 3 times the IQR (4.7σ limit) on either side of the box are marked as outliers (open circles) and those observations beyond 3 times the IQR as extremes (stars). Box plot allows visualisation of distribution in the most compact way and graphical assessment of symmetry and equality of variance can be made from box plot erected side by side.

Multivariate analysis of covariance was also used to compare the eight derived construct between old and new students simultaneously after controlling for gender, type of schools and age of the students. As there were 45 questions, eight derived constructs and many statistical tests, borderline statistical significances should be interpreted with caution. Students with missing values for a variable were not considered for the analyses that include the variable and hence the total number of students available for analysis would vary accordingly.

3.5.2 Qualitative methods

The data collected from the interviews, whose aim was exploratory and explanatory, were analysed. All the data was transcribed and grouped, and the findings were analysed qualitatively by using discourse analytic techniques. General tables, including all the categories and codes, were generated.

3.5.2.1 Transcribing and coding the interview data

Following Hycner (1985), with some modifications, the procedure of transcribing and coding (i.e., an analysis to “review a set of field notes, transcribed or synthesized, and to dissect them meaningfully, while keeping the relations between the parts intact”, Miles &

Huberman, 1994, p. 56) were carried out. Interview data were analysed consisted of the following steps.

1. Transcription of the recorded data: All of the interview data from was transcribed and coded manually in accord with the research aims.
2. Bracketing and phenomenological reduction: Data reduction is “a critical part of research method but gets scant attention in publications about the conduct of research” (Smagorinsky, 2008, p. 398). Since it was impossible to report everything, reduction was fundamental to elicit the units of general meaning for the clarification (Coffey & Atkinson, 1996; Keen, 1975; Miles & Huberman, 1994). The redundant phrases and sentences were eliminated and since “[A researcher] cannot just rely on the literal content but must also rely on the number times a meaning was mentioned and how it was mentioned ...[which] might indicate just how important that particular issue was to the participants” (Hycner, 1985, pp. 286-287).
3. Delineating units of meaning relevant to the research questions: The notes were examined by addressing the research questions to the units of general meaning to determine if participants’ responses illuminate the questions.
4. Writing a summary of each individual interview: Interview transcription was examined to write up summary of the themes.
5. The coding categories: When the interview data was analysed, there were ten coding categories as follows: learning needs, teaching environment, English proficiency, settings where English is used, individual aims with regard to English, problems, learning strategies, practitioners’ roles, opinions and feelings about Medical English.

It is also notable that all the interviews but two were conducted in Turkish, these were translated into English.

3.6 Practical issues and constraints

Although rich data were collected in the present study, the medical texts in English that students are likely to need to use in the hospital were not included in the study for genre

analysis due to the privacy of the documents in hospitals, which could have provided real written discourse for learners with regard to their future work settings.

3.7 Conclusion

This chapter provides information on the method and procedures. And also, the rationale behind the mixed research method, integrating qualitative and quantitative research methods, which complement each other, was discussed in detail, while introducing the instruments employed.

In the following chapter, the researcher will report on the data analysis and the findings in detail, by complementing the discussion with data from the questionnaires, the interviews, reflective journal and from the observation.

CHAPTER 4-RESULTS AND DISCUSSION

This Chapter presents the qualitative and quantitative findings of the critical needs analysis for medical students. It is worth reminding that since the questions (items) are built from medical students' essays, the frequencies tend to be very high as for agreement. The organisation in this chapter will follow the structure of providing each research question, presenting findings and discussion of these findings. First, the overall results of the questionnaire will be provided to identify perceived needs of Turkish medical students with regard to learning Medical English (4.1). Second, since there were two cohorts of Turkish medical students, the comparison of first and second cohort of medical students' perceptions regarding learning Medical English will be drawn to see if there are any differences in their perceptions regarding needs which may contribute to the generalizability of the data (4.2). Third, the data analysis of face-to-face interviews will be reported to find out academics' perceptions with a comparison to medical students' perceptions concerning EAP needs (4.3). Fourth, the data analysis of face-to-face interviews concerning the perceptions of doctors in a private hospital and Bursa Health Directorship about learning Medical English will be presented (4.4).

4.1 What are the perceived needs of Turkish medical students with regard to learning Medical English as a foreign language in the Faculty of Medicine?

Overall views

Frequencies and percentages were found for each item for the responses of the newly designed questionnaire and presented in detail. When the overall perceptions of the students about learning Medical English are examined, surprisingly, students focus on the importance of learning Medical English and qualifications of the instructor before presenting their perceptions such as their problems or shortcomings (see Figure 4.1). The order of frequency is also worth emphasizing. This may be an indication that medical students' awareness for the significance of learning Medical English is high. Second,

students highlight the qualifications of the instructors to show what their expectations from an instructor. This is an unexpected finding, which has not been addressed in the literature to date. The literature on needs analysis mainly focuses on present needs and future needs. However, as the mean scores of eight domains are examined, there are other components that overwhelm shortcomings, problems and aims. This picture may suggest that self-perceived needs may stem from the degree of importance of English in students' education life and also instructors' roles and characteristics in English language teaching process may have remarkable effects on students and their perceptions.

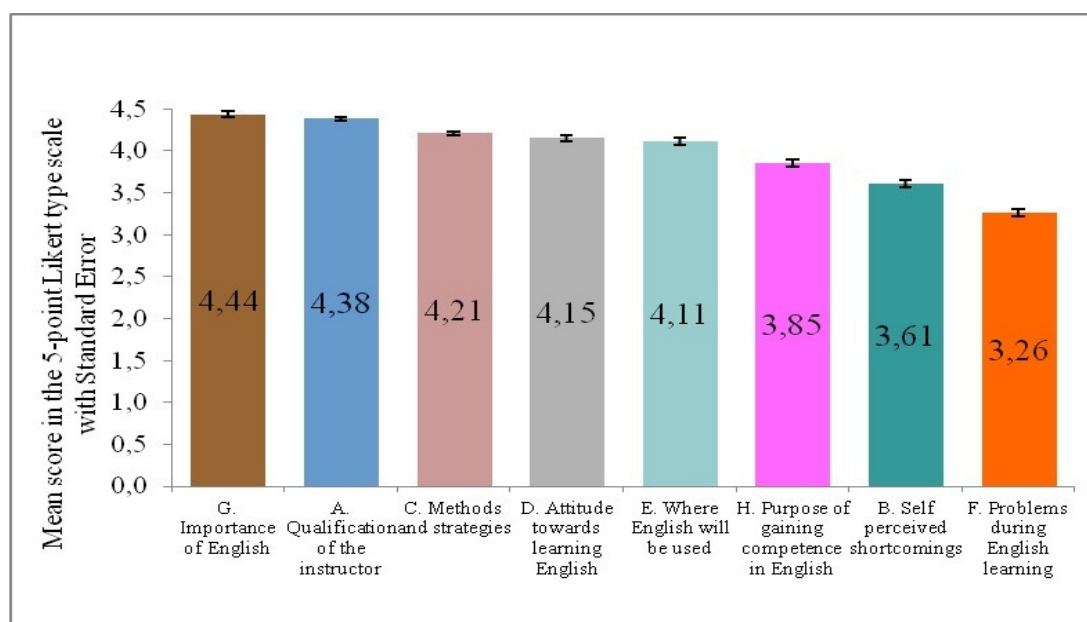


Figure 4.1. Mean scores of the eight aspects of students' needs for learning Medical English

The findings of the questionnaire are presented in detail in the order of the eight main sections in the questionnaire below (from questionnaire part A to H). Old students were more experienced than new students in terms of studying in the Faculty of Medicine and they were provided with a supportive teaching atmosphere to encourage them to express themselves with an intervention during this study. In contrast, new students were not as familiar with the Medical English course as old students.

As shown in Table 4.1 below, for the qualifications of the instructor, five items are considered very important for most of the students (with the percentage over 50%) as follows: Instructors should care about their job, love teaching, and be highly motivated (72.5%), teach English in a way that makes students love English are very important for the students (67.2%) and have a high level of proficiency in English (66.9%), make the course interesting and entertaining (65.4%) and create a relaxing atmosphere in the classroom (53.4%). Surprisingly, students do not seem to expect a lot from the instructors to plan the teaching process in detail (41.0%), prepare before coming to class (42.7%) and allocate specific time for their questions (39.9%).

Table 4.1

Overall response for Questionnaire part A- Qualifications of the instructor

Instructors should	Response						Total				
	Completely unimportant		Unimportant		Somewhat important			Very Important			
	n	%	n	%	n	%		n	%		
1. Make the course interesting and entertaining	1	0.3	3	0.9	24	7.4	84	25.9	212	65.4	324
2. Plan the teaching process in detail	4	1.2	12	3.7	60	18.6	114	35.4	132	41.0	322
3. Prepare before coming to class	7	2.2	10	3.1	52	16.1	116	35.9	138	42.7	323
4. Care about their job, love teaching, and be highly motivated	-		3	0.9	13	4.0	73	22.5	235	72.5	324
5. Allocate specific time for questions	4	1.2	11	3.4	44	13.6	135	41.8	129	39.9	323
6. Have professional competency	1	0.3	6	1.9	26	8.1	99	30.7	190	59.0	322
7. Have a high level of proficiency in English	1	0.3	3	0.9	19	5.9	84	26.0	216	66.9	323
8. Create a relaxing atmosphere in the classroom	2	0.6	6	1.9	45	13.9	98	30.2	173	53.4	324
9. Teach English in a way that makes students love English	1	0.3	3	0.9	19	5.9	83	25.7	217	67.2	323
10. Understand students' feelings and opinions	2	0.6	11	3.4	55	17.0	108	33.3	148	45.7	324

A possible explanation for this is maybe their perception if the instructor is highly motivated and proficient, other conditions exist concurrently. Another explanation for this is likely to be the collaboration that students are used to build in the classroom, including sharing course notes, group working for the examinations.

Another important though expected finding is that the highly relevant self-perceived shortcoming for medical students is the difficulty in expressing themselves orally (34.2%) as shown in Table 4.2.

Table 4.2

Overall response for Questionnaire part B- Self-perceived shortcomings in learning English

Self-perceived shortcomings	Response								Total		
	Absolutely invalid		Invalid		Low validity		Valid			Top validity	
	n	%	n	%	n	%	n	%		n	%
1. Difficulty understanding medical articles	6	1.9	18	5.6	80	24.8	128	39.6	91	28.2	323
2. Not able to pronounce the words	17	5.3	34	10.6	116	36.0	90	28.0	65	20.2	322
3. Difficulty expressing while speaking	12	3.8	29	09.1	77	24.1	92	28.8	109	34.2	319
4. Insufficient level of English gained in the classroom	53	17.0	35	11.3	55	17.7	71	22.8	97	31.2	311
5. Problems in understanding English expressions and statements	11	3.4	49	15.1	107	33.0	92	28.4	65	20.1	324
6. Difficulty in translating text from English to Turkish	12	3.7	33	10.2	112	34.6	89	27.5	78	24.1	324

This finding contradicts with the study of Chia, et al., (1999) in which reading was the most important needed skill for medical students in Taiwan. Foreign language education system in Turkey is probably a reason for this result because grammar is emphasized very much in contrast to speaking while teaching English and the examinations tend to consist of

multiple choice questions. In addition, productive skills in English are rarely assessed in higher education in Turkey (see Onder, in press, for the information about national English examinations in Turkey). Another highly relevant self-perceived shortcoming is insufficient level of English gained in the classroom (31.2%). Crowded medical classrooms can be a reason for this perception or insufficient exposure to English outside the classroom.

In terms of methods and strategies, repetition (50.9%) and learning words in context in medical articles (50.9%) are perceived as very important as shown in Table 4.3.

Table 4.3

Overall response for Questionnaire part C- Methods and strategies

Methods and strategies	Response								Total		
	Completely Unimportant		Unimportant		Partially important		Important			Very Important	
	n	%	n	%	n	%	n	%		n	%
1. Learning English by using English words in sentence	1	0.3	3	0.9	29	09.0	137	42.4	153	47.4	323
2. Meanings of English words as well as parts of speech and collocations	3	0.9	8	2.5	56	17.3	123	38.1	133	41.2	323
3. Reinforcing the target words by repetition	1	0.3	4	1.2	33	10.2	121	37.3	165	50.9	324
4. Learning words in sentences and in different contexts	1	0.3	14	4.3	43	13.3	144	44.6	121	37.5	323
5. Learning words through different learning strategies	2	0.6	18	5.6	86	26.8	123	38.3	92	28.7	321
6. Learning words by usage in medical articles	1	0.3	6	1.9	34	10.5	118	36.4	165	50.9	324
7. Learning structures and words through sample texts that include target structures and words	1	0.3	12	3.7	49	15.1	141	43.5	121	37.3	324
8. Learning by emphasizing the differences between medical and general English	1	0.3	11	3.4	54	16.7	124	38.4	133	41.2	323

Learning English by using English words in sentence is rated as important (47.4%). However, the lowest percentage in this category is learning words through different

learning strategies (28.7%). This may raise the question students are not familiar with the learning strategies. The researcher's observation and reflective journal also confirms the paucity in the strategies. Some excerpts from the reflective journal:

While I am talking about learning strategies concerning reading, I gave some clues for the exam, too. I emphasized the fact that (1) they should focus on the main idea and (2) if there are some unknown words, they can try to guess from the context by concentrating on words that they are already familiar with rather than unknown words.

I wrote "heal" on the board and asked if they know the meaning of this word. They hesitated to answer and claimed that it was the first time they saw this word. Then I wrote "health" they were surprised... Given that derivations are very important to understand the words and word structures, I provided lots of examples. I think they understood the main points.

....

....

I wanted them to use the strategies they used before while dealing with the readings. The first paragraph was about 'asthma'. There were many reading texts about the topic that we have studied before, so reading the paragraph made students more motivated and they said that they can now understand why I focused on studying both specified and general English words.

As regards attitudes towards learning English, it seems there is a growing consensus on the fact that English is a global language and is crucial to learn (60.2%) and learning English is important for professional development although there are a few students who refuse this perception.

The responses revealed that students have positive attitudes towards learning English as shown in Table 4.4. This result is in line with the findings of Zughoul and Hussein (1985), Fang (1987) and Chia, et al., (1999). It is also notable that some students are not happy to take Medical English course (24.5%). It is tentatively suggested that the reason may be the

busy and tight schedule they need to take courses that are directly relevant to medicine in each term.

Table 4.4

Overall response for Questionnaire part D- Affective domains (Attitudes towards learning English)

Attitude towards learning English	Response						Total				
	Absolutely invalid		Invalid		Low validity			Valid		Top validity	
	n	%	n	%	n	%		n	%	n	%
1. I regard English as a need that I am filling through this course	3	0.9	10	3.1	27	08.4	113	35.0	170	52.6	323
2. Learning English is important for professional development	3	0.9	3	0.9	30	09.3	97	30.0	190	58.8	323
3. Taking this course makes me happy	16	5.0	26	8.0	79	24.5	126	39.0	76	23.5	323
4. Desire to succeed in learning medical English affects my attitude toward the course	6	1.9	13	4.0	82	25.3	133	41.0	90	27.8	324
5. English is a common global language and is crucial to learn	6	1.9	6	1.9	39	12.0	78	24.1	195	60.2	324

There is a widespread agreement on the settings where English will be used among the students (see Table 4.5). Most of the students opined that they aim to participate in medical operations or other activities and accessing distance communication (51.2%). Surprisingly, there are also a number of students who reported that they want to use English while they are writing a paper, article etc. (42.7%). This finding may demonstrate that students are motivated enough to use medical English for life-long learning in their future professions. However, it is worth highlighting that watching or participating in discussion forums or websites on the Internet was rated the lowest (35.9%). This may be an indication that students aim to actively involved in the professional settings rather than using the forums and websites about which they may have already considerable experience.

Table 4.5

Overall response for Questionnaire part E- Setting (Where English will be used)

English will be used while	Response										Total
	Absolutely not a priority		Not a priority		Low priority		Priority		Top priority		
	n	%	n	%	n	%	n	%	n	%	
1. Writing a paper, article, etc	3	0.9	18	5.6	46	14.2	118	36.5	138	42.7	323
2. Exchanging knowledge and experience with colleagues abroad through individual correspondence (including e-mails)	6	1.9	9	2.8	62	19.2	112	34.7	134	41.5	323
3. Watching or participating in discussion forums or websites on the Internet	6	1.9	23	07.1	57	17.6	121	37.5	116	35.9	323
4. Participating in medical operations or other activities and accessing distance communication	11	3.4	14	4.3	35	10.9	97	30.1	165	51.2	322

It is noteworthy that almost 20% of the students accepted that they are coming to English course unprepared (see Table 4.6). The researcher's observation and reflective journal also confirms students tend to attend the courses unprepared. Some excerpts from the reflective journal:

When I asked students if they read the research article on integrated care, I realised that only five students skimmed the article...

It can be argued that the reason for this is the heavy schedule in the department. It was also observed that students not only have mid-term examinations and finals but also oral examinations almost once a week from medical courses, including Anatomy. Oral examinations can be a priority for students rather than preparing for courses. The study also found that for almost half of the students, problems about understanding English expressions and statements are not a priority at all.

Table 4.6

Overall response for Questionnaire part F – Problems (During Medical English learning process)

Problems during medical English learning process	Response						Total				
	Absolutely not a priority		Not a priority		Low priority			Priority		Top priority	
	n	%	n	%	n	%		n	%	n	%
1. Unprepared for the English courses	12	3.7	39	12.1	86	26.6	122	37.8	64	19.8	323
2. Unable to benefit from the course materials presented	14	4.4	63	19.6	97	30.2	109	34.0	38	11.8	321
3. Problems understanding English expressions and statements	29	09.0	70	21.7	104	32.2	80	24.8	40	12.4	323
4. Problems with the relationship between communication functions (showing contrast, explanation, characterisation, etc.)	25	7.7	51	15.8	86	26.6	106	32.8	55	17.0	323
5. I have +/- opinion toward learning English because of people or events in the past	69	21.4	63	19.5	58	18.0	77	23.8	56	17.3	323

There is a broad and clear consensus on the perceptions of students regarding importance of English in three items shown in Table 4.7.

Table 4.7

Overall response for Questionnaire part G- Importance of English

Importance of English	Response						Total				
	Completely Unimportant		Unimportant		Partially important			Important		Very Important	
	n	%	n	%	n	%		n	%	n	%
1. Medical English is a tool to realise occupational aims	-		7	2.2	17	5.3	114	35.3	184	57.0	322
2. English that I learn will be "medical English"	2	0.6	3	0.9	35	10.9	100	31.1	182	56.5	322
3. English is relevant for my future profession	-		9	2.8	26	08.1	109	33.9	178	55.3	322

The results in questionnaire part G are compatible with the part D which focuses on affective domains (attitudes towards learning English). Over 50% of the students accepted that Medical English is a tool to realise their occupational aims and it is relevant to their future profession.

When the frequencies for purpose of gaining competence in English language in Table 4.8, it is particularly striking that Interuniversity Foreign Language Examination (UDS),

Table 4.8

Overall response for Questionnaire part H- Purpose of gaining competence in English language

Purpose of gaining competence in English language	Response						Total				
	Absolutely not a priority		Not a priority		Low priority			Priority		Top priority	
	n	%	n	%	n	%		n	%	n	%
1. To be successful on the international English proficiency exams, which are a prerequisite for conducting research and working abroad	3	0.9	8	2.5	45	14.0	108	33.5	158	49.1	322
2. To pursue education abroad in medicine	4	1.2	17	5.3	57	17.7	104	32.3	140	43.5	322
3. To be successful on the Foreign Language Examination for Civil Servants	41	12.9	43	13.5	84	26.3	86	27.0	65	20.4	319
4. To be successful on the Interuniversity Foreign Language Examination	19	5.9	27	8.4	70	21.7	111	34.5	95	29.5	322

which is a prerequisite to go on residence in medicine, is considered lower priority (29.5%) compared to international English examinations (49.1%). A possible explanation for this result can be their aim to go abroad for various reasons, including undertaking research, studying or working abroad. Moreover, when the overall response percentage is examined, 43.5% of the students aim to pursue their education abroad, which is the second top priority. The lowest priorities are being successful in the Foreign Language Examination for Civil Servants (KPDS) (20.4%) and in the Interuniversity Foreign Language

Examination (29.5%). It is tentatively suggested that medical students do not seem to give importance to the results of the national English examinations, which will also be discussed in the interviews in detail in this chapter.

The descriptive statistics results have been presented in Table (4.9) and described in detail in Appendix F.

Table 4.9

Descriptive statistics for the eight aspects showing students' needs for learning Medical English

Students' perception of needs	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
A. Qualification of the instructor	316	2.8	5	4.38	0.45
B. Self-perceived shortcomings	303	1	5	3.61	0.82
C. Methods and strategies	318	2.5	5	4.21	0.50
D. Attitude towards learning English	323	1.6	5	4.15	0.61
E. Where English will be used	322	1	5	4.11	0.74
F. Problems during English learning	321	1	5	3.26	0.80
G. Importance of English	322	2	5	4.44	0.59
H. Purpose of gaining competence in English	319	1	5	3.85	0.77

A. The average score for the 10 items regarding instructors' qualification ranged from 2.5 to 5 with a mean of 4.38 (mid-way between important and very important) and SD of 0.45. The box plot shows that 75% of the students' mean scores were between 4.1 (Important) and 4.7 (close to very important).

B. The average score for the six items regarding students' self-perceived short comings ranged from 1 to 5 with a mean of 3.61 (between low relevance and relevant) and SD of

0.82. The box plot shows that 75% of the students' mean scores were between 3.2 (just above low relevance) and 4.1 (relevant).

C. The average score for the eight items regarding methods and strategies ranged from 2.5 to 5 with a mean of 4.21 (just above important) and SD of 0.50. The box plot shows that 75% of the students' mean scores were between 3.9 (just below Important) and 4.6 (mid-way between important and very important).

D. The average score for the five items regarding attitude towards learning English ranged from 1.6 to 5 with a mean of 4.15 (just above relevant) and SD of 0.61. The box plot shows that 75% of the students' mean scores were between 3.8 (just below Important) and 4.6 (mid-way between important and very important).

E. The average score for the four items regarding settings where English will be used ranged from 1.0 to 5 with a mean of 4.11 (just above priority) and SD of 0.74. The box plot shows that 75% of the students' mean scores were between 3.75 (below priority) and 4.75 (close to Top priority).

F. The average score for the five items regarding problems during learning medical English ranged from 1.0 to 5 with a mean of 3.26 (above low priority) and SD of 0.80. The box plot shows that 75% of the students' mean scores were between 2.8 (below low priority) and 3.8 (below priority).

G. The average score for the three items regarding importance of English ranged from 2 to 5 with a mean of 4.44 (mid-way between important and very important) and SD of 0.59. The box plot shows that 75% of the students' mean scores were between 4 (important) and 5 (very important).

H. The average score for the four items regarding purpose of gaining competence in English ranged from 1 to 5 with a mean of 3.85 (just below priority) and SD of 0.77. The box plot shows that 75% of the students' mean scores were between 3.5 (mid-way between low priority and priority) and 4.5 (mid-way between priority and top priority).

4.2 Are there any differences between the first and second cohort of Turkish medical students' perceptions regarding learning Medical English? If so, what are the differences?

Since this study is an ongoing critical needs analysis, the researcher aimed to reveal if there are significant differences about the EAP needs of medical students in two different periods of time, which may also give an opinion for the generalizability of the findings. According to chi square results, for the differences between the perceptions of the old and new students, some significant differences were found despite the fact that similarities outnumber the differences.

Questionnaire part A- Qualifications of the instructor

The response of old and new students to the 10 questions regarding qualification, skills and way of approach in teaching of English is depicted in Figure 4.2.

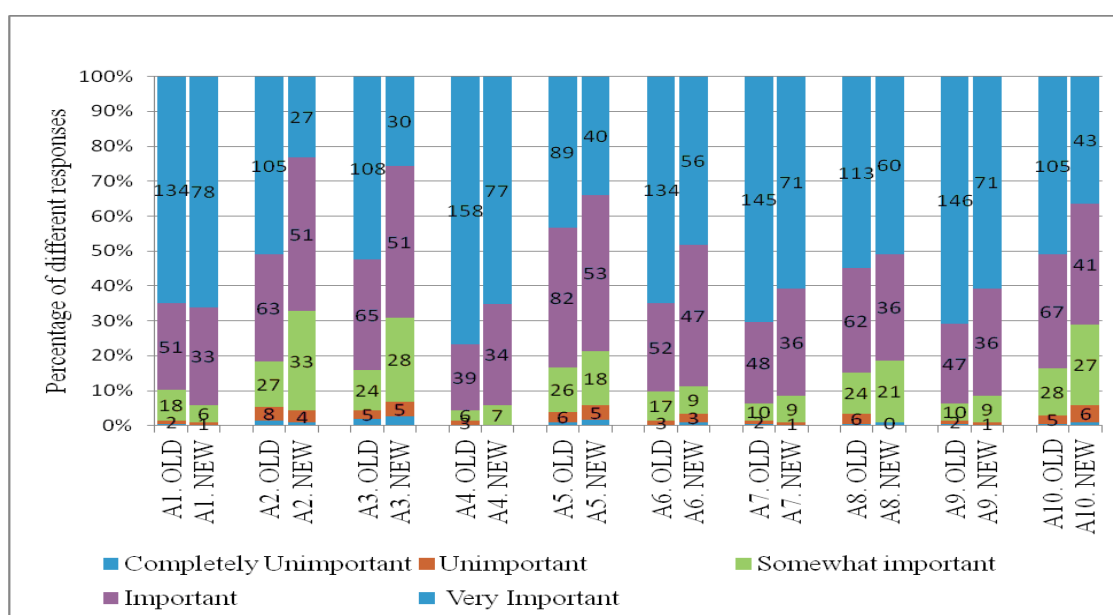


Figure 4.2. Distribution of responses to questions regarding qualifications of instructor

As regards the 10 items about the qualifications of the ESP instructor in the questionnaire, differences in the pattern of responses were not large enough to be

statistically significant for questions A1, A4, A5, A7, A8 and A9. However, there are statistically significant differences for questions A2, A3, A6, and A10. In question A1, around 65% of both old as well as new students opined that it is very important for the instructor to make the course interesting and entertaining to facilitate learning English. The pattern of responses are similar between two group of students, $\chi^2(2,324) = 1.89$, $P = 0.389$. As for question A4, the study found that there is remarkably high agreement among medical students that the instructors should care about their job, love teaching, and be highly motivated. Although old students appear to report more strongly (76.7%) than new students (65.3%), the differences in the pattern of responses are not large enough to be statistically significant, $\chi^2(2,324) = 5.0$, $P = 0.083$. In question A5, old students (43.4%) express more strongly that the instructors should accommodate students by allocating specific time for questions, the differences in the pattern of responses are not large enough to be statistically significant, $\chi^2(3,323) = 3.16$, $P = 0.368$. Despite the fact that old students (70.4%) appear to note more strongly than the new students (60.7%) that the instructors should have a high level of proficiency in English as for the question A7, the differences in the pattern of responses are not large enough to be statistically significant, $\chi^2(2,323) = 3.18$, $P = 0.204$. Old students (54.9%) appear to opine more strongly than the new students (50.8%) that the instructors should create a relaxing atmosphere in the classroom in question A8, the differences in the pattern of responses are not large enough to be statistically significant, $\chi^2(3,324) = 4.25$, $P = 0.236$. Interestingly, in tune with the results of question A4, students have consensus on the fact that instructors should teach English in a way that makes students love English. The differences in the pattern of responses are not large enough to be statistically significant, $\chi^2(2,323) = 3.51$, $P = 0.173$ in question A9. These findings can be an indication that students give importance not only to the professional competence and high level of proficiency in English but also instructors' personal characteristics. It is also tentatively suggested that medical students' perceptions for the instructors' personalities overwhelm the other qualifications, including instructors' high level of proficiency and teaching plan.

Recall that the pattern of responses was not similar for questions 2, 3, 6 & 10. Surprisingly, as for A2 while more than 50% of the old students reported that it is very important for the instructor to plan the teaching process in detail, only 23.3% of the new students opined the same. Accordingly, the overall pattern of response is different among old and new students, $\chi^2(3,322) = 27.2$, $P < 0.001$. While more than 50% of the old students opined that it is very important for the instructor to be prepared before coming to the class, only 25.6% of the new students opined the same. The overall pattern of responses are different among old and new students, $\chi^2(3,323) = 23.4$, $P < 0.001$ in question A3. Regarding question A6, while 65% of the old students expressed that it is very important for the instructor to have professional competencies, including the ability to ask relevant questions and to explain important points in a comprehensible way, only 48.3% of the new students opined the same. The overall pattern of responses are different among old and new students, $\chi^2(2,322) = 9.33$, $P = 0.009$. Similarly, for the question A10, while 51% of the old students opined that it is very important that the instructor should understand students' feelings and opinions, only 36.4% of the new students opined the same. The overall pattern of responses are different among old and new students, $\chi^2(3,324) = 9.10$, $P = 0.028$. Given the statistically significant differences in questions A2, A3, A6, and A10, the findings may suggest that new students' lack of experience in their faculty and courses affected their response and may lead to some different perceptions.

Questionnaire part B- Self-perceived lacks in learning English

Questions 11-16 were regarding the students' lacks in learning English as shown in Figure 4.3. When the perceptions of new and old students are examined, there are not any statistically significant differences among five items but one item. The new students seem to think that they have difficulty in understanding medical articles to be more relevant than their seniors, so the overall pattern of responses is different among old and new students, $\chi^2(3,323) = 10.8$, $P = 0.013$. A possible explanation for this may be that new students are not very familiar with the genre and academic discourse of their discipline.

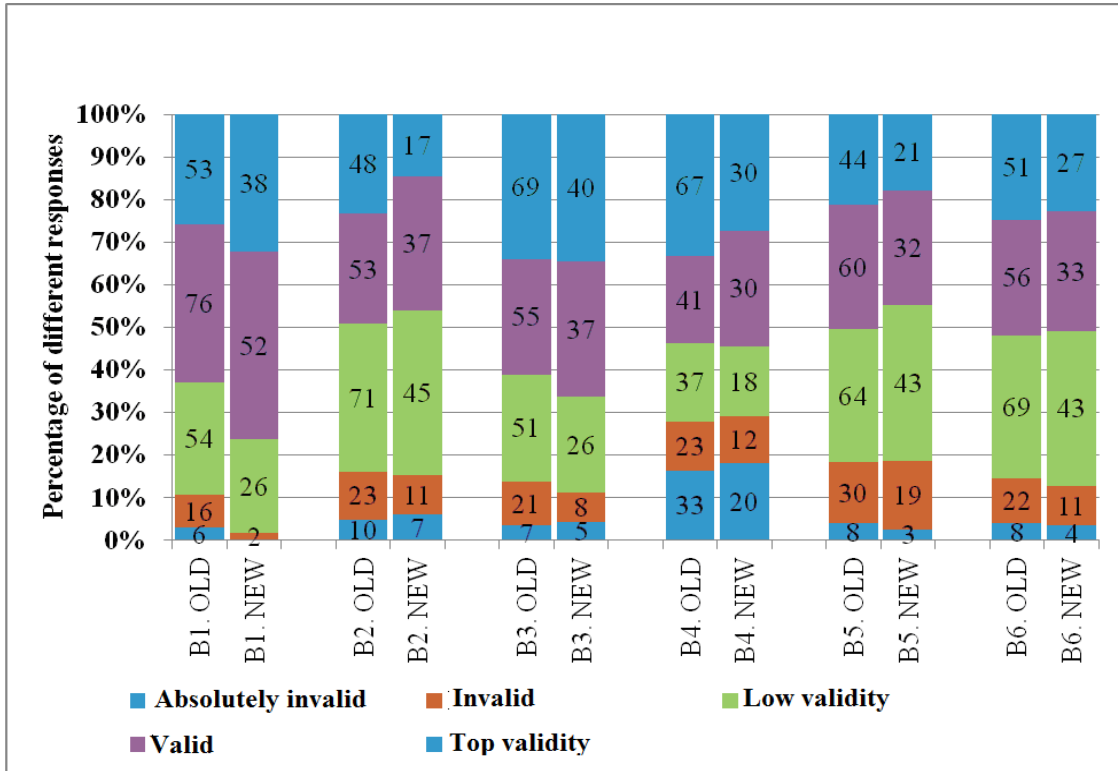


Figure 4.3. Distribution of responses to questions regarding self-perceived shortcomings.

A further explanation can be related with the paucity in their knowledge related with the medical subjects. It is also particularly striking that as for questions B2, 3, 4, 5 and 6, there is a high consensus on overall pattern of responses about lacks including pronouncing the words ($\chi^2(4,322) = 4.51, P = 0.342$), difficulty in expressing themselves while speaking ($\chi^2(4,319) = 1.93, P = 0.748$), insufficient level of English gained in the classroom ($\chi^2(4,311) = 2.63, P = 0.622$), difficulty in understanding English expressions and statements ($\chi^2(4,324) = 1.75, P = 0.781$) and also translating a text from English to Turkish ($\chi^2(4,324) = 0.5, P = 0.974$). These findings may raise the question of whether these responses are associated with the foreign language system in Turkey because it is well-known that grammar is highlighted more than productive skills in English classrooms.

Questionnaire part C- Methods and strategies

Questions 17-24 were regarding the methods and strategies. Interestingly, there were not any statistically significant differences in two questions, in part C in the questionnaire while the responses for six questions were statistically significant different. The response of old and new students to eight questions regarding methods and strategies to be used for learning English is depicted in Figure 4.4.

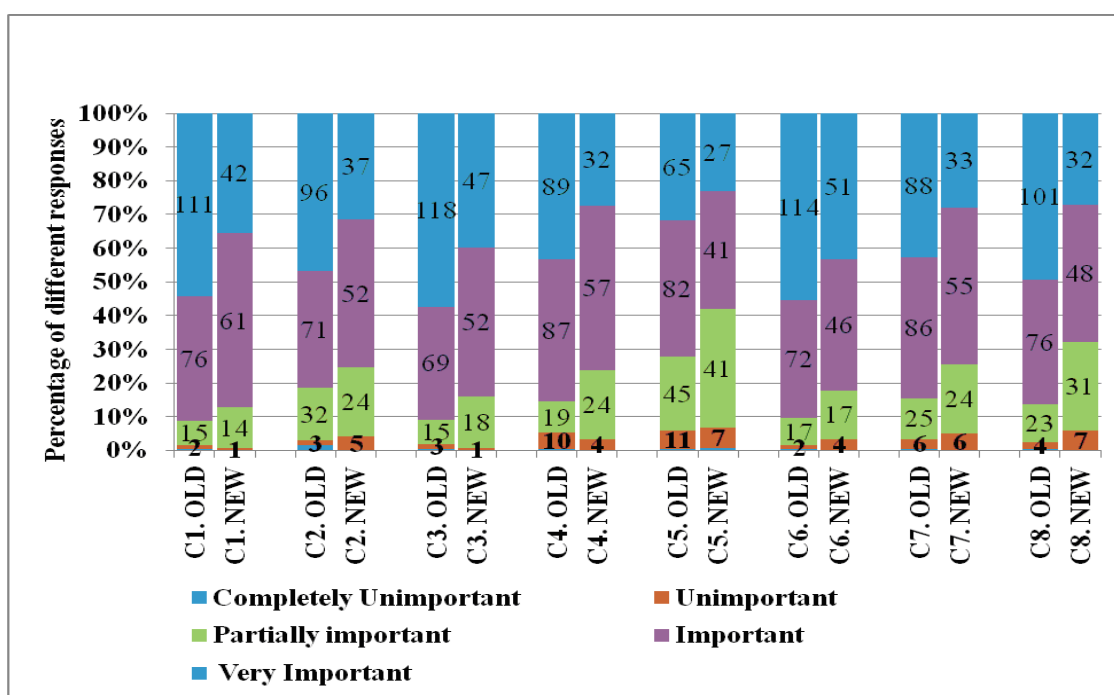


Figure 4.4. Distribution of responses to questions regarding methods and strategies

About 47% of the old students consider learning not only the meanings of English words but also the parts of speech of words (i.e., adjective, verb, etc.) and collocations (i.e., conducting research), are very important while the proportion is 31.4% among new students. The differences in overall pattern of responses is not large enough to be statistically significant, $\chi^2(3,323) = 7.45$, $P = 0.059$. About 32% of the old students consider learning words through different learning strategies is very important while the proportion is 23.1% among new students. The differences in overall pattern of responses is not large

enough to be statistically significant, $\chi^2(3,321) = 7.31$, $P = 0.063$. Recall from the methodology chapter that an action research that was carried out in the context of the present research as a reflection and practical intervention by the researcher. During the action research, it was evident from the students' feedback after two months of training that they developed vocabulary learning strategies and the training boosted their confidence in themselves to address the unknown words. Moreover, when the pre- and post-test results were examined as a part of action plan, the normality of the tests was not met to conduct the parametric tests; therefore, the non-parametric Wilcoxon Signed Ranks test was performed. The results revealed that there is a statistically significant difference between the mean score of pre-test ($\bar{x}=34.29$) and the mean score of the post-test ($\bar{x}=83.03$) results [$z = -6.453$, $p < 0.01$]. The test results were discussed with the students, so they had an opportunity to reflect how the strategies helped them in learning new medical terminology. More than 50% of the old students consider learning English by using English words in sentence is very important while the proportion is 35.6% among new students. The overall pattern of responses is different among old and new students, $\chi^2(2,323) = 10.4$, $P = 0.006$. About 57% of the old students consider reinforcing target words by repetition is very important while the proportion is about 40% among new students. The overall pattern of responses is different among old and new students, $\chi^2(2,324) = 9.76$, $P = 0.008$. About 43% of the old students consider learning English words in sentences and in different contexts is very important while the proportion is 27% among new students. The overall pattern of responses is different among old and new students, $\chi^2(3,323) = 13.4$, $P = 0.004$. About 32% of the old students consider learning words through different learning strategies is very important while the proportion is 23.1% among new students. The differences in overall pattern of responses is not large enough to be statistically significant, $\chi^2(3,321) = 7.31$, $P = 0.063$. About 55% of the old students consider learning words by emphasizing how the words are used in medical articles is very important while the proportion is 43.2% among new students. The overall pattern of responses is different among old and new students, $\chi^2(2,324) = 6.38$, $P = 0.041$. About 43% of the old students consider learning

English structures and words through the sample texts, which include the target structures and words is very important while the proportion is 28% among new students. The overall pattern of responses is different among old and new students, $\chi^2(3,324) = 8.65$, $P = 0.034$. About 49% of the old students consider learning by emphasizing the differences between medical English terminology and general English words is very important while the proportion was 27.1% among new students. The overall pattern of responses is different among old and new students, $\chi^2(3,323) = 21.8$, $P < 0.001$. These results seem to suggest that students may use different approaches while learning English thanks to their preferences.

Questionnaire part D- Affective Domains (Attitudes towards learning English)

Questions 25-29 are regarding the affective domains. In other words, this part focuses on attitudes towards learning English. The response of old and new students to five questions regarding attitude towards learning English is depicted in Figure 4.5.

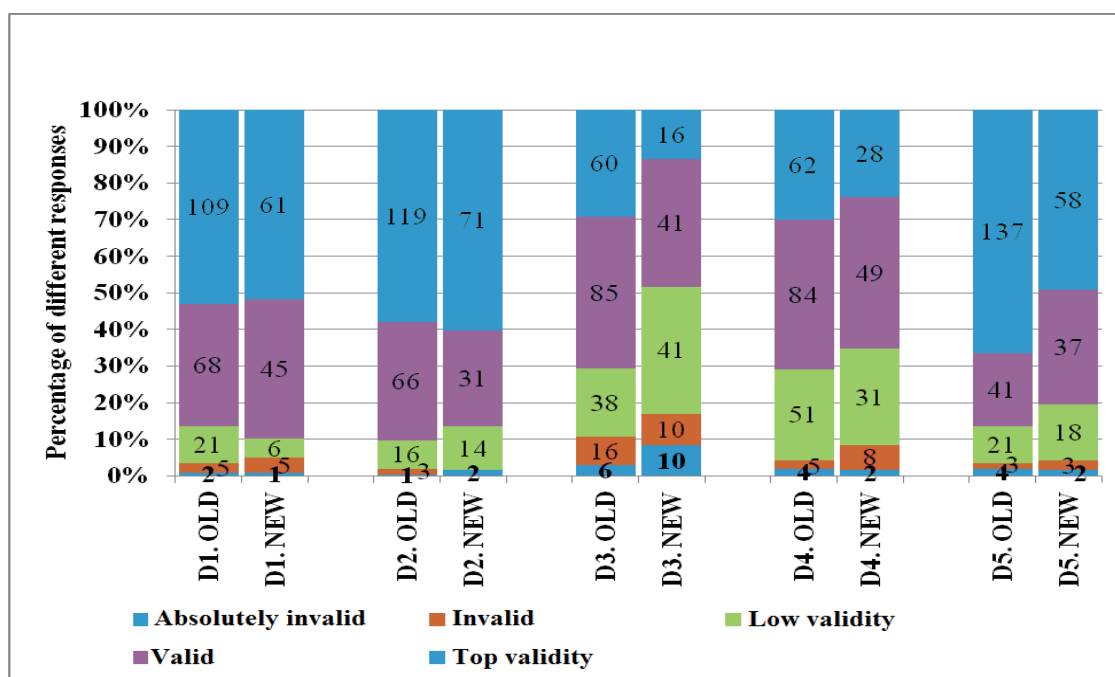


Figure 4.5. Distribution of responses to questions regarding attitude towards English learning

With regard to assessing question D1 which focuses on perceiving English as a need, there are small differences in the proportion of old (53.2%) and new students (51.7%) but the differences overall are not big enough to be statistically significant, $\chi^2(3,323) = 3.46$, $P = 0.326$. As for question D2, about 60% of the students considered learning English for professional development as top validity. Though there are small differences in the proportion of old and new students in the other categories, the differences are not big enough to be statistically significant, $\chi^2(2,323) = 1.90$, $P = 0.386$. Moreover, 29.3% of the old students and 13.6% of the new students reported that the course does not make them happy. It was observed that after passing university examination and spending a full year in the preparatory English classrooms instead of studying medicine affect them negatively. The differences are not large enough to be statistically significant, $\chi^2(3,324) = 3.33$, $P = 0.343$. With regard to the effect of success on students' attitude, 30.1% of the old students and 23.7% of the new students found it absolutely valid. The differences in the proportion of old and new students in the five categories are large enough to be statistically significant, $\chi^2(4,323) = 21.5$, $P < 0.001$. Surprisingly, regarding question D5, 66.5% of the old students considered English as a common global language and crucial to learn, whereas the proportion is 49.2% among new students. The overall pattern of responses among old and new students is different, $\chi^2(3,324) = 9.58$, $P = 0.022$.

Questionnaire part E- Settings (where English will be used)

Questions 30-33 were regarding the settings where English will be used. The response of old and new students to four questions regarding settings where English will be used is depicted in Figure 4.6. Although there are small differences in the proportion of old (47.1%) and new students (35%) in the different categories of priorities regarding the need to use English in writing paper, article etc., it was not large enough to be statistically significant, $\chi^2(3,323) = 7.07$, $P = 0.070$. The proportion of old (51.9%) and new students (50%) in the different categories of priorities regarding the need to learn English for accessing distance communication where available and while participating in medical operations or other activities is quite similar, $\chi^2(4,322) = 2.54$, $P = 0.638$.

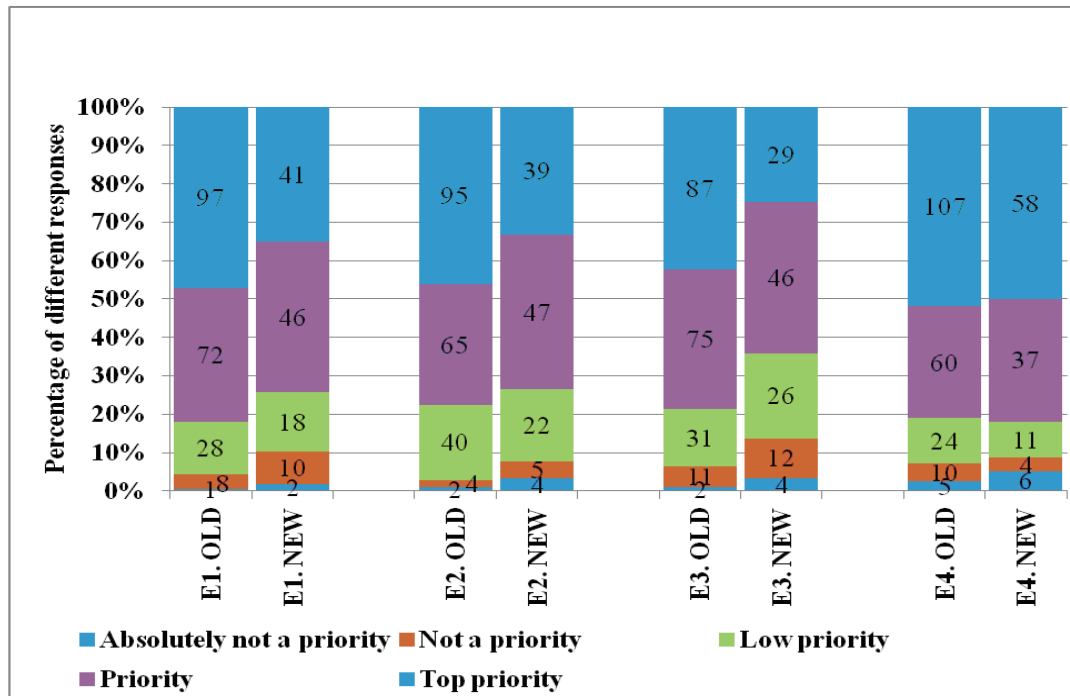


Figure 4.6. Distribution of responses to questions where English will be used

The differences in the proportion of old (46.1%) and new students (33.3%) in the different categories of priorities regarding the need to use English for exchanging knowledge and experience with colleagues abroad through individual correspondence (including e-mails) is large enough to be statistically significant, $\chi^2(3,323) = 8.22$, $P = 0.042$. Likewise, the differences in the proportion of old (42.2%) and new students (24.8%) regarding the need to learn English for watching or participating in discussion forums or websites on the Internet is large enough to be statistically significant, $\chi^2(3,323) = 13.2$, $P = 0.004$. It can be argued that the experience gained in the department may encourage old students to use English in many opportunities.

Questionnaire part F – Problems (during Medical English Teaching Process)

Questions 34-38 were regarding the problems. The response of old and new students to five questions regarding problems in learning English is depicted in Figure 4.7. The pattern of responses is similar among old and new students for all the questions.

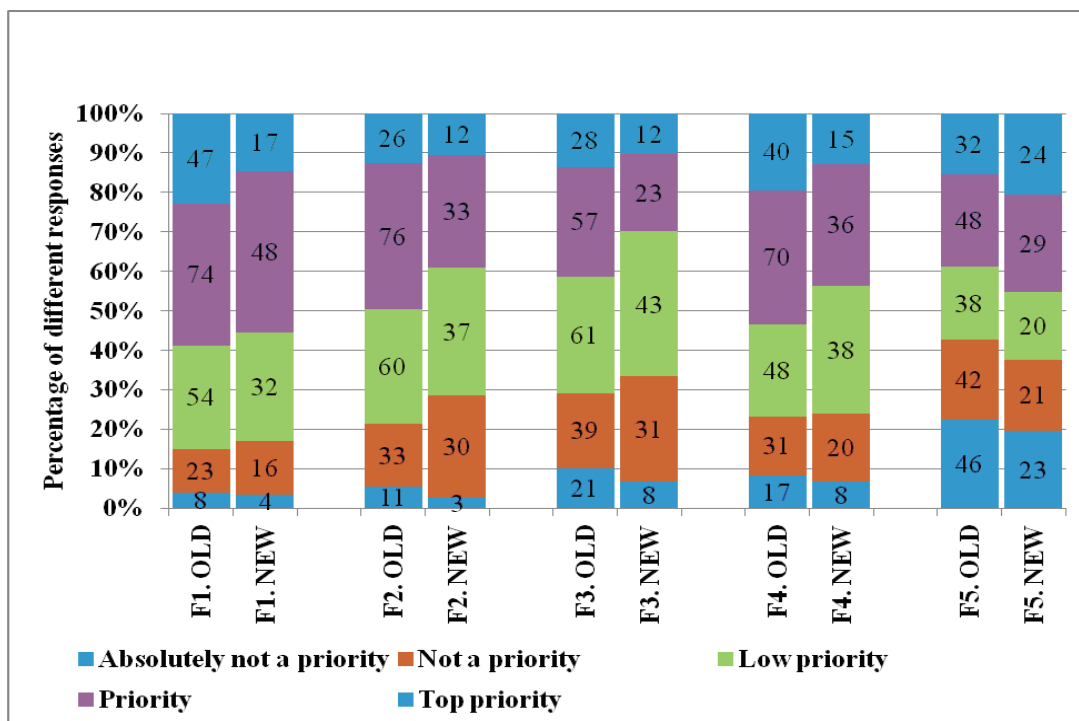


Figure 4.7. Distribution of responses to questions regarding problems in English learning

The data analysis suggests that students have similar problems, including not being able to get prepared for the English courses, not to be able to benefit from the course materials, understanding English expressions, the relationship between functions in communication (i.e., contrast, similarities). Accordingly, there are not any statistically significant differences between their perceptions. The differences in the proportion of old (22.8%) and new students (14.5%) in the different categories of priorities regarding the problem of preparedness for the English course is not large enough to be statistically significant, $\chi^2(4,323) = 3.57$, $P = 0.467$. Likewise, the differences in the proportion of old (12.6%) and new students (10.4%) in the different categories of priorities regarding the inability to benefit from the course materials presented is not large enough to be statistically significant, $\chi^2(4,321) = 7.06$, $P = 0.133$. The differences in the proportion of old (13.6%) and new students (10.3%) in the different categories of priorities regarding the problem of understanding English expressions and statements is not large enough to be statistically

significant, $\chi^2(4,323) = 6.69, P = 0.153$. In addition, the differences in the proportion of old (19.4%) and new students (12.8%) in the different categories of priorities regarding the problem of learning the relationship between communication functions (showing contrast, explanation, characterisation, etc.) is not large enough to be statistically significant, $\chi^2(4,323) = 4.89, P = 0.298$. The differences in the proportion of old and new students in the different categories of priorities regarding the problem of bias toward learning English (I have positive or negative opinions because of people or events in the past.) is not large enough to be statistically significant, $\chi^2(4,323) = 1.69, P = 0.793$.

Questionnaire part G- Importance of English

Questions 39-41 were regarding the importance of English. The response of old and new students to three questions regarding importance and relevance of learning English is depicted in Figure 4.8.

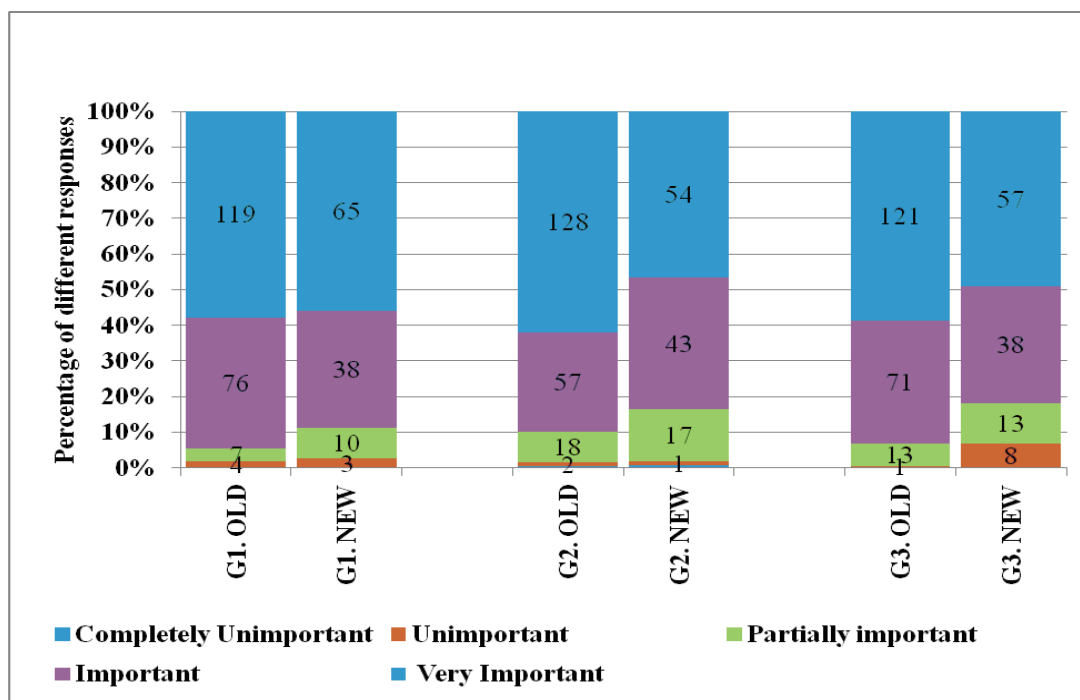


Figure 4.8. Distribution of responses to questions regarding importance of English

There was no doubt that the old (57.8%) and new students (55.6%) are aware of the importance of English as a tool to realise occupational aims. The pattern of responses among them regarding the importance is not different enough to be statistically significant, $\chi^2(4,322) = 3.83$, $P = 0.148$. It is also noteworthy that more than 60% of the old students considered it is very important to make sure that the English they learn will be “Medical English” while the proportion was 46.6% among new students. The difference in the proportion of old and new students in different categories of opinion is large enough to be statistically significant, $\chi^2(2,322) = 7.59$, $P = 0.023$. This result seems to suggest that new students may not be aware of the difference between medical English and general English in contrast to old students. About 59% of the old students considered it is very important to make sure that the English they learn will be relevant for their future profession while the proportion was 49.1% among new students. The difference in the proportion of old and new students in different categories of opinion is large enough to be statistically significant, $\chi^2(2,322) = 10.0$, $P = 0.007$. A possible explanation for this can be that the experience old students gained in the courses in the department or the observation they had in the hospital might have increased old students’ awareness regarding their future profession. A further explanation can be related to their concern about future. Maybe old students tend to think of future work more than new students.

Questionnaire part H- Aims regarding English language competence

Questions 42-45 were regarding the purpose of gaining competence in English language. The difference in the pattern of responses among old and new students is not big enough to be statistically significant, for all the questions. The response of old and new students to four questions regarding the purpose of acquiring competence in English Language is depicted in Figure 4.9.

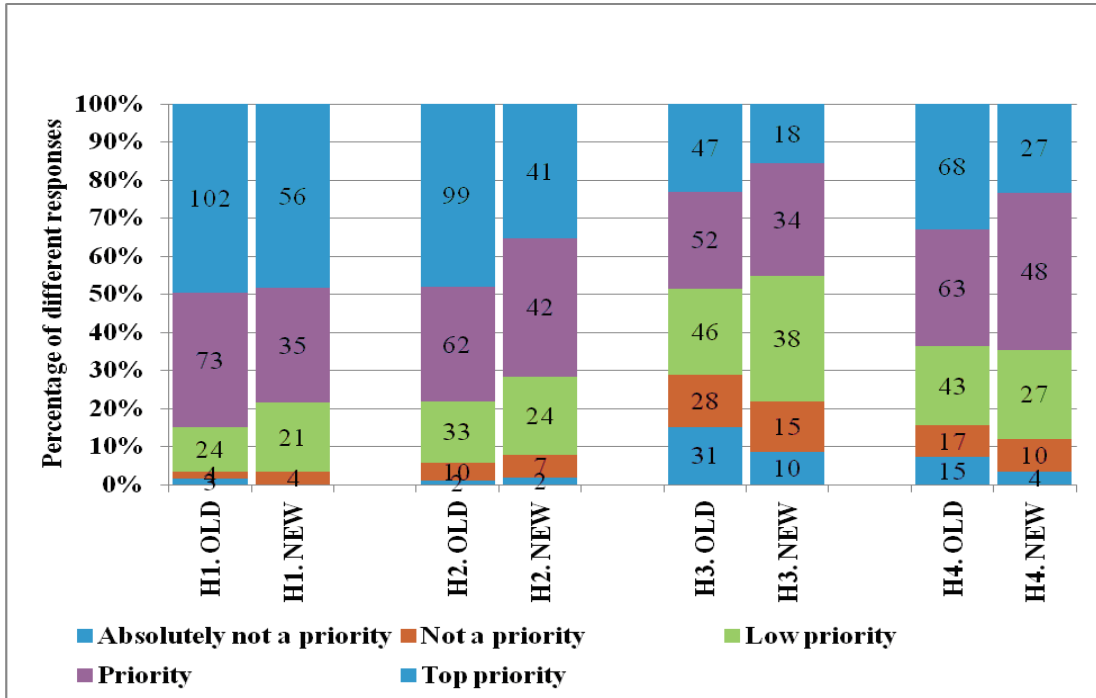


Figure 4.9. Distributions of responses to questions regarding purpose of competence in English language

There was no doubt among the students regarding the priority to be given for learning English to be successful on the international English proficiency exams, which are a prerequisite for conducting research and working abroad. As an expected finding, the pattern of responses among old (49.5%) and new students (48.3%) is not different enough to be statistically significant, $\chi^2(3,322) = 2.85$, $P = 0.416$. Similarly, about 48% of the old students considered that top priority is to be given for learning English for them to pursue education abroad in medicine, while the proportion was 35.3% among new students. Again the differences in the proportion of old and new students in different categories of opinion are not large enough to be statistically significant, $\chi^2(2,322) = 4.96$, $P = 0.175$. While about 23% of the old students considered that top priority is to be given for learning English for them to be successful on the Foreign Language Examination for Civil Servants (KPDS), the proportion was 15.7% among new students. But the differences in the proportion of old

and new students in different categories of opinion are not large enough to be statistically significant, $\chi^2(4,319) = 7.94$, $P = 0.094$. 33% of the old students considered that top priority is to be given for learning English for them to be successful on the Interuniversity Foreign Language Examination (UDS) but the proportion was 23.3% among new students. The differences in the proportion of old and new students in different categories of opinion are not large enough to be statistically significant, $\chi^2(4,322) = 6.95$, $P = 0.139$. The findings from part H appear to demonstrate that students aim to work or study abroad and they tend to associate language competence with the international examinations and have an education abroad.

As the foregoing discussion to answer the second research question demonstrates, there are not any statistically significant differences between the first and second cohort of Turkish medical students' perceptions regarding learning Medical English. Given that needs analysis is an ongoing process, this finding is unexpected although it may help to generalize the findings. However, as discussed above, although few, there are also some differences between old and new students. These differences confirm the hypothesis of Chambers' (1980) and Robinson's (1991) suggestion that students' needs may change during their study.

Analysis of the students' needs for medical education. A. Qualification and skill of the instructor

Cronbach's alpha that summarises the inter-item correlations between the 10 items measuring students' needs regarding qualification and skills of instructor was 0.7683. Therefore, the responses to the 10 items were summed up and divided by 10 to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.10 using box plots. New students who were not given the scaffolding environment appear to have distinctly lower expectation about the quality of teachers compared to their senior students who had experienced the environment. The derived score for 205 old students who had non-missing values for all the 10 constituent questions had a mean of 4.45 (standard deviation, SD of

0.47) compared to 4.25 (SD 0.40) among 111 new students who had non-missing values for all the 10 constituent questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students rejected the null hypothesis. The difference in mean score of 0.20 was statistically significant at 5% level of significance, $t_{314} = 3.76$, $P < 0.001$.

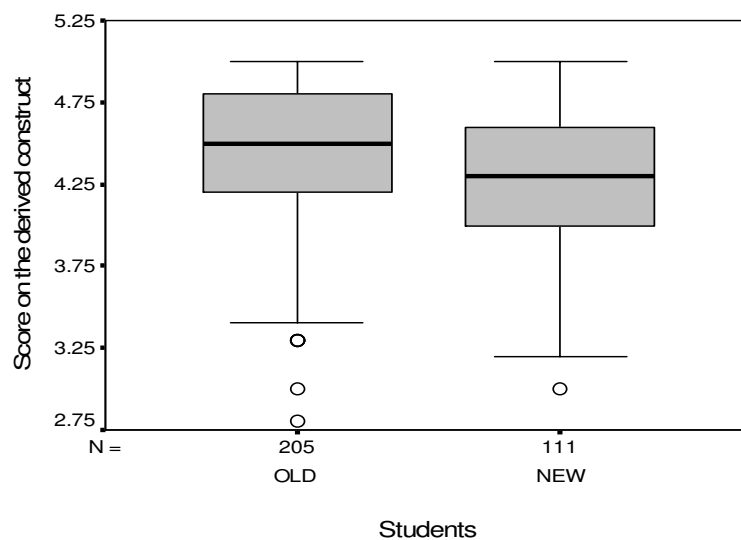


Figure 4.10. Distribution of the scores on the derived construct A (Qualification and skills of the teacher) among old and new students

Gender was recoded as 0 – female and 1 – Male, dummy variables were created to indicate Anatolian (school code 2 or 3) and schools other than Science (school codes 4 or more). Regression analysis was performed to assess the role of age, gender and the type of schools on the derived construct. The analysis is depicted in the Table 4.10. The difference in the derived scores between old and new students, after controlling for other variables in the model, increased to 0.268 ($P < 0.001$) in the regression analysis. The score on the derived construct among male student was lower by 0.252 ($P < 0.001$) on an average compared to female students. The derived score decreased by 0.053 ($P = 0.0077$) on an average with increase of 1 year in age and the decrease was statistically significant at 5%

level of significance. Type of school had no relationship with the derived scores. The pattern of score is depicted in Figure 4.11 using box-plots.

Table 4.10

Regression analysis of the derived construct A (Qualification and skills of the teacher)

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.268	0.056	0.290	4.81	< 0.001
Male v/s Female	-0.252	0.049	-0.284	-5.11	< 0.001
Age	-0.053	0.020	-0.164	-2.68	0.0077
Anatolian v/s Science schools	-0.013	0.062	-0.015	-0.21	0.8345
Other schools v/s Science schools	0.020	0.068	0.020	0.30	0.7677

Model $R^2 = 17.2\%$

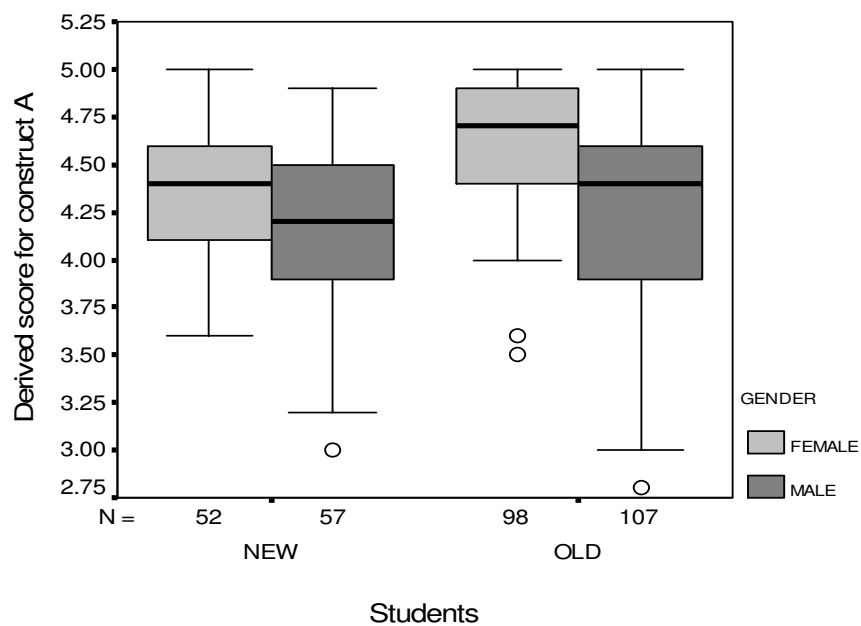


Figure 4.11. Distribution of the scores on the derived construct A (Qualification and skills of the teacher) among males and female of old and new students

Analysis of the students' needs for medical education. B. Self-perceived short-comings of the students

Cronbach's alpha that summarises the inter-item correlations between the 6 items measuring students' perception of their own short-comings was 0.8061. Therefore, the responses to the six items were summed up and divided by six to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.13 using box plots. The self-perceived short comings appear to be similar among new students who were not given the scaffolding environment and their senior students who had the environment. The derived score for 196 old students who had non-missing values for all the constituent questions had a mean of 3.60 (SD of 0.86) compared to 3.63 (SD 0.73) among 107 new students who had non-missing values for the questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students retained the null hypothesis. The difference in mean score of 0.03 was not large enough to be statistically significant at 5% level of significance, $t_{301} = 0.299$, $P = 0.765$.

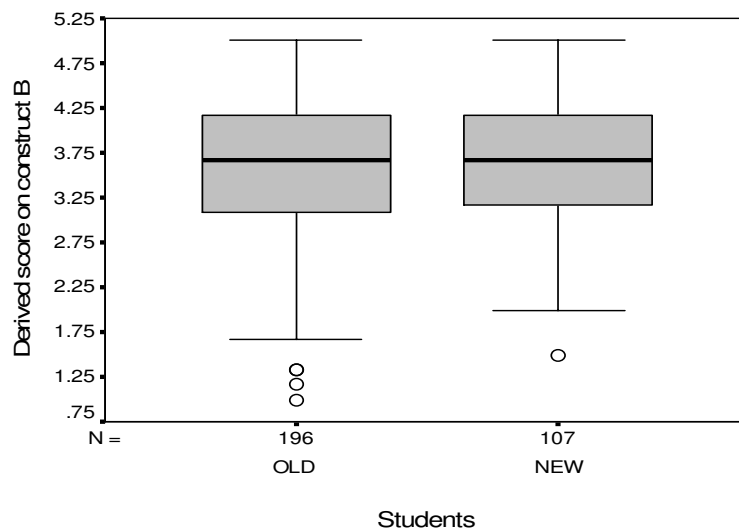


Figure 4.12. Distribution of the scores on the derived construct B (Self-perceived short-comings of the students) among old and new students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.11. The derived scores of old and new students was similar, after controlling for other variables in the model ($P = 0.2917$). The score on the derived construct among male student was lower by 0.233 ($P = 0.0197$) on an average compared to female students. The derived score increased by 0.082 ($P = 0.0401$) on an average with increase of 1 year in age and the increase was statistically significant. While the difference between the score of students of Anatolian and Science schools was similar ($P = 0.2770$), it was different between other type of schools and science schools ($P = 0.0445$). The pattern of score is depicted in Figure 4.14 using box-plots.

Table 4.11

Regression analysis of the derived construct B (Self-perceived short-comings of the students)

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	-0.118	0.111	-0.069	-1.06	0.2917
Male v/s Female	-0.233	0.099	-0.143	-2.35	0.0197
Age	0.082	0.040	0.137	2.06	0.0401
Anatolian v/s Science schools	-0.135	0.124	-0.083	-1.09	0.2770
Other schools v/s Science schools	-0.274	0.136	-0.152	-2.02	0.0445

Model $R^2 = 4\%$

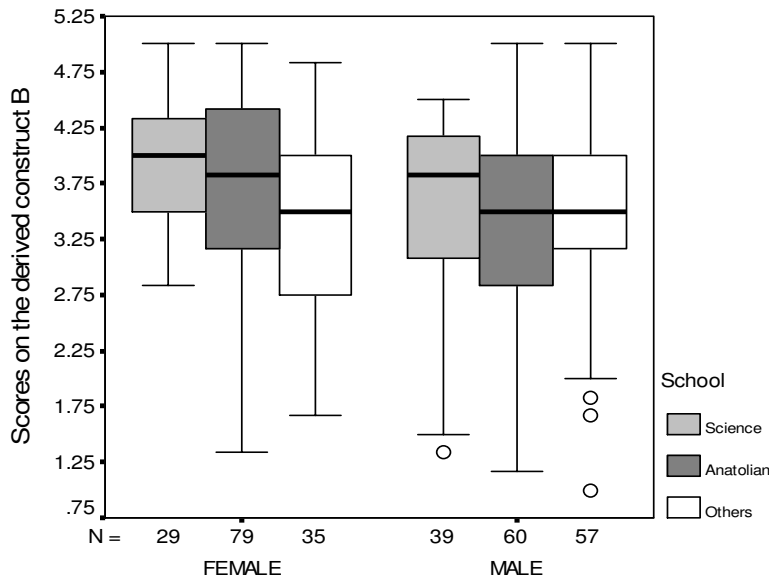


Figure 4.13. Distribution of the scores on the derived construct B (Self-perceived shortcomings of learning medical English) among male and female students of the three type of schools

Analysis of the students' needs for medical education. C. Methods and strategies of learning English

Cronbach's alpha that summarises the inter-item correlations between the eight items measuring students' needs regarding methods and strategies that need to be adopted for teaching English was 0.7642. Therefore, the responses to the eight items were summed up and divided by eight to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.16 using box plots. The awareness of the need for adopting different learning strategies appear to be lower among new students who were not given the scaffolding environment compared to senior students who had the environment. The derived score for 202 old students who had non-missing values for all the constituent questions had a mean of 4.30 (SD of 0.49) compared to 4.04 (SD 0.46) among 116 new students who had non-missing values for the questions. Independent t-test carried out to

test the null hypothesis of equal mean among old and new students rejected the null hypothesis. The difference in mean score of 0.26 was statistically significant, $t_{316} = 4.65$, $P < 0.001$.

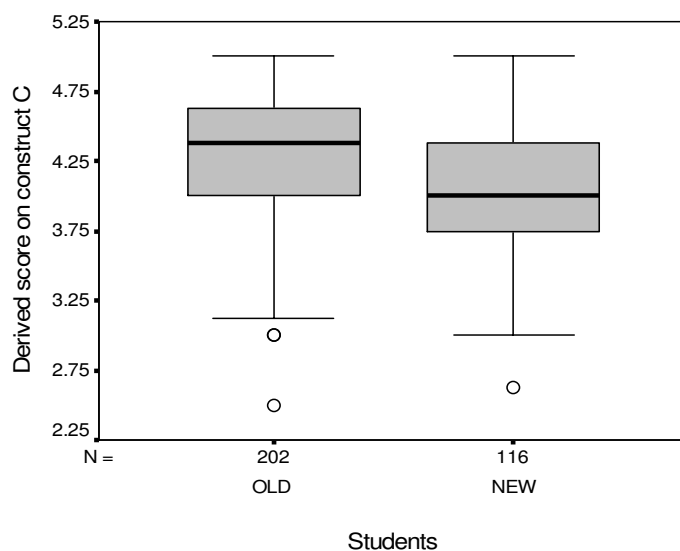


Figure 4.14. Distribution of the scores on the derived construct C. Methods and strategies of learning English among new and old students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.12. The difference in the derived scores between old and new students, after controlling for other variables in the model, was 0.316 ($P < 0.001$) in the regression analysis. The score on the construct among male student was lower by 0.149 ($P = 0.0063$) on an average compared to female students. There was no evidence to suggest that the score was related to the age of the students ($P = 0.2305$). The score was similar across science, Anatolian and other schools. The pattern of score is depicted in Figure 4.15 using box-plots.

Table 4.12

Regression analysis of the derived construct C. Methods and strategies of learning English

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.316	0.062	0.321	5.11	< 0.001
Male v/s Female	-0.149	0.054	-0.158	-2.75	0.0063
Age	-0.027	0.022	-0.077	-1.20	0.2305
Anatolian v/s Science schools	0.030	0.069	0.032	0.44	0.6616
Other schools v/s Science schools	-0.001	0.075	-0.001	-0.01	0.9904

Model $R^2 = 12.5\%$

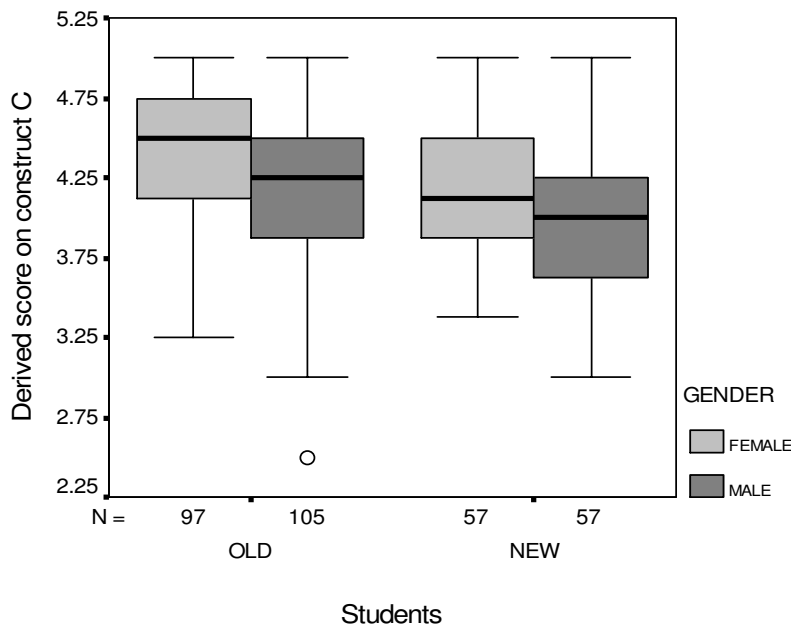


Figure 4.15. Distribution of the scores on the derived construct C (Methods and strategies of learning English) among male and female old and new students

Analysis of the students' needs for medical education. D. Affective domain: Attitude towards learning English

Cronbach's alpha that summarises the inter-item correlations between the eight items measuring students' needs regarding methods and strategies that need to be adopted for teaching English was 0.7023. Therefore, the responses to the five items were summed up and divided by five to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.16 using box plots. The derived score for 205 old students who had non-missing values for all the constituent questions had a mean of 4.22 (SD of 0.58) compared to 4.04 (SD 0.65) among 118 new students who had non-missing values for the questions. Independent t-test was carried out to test the null hypothesis of equal mean among old and new students rejected the null hypothesis. The difference in mean score of 0.17 was statistically significant, $t_{321} = 2.62$, $P = 0.009$.

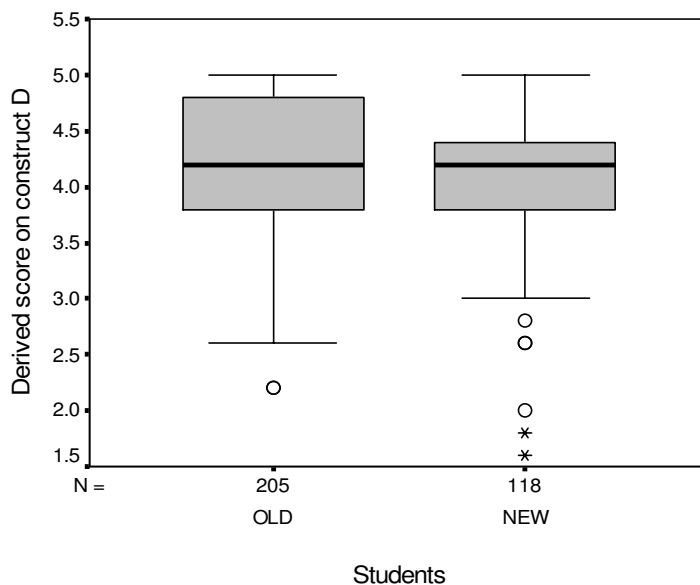


Figure 4.16. Distribution of the scores on the derived construct D. Affective domain: Attitude towards learning English among new and old students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.13. The difference in the derived scores between old and new students, after controlling for other variables in the model, was 0.269 ($P < 0.001$) in the regression analysis. The score on the construct among male student was lower by 0.160 ($P = 0.0217$) on an average compared to female students. There was enough evidence to suggest that the score was related to the age of the students ($P = 0.0015$) with the score decreasing by 0.088 with an increase of 1 year in age. The score was also not similar across science, Anatolian and other schools – the derived score of Anatolian school was higher by 0.173 ($P = 0.0486$) and that of other schools by 0.326 ($P < 0.001$), compared to science schools. The pattern of score is depicted in Figure 4.17a and 4.17b using box-plots.

Table 4.13

Regression analysis of the derived construct D. Affective domain: Attitude towards learning English

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.269	0.078	0.214	3.46	< 0.001
Male v/s Female	-0.160	0.069	-0.132	-2.31	0.0217
Age	-0.088	0.028	-0.202	-3.21	0.0015
Anatolian v/s Science schools	0.173	0.087	0.142	1.98	0.0486
Other schools v/s Science schools	0.326	0.095	0.244	3.44	< 0.001

Model $R^2 = 11.5\%$

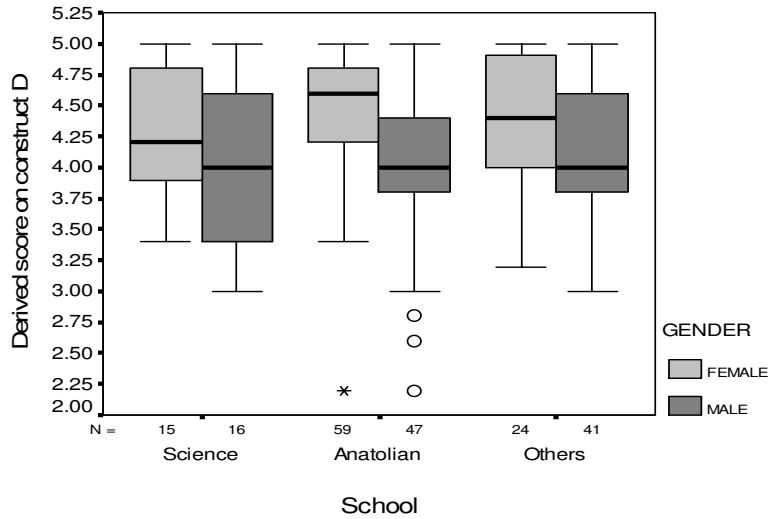


Figure 4.17a. Distribution of the scores on the derived construct D. Affective domain: Attitude towards learning English among old male and female students of the three types of schools

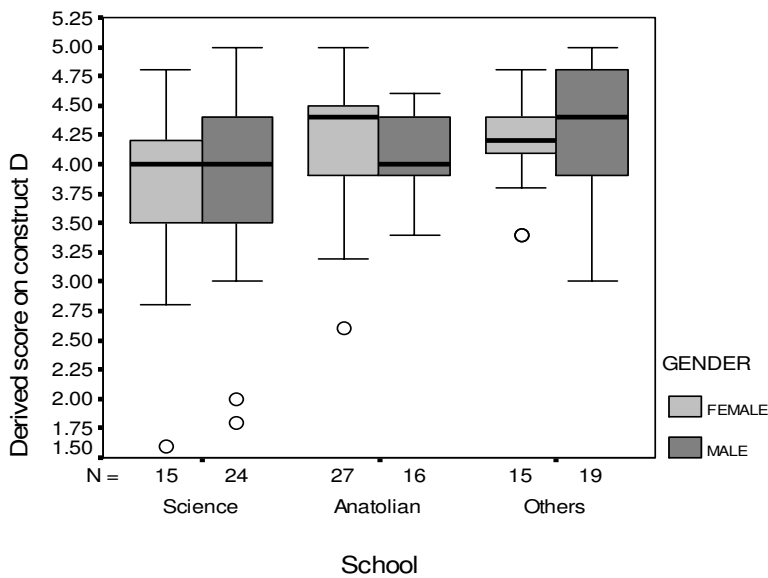


Figure 4.17b. Distribution of the scores on the derived construct D. Affective domain: Attitude towards learning English among old male and female students of the three types of schools

Analysis of the students' needs for medical education. E. Awareness of settings where English will be used

Cronbach's alpha that summarises the inter-item correlations between the four items measuring students' awareness regarding settings where English will be used was 0.7508. Therefore, the responses to the four items were summed up and divided by four to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.18 using box plots. The derived score for 206 old students who had non-missing values for all the constituent questions had a mean of 4.20 (SD of 0.69) compared to 3.96 (SD 0.79) among 116 new students who had non-missing values for the questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students rejected the null hypothesis. The difference in mean score of 0.24 was statistically significant, $t_{320} = 2.88$, $P = 0.004$.

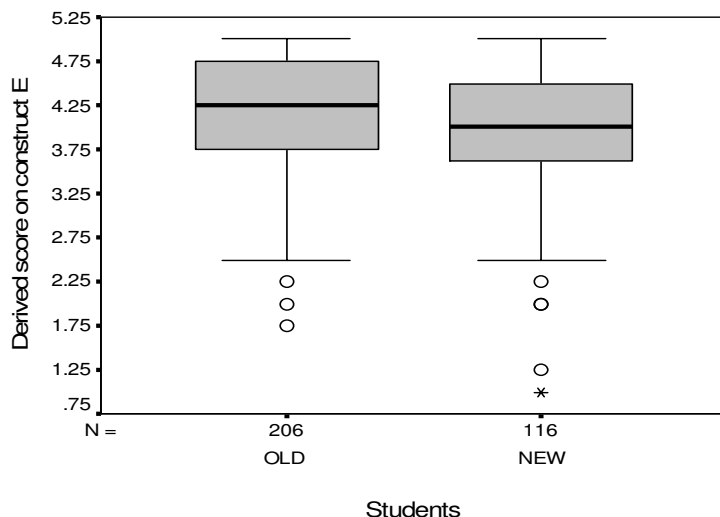


Figure 4.18. Distribution of the scores on the derived construct E. Awareness of settings where English will be used among new and old students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.14. The difference in the derived

scores between old and new students, after controlling for other variables in the model, was 0.28 ($P = 0.0039$) in the regression analysis. The score on the construct among male student was lower by 0.259 ($P = 0.0027$) on an average compared to female students. There was no evidence to suggest that the score was related to the age of the students ($P = 0.8462$). The score was also similar across science, Anatolian and other schools. The pattern of score is depicted in Figure 4.19 using box-plots.

Table 4.14

Regression analysis of the derived construct E. Awareness of settings where English will be used

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.280	0.096	0.185	2.91	0.0039
Male v/s Female	-0.259	0.086	-0.178	-3.03	0.0027
Age	-0.007	0.034	-0.013	-0.19	0.8462
Anatolian v/s Science schools	-0.038	0.108	-0.026	-0.35	0.7257
Other schools v/s Science schools	0.014	0.117	0.008	0.12	0.9083

Model $R^2 = 6.4\%$

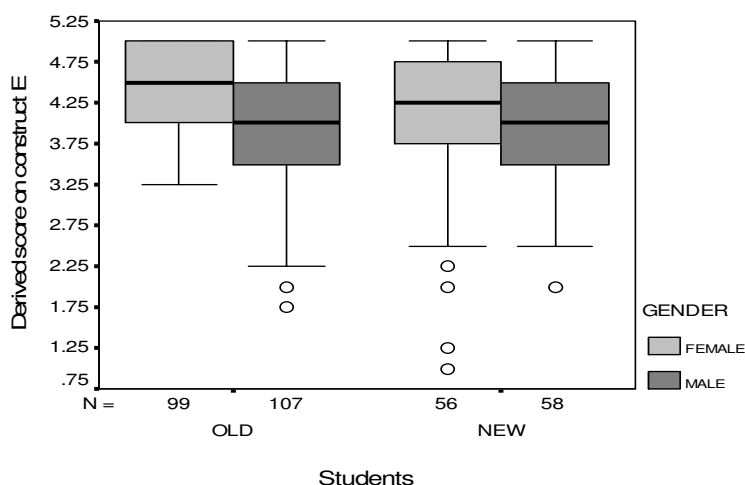


Figure 4.19. Distribution of the scores on the derived construct E. Awareness of settings where English will be used, among male and female students of the two groups of students

Analysis of the students' needs for medical education. F. Awareness of problems during medical English learning process

Cronbach's alpha that summarises the inter-item correlations between the five items measuring students' awareness of problems during medical English learning process was 0.7100. Therefore, the responses to the five items were summed up and divided by five to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.20 using box plots. The derived score for 206 old students who had non-missing values for all the constituent questions had a mean of 3.29 (SD of 0.81) compared to 3.20 (SD 0.78) among 115 new students who had non-missing values for the questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students retained the null hypothesis. The difference in mean score of 0.09 was not large enough to be statistically significant, $t_{319} = 0.97$, $P = 0.333$.

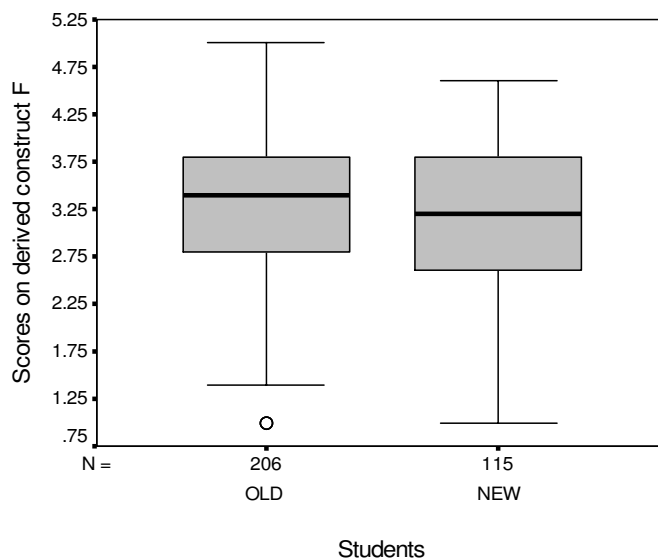


Figure 4.20. Distribution of the scores on the derived construct F. Awareness of problems during medical English learning process, among new and old students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.15.

Table 4.15

Regression analysis of the derived construct F. Awareness of problems during medical English learning process

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.033	0.107	0.020	0.31	0.7546
Male v/s Female	-0.028	0.096	-0.017	-0.29	0.7722
Age	0.064	0.038	0.112	1.70	0.0902
Anatolian v/s Science schools	-0.101	0.121	-0.063	-0.83	0.4045
Other schools v/s Science schools	-0.272	0.131	-0.156	-2.08	0.0381

Model $R^2 = 2.5\%$

The difference in the derived scores between old and new students, after controlling for other variables in the model, was 0.033 and remained statistically non-significant ($P = 0.7546$) in the regression analysis. There was no evidence to suggest any role for gender and age of the student on the derived score indicating awareness of problems during medical English education. While the score was similar among science and Anatolian schools, other schools had a lower score on an average (by 0.272; $P = 0.0381$) compared to science schools. The pattern of score is depicted in Figure 4.21 using box-plots.

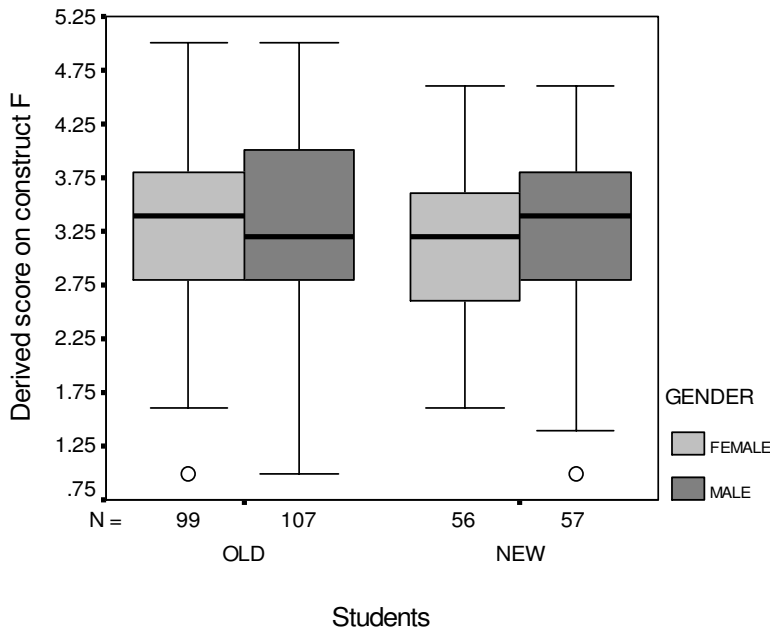


Figure 4.21. Distribution of the scores on the derived construct F. Awareness of problems during medical English learning process, among male and female students of the two group of students

Analysis of the students' needs for medical education. G. Awareness of importance of English

Cronbach's alpha that summarises the inter-item correlations between the three items measuring students' awareness of importance of English learning process was 0.7169. Therefore, the responses to the three items were summed up and divided by three to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.22 using box plots. The derived score for 206 old students who had non-missing values for all the constituent questions had a mean of 4.51 (SD of 0.53) compared to 4.31 (SD 0.68) among 116 new students who had non-missing values for the questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students rejected the null

hypothesis. The difference in mean score of 0.20 was large enough to be statistically significant, $t_{320} = 2.84$, $P = 0.005$.

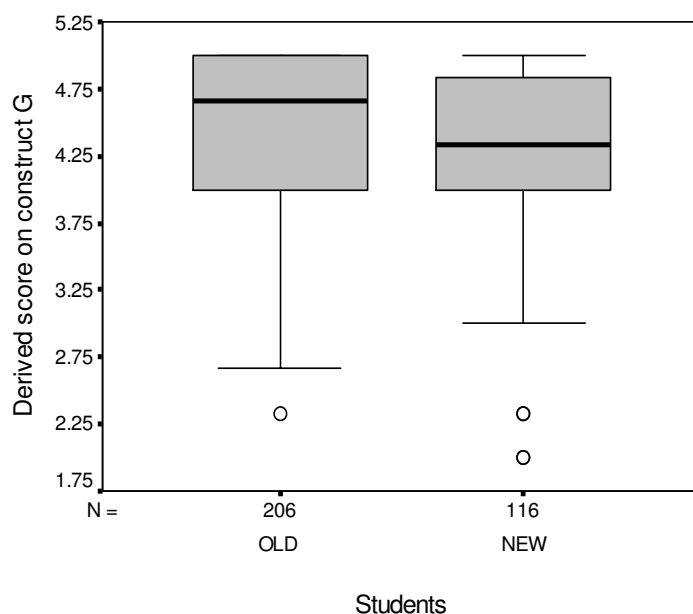


Figure 4.22. Distribution of the scores on the derived construct G. Awareness of importance of English

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.16. The difference in the derived scores between old and new students, after controlling for other variables in the model, was 0.229 and remained statistically significant ($P = 0.0029$) in the regression analysis. The score on the construct among male student was lower by 0.157 ($P = 0.0215$) on an average compared to female students. There was no strong evidence to suggest that the score was related to the age of the students ($P = 0.0629$). Anatolian schools had a higher mean score (by 0.24) and other schools by 0.302, compared to Science schools. The pattern of score is depicted in Figure 4.23a and 4.23b using box-plots.

Table 4.16

Regression analysis of the derived construct G. Awareness of importance of English

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.229	0.076	0.186	3.00	0.0029
Male v/s Female	-0.157	0.068	-0.133	-2.31	0.0215
Age	-0.051	0.027	-0.118	-1.87	0.0629
Anatolian v/s Science schools	0.240	0.086	0.203	2.80	0.0054
Other schools v/s Science schools	0.302	0.093	0.231	3.25	0.0013

Model $R^2 = 10.3\%$

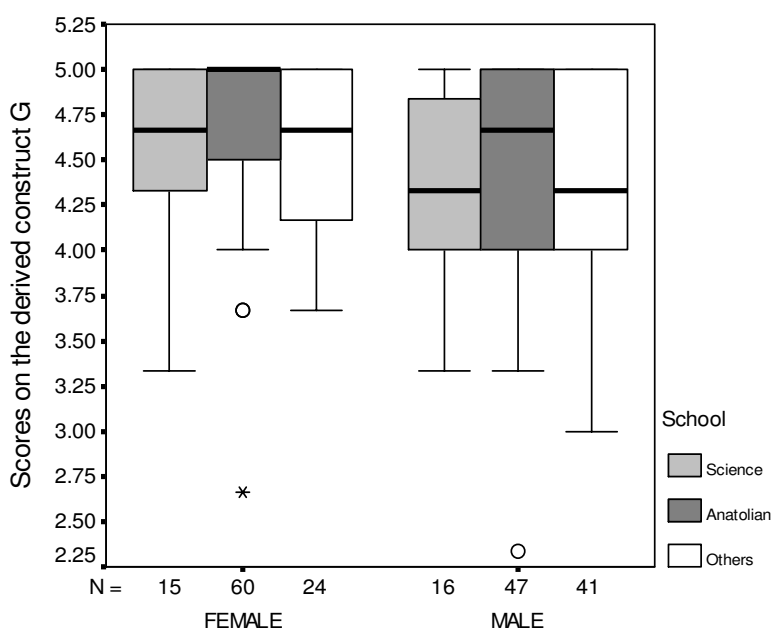


Figure 4.23a. Distribution of the scores on the derived construct G. Awareness of importance of English, among old male and female students of the three schools

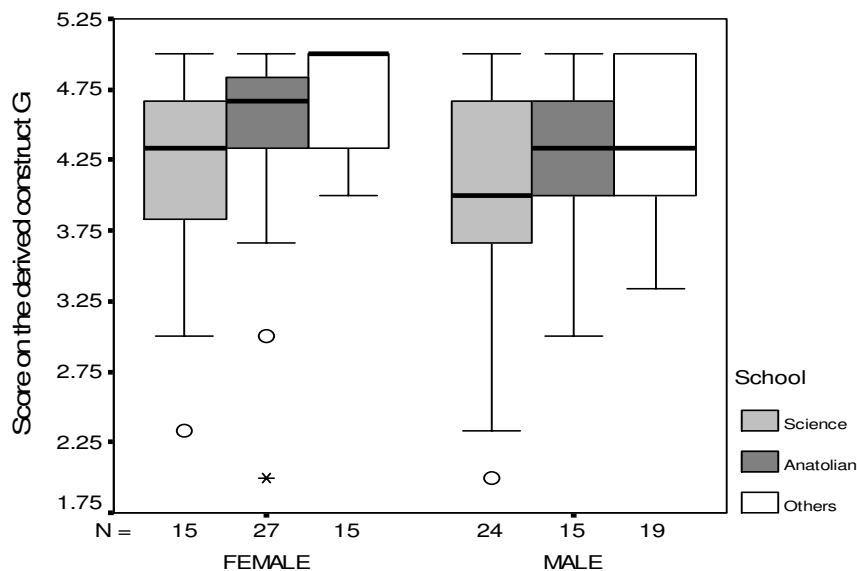


Figure 4.23b. Distribution of the scores on the derived construct G. Awareness of importance of English, among new male and female students of the three schools

Analysis of the students' needs for medical education. H. Purpose of acquiring competence in English language

Cronbach's alpha that summarises the inter-item correlations between the four items measuring students' purpose of acquiring competence in English language was 0.6820. Therefore, the responses to the four items were summed up and divided by four to derive a summary measure of the construct. The graphical comparison of the distribution of the derived construct among old and new students is depicted in Figure 4.24 using box plots. The derived score for 204 old students who had non-missing values for all the constituent questions had a mean of 3.87 (SD of 0.80) compared to 3.82 (SD 0.72) among 115 new students who had non-missing values for the questions. Independent t-test carried out to test the null hypothesis of equal mean among old and new students retained the null hypothesis. The difference in mean score of 0.05 was not large enough to be statistically significant, $t_{317} = 0.55$, $P = 0.580$ (see Figure 4.24).

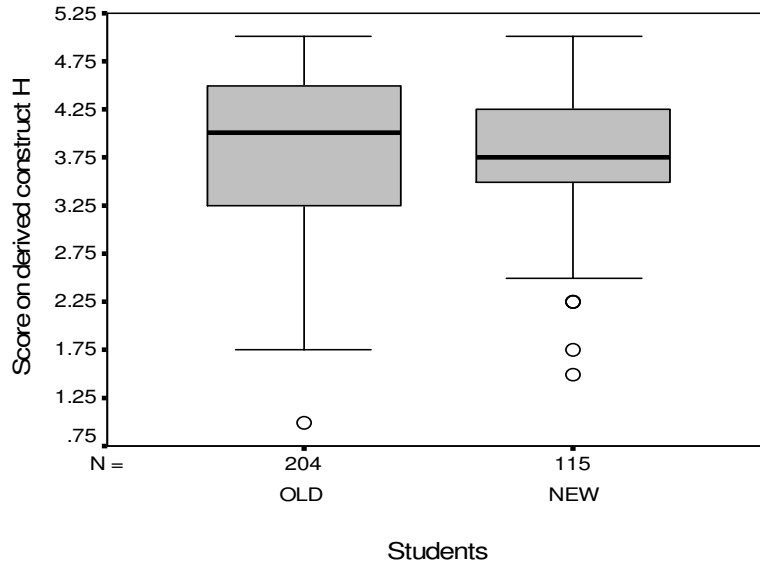


Figure 4.24. Distribution of the scores on the derived construct H. Purpose of acquiring competence in English language among new and old students

Result of regression analysis carried out to assess the role of age, gender and the type of schools on the derived construct is depicted in Table 4.17.

Table 4.17

Regression analysis of the derived construct H. Purpose of acquiring competence in English language

Variable	Regression coefficient	Standard error	Standardized coefficients	t	P-value
Old students v/s New students	0.063	0.107	0.039	0.59	0.5547
Male v/s Female	0.109	0.095	0.069	1.15	0.2531
Age	-0.039	0.038	-0.069	-1.04	0.3007
Anatolian v/s Science schools	0.181	0.120	0.115	1.51	0.1320
Other schools v/s Science schools	0.123	0.130	0.071	0.95	0.3446

Model $R^2 = 1.4\%$

The difference in the derived scores between old and new students, after controlling for other variables in the model, was 0.063 and remained statistically non-significant ($P =$

0.5547) in the regression analysis. There was no evidence to implicate gender, age or type of school in the student's purpose of acquiring competence in English.

Simultaneous comparison of all the derived constructs between old and new students after controlling for gender, type of schools and age – Multivariate analysis of covariance

The result of the analysis is depicted in Table 4.18. The analysis suggested that old and new students had different mean vector for the eight derived constructs, after removing the effect of gender, type of schools and age of the student, Wilk's Lambda = 0.867; $F(8,251) = 4.81$, $P < 0.001$. Gender (Wilk's Lambda = 0.859; $F(8,251) = 5.16$, $P < 0.001$) and age (Wilk's Lambda = 0.908; $F(8,251) = 3.18$, $P = 0.002$) of the students had statistically significant influence on the eight derived constructs. There was no evidence to suggest any overall difference in the derived constructs across three types of schools, Science, Anatolian and Others (Wilk's Lambda = 0.918; $F(16,502) = 1.36$, $P = 0.154$).

Table 4.18

Result of multivariate analysis of covariance

Variable	Wilk's Lambda	F	Numerator d.f.	Denominator d.f.	P-value
Group of students: Old & New	0.867	4.814	8	251	< 0.001
Gender: Male and Female	0.859	5.160	8	251	< 0.001
Type of schools: Science, Anatolian & Others	0.918	1.364	16	502	0.154
AGE	0.908	3.181	8	251	0.002

4.3 Are there any differences between the perceptions of academics and medical students regarding EAP needs? If so, what are the differences?

As described in the methodology chapter in detail, the interview data was collected from both insiders (medical students, academics) and outsiders (doctors in other hospitals)

to reach potential stakeholders to hear their voices. Through in-depth interviews with ten questions, this study identifies various salient perceptions about Medical English as follows: (1) Learning needs, (2) Teaching environment, (3) English proficiency, (4) Settings where English is used, (5) Individual aims with regard to learning English, (6) Problems, (7) Learning strategies, (8) Teachers' roles, (9) Opinions and feelings about medical English and also (10) other relevant additional issues. Once the data was analysed, the needs were made up of a number of subcategories. Categories including all subcategories are presented in Appendix G. The highest frequency categories were identified and reported here. Salient themes under each category and the total number of participants in the interview were provided in Table 4.19. This table thus gives overall picture of various comments by the stakeholders. It is worth highlighting that the interview data analysis should be treated with caution because the salient themes were presented below. Therefore, it does not mean that the other participants do not share the same comments but it means that the attitude was not particularly salient for the given individual at that moment in time (Flowerdew, 1999).

1. Medical English learning needs

As for learning needs, three skills including listening, reading and speaking were salient. 70% of the academics reported that students need to speak in English while among students speaking is not as a salient need as academics (13,3%). Academics tend to associate speaking with practise as the following quotes show:

P.C.2: What I have observed is the lack of practise despite the fact that students have knowledge. When they are using language, they are not active but the knowledge is useful while they are doing the questions? Yes, it is. Apart from that they need to use English actively while writing and speaking.

P.C.4: The focus should be on practice. They need to speak and understand what is spoken.

50% of the academics and all of the students (100%) reported that they need to learn medical words. Students accepted that they do not need any grammar as the following quotations indicate:

P.S.16: I do not think that we need grammar while we are learning Medical English. We are always repeating grammar since primary school years particularly tenses in English. In my view, from now on we should revise the words because the words we learnt in General English are different when compared to the words in Medical English. Learning medical words may make us superior since they represent our field.

P.S.19: If we consider our course Medical English, we must know general English. I must not put effort to learn the grammar structures so that I can learn medical words. I think Medical English can be useful for our academic studies in the future.

P.S.21: I do not need to learn grammar. I have problems with vocabulary. I am familiar with the general English words but I do not know medical words at all.

P.S.25: The most important paucity is our knowledge of medical vocabulary. Of course grammar is also important but when we can deal with the words, we can understand even if our grammar is bad ... Therefore, medical vocabulary should be a priority We should learn various uses of the words in our course.

P.S.29: We have studied grammar so far (until we come to the university). What did I learn? Whenever I looked at a text, I just said yes, it is present tense but nothing more. This year, we are learning medical words. It is much better. I can remember.

Table 4.19

Summary of insiders' (academics and medical students) comments regarding Medical English

Domains	Participant Code (P.)	Number of the Participants		Percentage (%)	
		Academics (10)	Students (15)	Academics	Students
1. Learning needs					
Speaking	P.D.1-P.C.3-P.C.4-P.C.5-P.I.7-P.I.8-P.R.10-P.S.12-P.S.18	7	2	70	13,3
Listening	P.D.1-P.C.3-P.C.4-P.C.5-P.S.14	4	1	40	6,7
Reading	P.D.1-P.C.4-P.C.5- P.S.17-P.S.18 -P.S.19-P.S.21-P.S.25	3	5	30	33,3
Medical vocabulary	P.C.2-P.C.3-P.C.6-P.I.7-P.I.8-P.S.11-P.S.12-P.S.13-P.S.14-P.S.15-P.S.16-P.S.17-P.S.18-P.S.19-P.S.20-P.S.21- P.S.22-P.S.23-P.S.24-P.S.25	5	15	50	100
2. Teaching environment					
Learning in small groups	P.D.1-P.C.4-P.C.5-P.C.6-P.I.7-P.I.8-P.I.9-P.R.10-P.S.11-P.S.12-P.S.13-P.S.14-P.S.15-P.S.16-P.S.18-P.S.19-P.S.20-P.S.21-P.S.22-P.S.23-P.S.24-P.S.25	8	14	80	93,3
A supportive teacher	P.C.3-P.I.8-P.S.20-P.S.23	2	2	20	13,3
Interactive teaching	P.C.2-P.C.3-P.C.4-P.C.5-P.C.6-P.S.13-P.S.20	5	2	50	13,3
3. English proficiency					
TOEFL	P.D.1-P.C.6-P.C.3-P.I.8- P.S.18-P.S.20-P.S.21	4	3	40	20
None of the examinations	P.C.2-P.C.5-P.S.15-P.S.16-P.S.17-P.S.19-P.S.20-P.S.23-P.S.24-P.S.25	2	8	20	53,3
Reading and understanding	P.I.7-P.I.9- P.S.12-P.S.24	2	2	20	13,3
Speaking	P.I.7-P.S.13-P.S.14-P.S.15-P.S.17- P.S.19-P.S.24-P.S.22-P.S.25	1	8	10	53,3
Writing	P.I.7-P.R.10-P.S.13-P.S.22	2	2	20	13,3
4. Settings English is used					
Communication/Social interaction	P.C.2-P.C.3-P.C.4-P.I.7-P.I.8-P.I.9-P.R.10	7	0	70	0
International Congress/Conferences	P.C.2-P.C.3-P.C.4-P.C.5-P.C.6-P.I.7-P.I.8-P.R.10-P.S.11-P.S.13-P.S.17-P.S.18-P.S.19-P.S.23-P.S.25	8	7	80	46,7

Working abroad	P.C.2-P.C.4 P.I.7-P.S.14-P.S.15-P.S.18 -P.S.19-P.S.23-P.S.24	3	6	30	40
Keeping up with the developments in medicine	P.C.3-P.C.5-P.C.3-P.I.7	4	0	40	0
Academic studies	P.C.5-P.C.3-P.C.4-P.I.7-P.S.12-P.S.14-P.S.19-P.S.21-P.S.23	4	5	40	33,3
Talking to patients	P.I.8-P.S.14- P.S.16-P.S.18-P.S.21-P.S.22	1	5	10	33,3
5. Individual aims with regard to learning English					
Academic studies	P.D.1-P.C.2-P.C.3-P.C.4-P.C.6-P.I.8-P.R.10-P.S.12-P.S.13- P.S.20-P.S.21-P.S.22-P.S.23	7	6	70	40
Speaking as an academic	P.D.1-P.C.4-P.C.5-P.S.13-P.S.20-P.S.24-P.S.25	3	4	30	26,7
Working abroad	P.S.11-P.S.13-P.S.14-P.S.21-P.S.25	0	5	0	33,3
Understanding the scientists in their own languages	P.S.11-P.S.14-P.S.16-P.S.18-P.S.24	0	5	0	33,3
6. Problems					
Speaking	P.C.3-P.C.4-P.C.5-P.I.8-P.I.9-P.R.10-P.S.11-P.S.12-P.S.13-P.S.14-P.S.18-P.S.20-P.S.21-P.S.22-P.S.23-P.S.24-P.S.25	6	11	60	73,3
7. Learning strategies					
Reading research articles	P.D.1-P.C.6-P.R.10-P.S.18	3	1	30	6,7
Writing (i.e., taking notes)	P.I.8-P.I.9-P.S.12-P.S.17	2	2	20	13,3
8. Instructors' roles					
Encouraging students	P.D.1-P.C.4-P.I.7-P.S.11-P.S.20-P.S.23	3	3	30	20
Being supportive	P.S.11-P.S.20-P.S.21-P.S.23	0	4	0	26,7
9. Opinions and feelings about Medical English					
Positive attitude towards English	P.C.2- P.C.4-P.S.13-P.S.15-P.S.16-P.S.17-P.S.18-P.S.19-P.S.20-P.S.21-P.S.22-P.S.23-P.S.24-P.S.25	2	11	20	73,3
A must	P.D.1-P.C.3-P.C.6-P.S.11-P.S.12-P.S.14-P.S.15-P.S.21-P.S.22-P.S.24	3	7	30	46,7
Universal	P.D.1-P.C.5-P.I.7-P.I.9-P.S.18-P.S.21	4	2	40	13,3

Academics, though not as much as students, also stated that medical vocabulary is important:

P.C.4: As far as I observed, one of the basic needs of students is insufficient vocabulary knowledge.

P.I.8: They should know fixed medical words that are used in the articles.

2. Teaching environment

There is a consensus among the academics (80%) and students (93.3%) that learning English in small groups is more effective, thus preferable. The underlying reason seems to be the potential problem for noise and speaking. Arguments participants are putting forward include:

P.D.1: I strongly believe that students cannot learn English in a crowded classroom. This will affect learning negatively. I wish there could have been fewer students in the classrooms.

P.R.10: That classroom is crowded makes teaching and the interaction between students and instructors difficult. If English could be taught in small groups, the difficulty may become an advantage. In addition, instructor can also control the classroom easily. Since the opportunities and number of the instructors are limited, it seems very difficult to reduce the number of the students in the classrooms.

P.C.5: It is impossible to make an eye contact in the lecture theatres or talk face to face... We cannot understand if the students are motivated or not. In a smaller classroom with face to face interaction, the course could be more effective.

Students also have the same perceptions as the academics:

P.S.23: That the classroom is crowded affects our learning negatively. We cannot arrange speaking groups in a crowded classroom. And also, when the number of the students increases, the noise also increases.

P.S.17: The classroom should not be crowded. There must be fewer students, so we can communicate easily and we can have more opportunities to speak in English.

3. English proficiency

When the participants were asked about the examination(s) that is/are significant in terms of showing their language proficiency, surprisingly, some of the academics (40%) TOEFL is better compared to other examinations while most of the students (53.3%) reported that none of the examinations can show their language proficiency despite the fact that Turkish education system is overly depends on examinations. Interview extracts and excerpts from informants include the following:

P.D.1: International examinations are important. Students must assess themselves with international examinations such as TOEFL.

P.C.2: I do not think that language proficiency can be determined easily only with an examination. I also have experience for the English examinations including KPDS, UDS and TOEFL. I was very successful in some of them that I did not expect. On the contrary, there were exams that I thought I was excellent but got a worse result. I do not think that the examinations could measure my language ability. To say I am proficient one should ask herself/himself these questions: Do I understand what I read? Can I interpret the reading and use the knowledge whenever I need in my projects by writing. In my view these aspects are important. However, we should keep in mind that these are the exams that we need for many applications.

P.C.6: If one gets 50-60s from a national English examination such as KPDS or UDS, we cannot say that he/she English is proficient user. I think the best examination that evaluates English proficiency is TOEFL IBT because it tests four skills. However, TOEFL also do not measure the proficiency of Medical English. There must be an examination that focuses on Medical English.

Some students also point out that TOEFL or IELTS may assess our proficiency:

And participants tended to focus on skills such as speaking, writing and reading:

P.S.12: For me language proficiency means understanding the research articles in medicine.

Only one student said that she was not familiar with the examinations and explained the reason why sincerely:

P.S.11: I do not know about the examinations. I have never studied English for the examinations. I enjoy studying English. For example, I listen to music in English, I try to study English. I learnt about the examination from you this year.

4. Settings where English is used

Both academics (80%) and students (46.7%) reported that international congress/conferences are their priority to use English. A surprising difference is learning English for social interaction. 70% of the academics stated that social interaction is another dimension to learn English while in students' data this factor was not salient. An explicit explanation for this difference can be the fact that academics are more experienced compared to students and students' awareness about social interaction in work life may not be available due to lack of experience. Extracts from each group of participants are presented below:

P.C.2: We use English in the international congress at most. Apart from this, we use English when we work with colleagues or researchers who come from other countries to work in the labs or clinics or when we go abroad for our research.

P.C.3: One of the activities we do is reading research articles...If you are an academic you attend international conferences both in Turkey and abroad. You communicate from two dimensions. The former is related with the evaluation of the presentations and listening to new research topics. More importantly, asking our questions to the prominent researchers in the field which is a nuisance for us. The latter is to socialize in the coffee breaks. We use English mostly in this setting and I think that it is important for the new generations.

P.C.4: I use English in academic meetings, conference presentations and also while talking to international students who come to the hospital.

P.C.5: We use English while reading, writing a publication mostly. Sometimes we use in national and international conferences, too.

P.I.7: I use English to do research, translate or write an article and also to understand the speakers and discuss the topics in the international conferences.

P.S.19: I am a medical student in Turkey. My English will be limited to conferences unless I go out and travel. Personally, I aim to do my residency outside of Turkey so English will be beneficial for me.

5. Individual aims with regard to learning English

A striking difference between academics' and students' perceptions concerning individual aims is that 33.3% of the students reported that they aim to learn English to work abroad and understanding scientists in their own language in contrast to academics (0%).

P.I.7: ... I believe that people should be brought up as *a citizen of the world* English is a must to be a citizen of the world I have learnt English to reach the original resources and I have still been learning (emphasis added).

P.S.19: Learning English is a big investment because by learning English you open the doors and get a better look, [which] makes you more sophisticated.

With regards academic studies, academics' and students' perceptions are highest:

P.C.3: I studied medicine to be an academic to be a scientist. If you want to be a scientist, you need to know English to be able to read, speak and write articles.

P.S.21: My individual aim is to go abroad and be successful as an academic. I want to be in a position that I can represent my country. To realise my aim, I need to learn English.

6. Problems

As expected speaking was a crucial problem for the academics (70%) and students (40%). Participants put forward:

P.C.5: I have difficulty in speaking English when I do not speak for a long time. And also listening to different accents is challenging for me. You know sometimes even in English we do not understand some accents and it happens in English, too. In addition, as a

Turkish citizen, we are trying to talk in English by obeying all the grammatical rules...For example, people from Germany or Sweden speak even though they have grammar mistakes.... I do not speak a lot in my daily life. However, people who speak Turkish more can speak English easily.

P.C.3: I think I have difficulty in expressing myself and my emotions but I am trying to improve. What am I doing? For example, the book I have been reading recently is in English. It is a medical book. Most of the medical books are in English. Even though my KPDS score is A level, I had this examination regularly. Similarly, two years ago I had TOEFL examination to test myself. Now I am reading a novel in English that has not been translated into Turkish so far. In our education system, grammar topics such as passive voices are taught very well; however, when we meet a citizen of word, our students cannot put two words together.

P.I.7: Listening and understanding. I did not learn English in professional settings, so I have some shortcomings. I have difficulty in speaking most.

P. I.9: I do not think that I have a problem with medical English but I have problem with speaking. English is used as Texas English. When you go to Arizona, you hear totally different English.

P.S.25: I especially have difficulty in speaking... I am trying to practise with my friends who are good at English in the lecture hall. However, I cannot say that I am successful about my attempt. I have difficulty in finding words. Everyone says that if you go abroad, you will have to talk more fluently because you must speak and you do not have another choice. Maybe Erasmus may also be helpful...

7. Learning strategies

With regard to using learner strategies, participants explain opinions as follows:

P.I.7: I attended many English courses but I think courses are very limited. My individual effort was more and I read Turkish Daily News in English. I recommend this because you read about the events in your country and you read in English. Therefore, you learn the

usage of words in real life. It was very effective and not expensive. Mine was completely an individual effort because you look it up each unknown words yourself. I strongly suggest trying this strategy.

P.I.8: I underline important words and take notes.

One of the students explains his strategy in a very interesting way:

P.S.12: I generally study -not only for English but also for all courses- by writing. We learnt the following saying in the medical terminology course: *Docendo discitur*. Writing means studying three times. First, you think what you will write. Second, you see what you write. And you see while you are writing. Therefore, I use this strategy and I believe it works.

8. Instructors' roles

Regarding instructors' roles, there were various perceptions. It is tentatively suggested that instructors should have many responsibilities:

P.C.2: I cannot teach Medical English in a relaxing/comfortable way that I teach my own courses. We did not have any education or training. Therefore, sometimes small problems occur. We use Internet and video to make the course enjoyable and efficient. I am not sure but instead of putting severe rules, instructors should teach English in a way that students can love. And also medical information also should be given in Turkish while teaching English.

As the participant above highlighted success in teaching Medical English as an ESP course is a professional challenge. Therefore, feeling comfortable in the classroom is not easy. This finding is in line with Strevens' (1988) opinion. He points out that such professionalism is not easily achieved, so ESP instructors need special help and training and requires extra effort and commitment.

P.C.3: There are instructors who attract students' attentions and there are instructors who keep the students outside. This is the same everywhere in the world.

P.I.7: I think it is not only significant for English but also for other courses. I think the most important issue is talking to students where English knowledge will help them and

that learning English is significant. Because if a student do not believe the [benefits] of English, he/she never puts effort especially for English. I think it is the most important fact. If the instructors explain the students where English is used and how beneficial it is for their profession, these will encourage students. For example, I have been to Germany and realized that maybe speaking English is not enough. I understood that if you know German, you may benefit a lot in Germany. Therefore, these experiences should be shared with students.

9. Opinions and feelings about learning English

Both academics and students have positive attitude towards learning English, as the following quotations indicate:

P.C.4: At first as a doctor, who had PhD abroad, English was a must but I really like English now. It is a positive contribution to our life.

P.C.2: At first I had bad experience about English because of this I had negative attitude to English, which put me in difficult positions in my critical times. Since [English] is a tool to communicate, I have a positive attitude towards learning English now.

P.I.7: Knowledge of English increases your confidence.

P.S.19: I like it. I have always liked English...

P.S.28: English is a part of our profession. [We] have to update ourselves frequently. So, in order to improve ourselves, we should have language skills.

10. Additional issues

Participants were asked if they would like to add further comments at the end of the interview. There were twenty three additional comments, which were presented in Appendix E. The most striking comment was from one of the Medical English course coordinators who highlighted the challenging issue that instructors and ESP/EAP teachers may have difficulty:

P.C.5: The responsibility of material preparation belongs to the teacher.

Indeed, as the ESP literature also emphasise in contrast with the general English classrooms, in the ESP classrooms, finding an authentic material is a big problem because there are not enough suitable ESP materials (Strevens, 1988). Therefore, academics produce their own materials to teach Medical English at Uludag University.

Another interesting additional comment came from a student who expects to have a less exam oriented programme:

P.S.23: The instructors must put as much effort as possible to make the course less exam oriented

4.4 What are the perceptions of doctors in private hospital and Bursa Health Directorship?

With regard to the setting English is used, all the doctors in the private hospital have a consensus that international congress/conferences are the place where they use English most (100%). They state that reading English medical books also an important way for them that they spend time. A typical extract reads:

P.P.27: While doing empirical research, attending international congress, we realise that English is very important.

In line with previous data analysis, five of the participants stated that speaking is a big problem as the following quotations indicate:

P.P.28: Although we have sufficient knowledge of literature, I feel insufficient when I discuss the literature with a doctor. Since we do not speak English frequently, we do not speak fluently. However, students must learn, carry out empirical research and improve himself/herself because 90% of medical literature is almost in English.

P.P.27: Medicine is one of the most important disciplines. Therefore, English is necessary. Medical English should be translated in a way that public could understand. Medical English is an integration of Latin and English. Medical English is independent from English. It is both Latin and English. Even we have difficulty to reach public.

Table 4.20

Summary of outsider participants' comments regarding Medical English

Domains	Participant Code (P.)	Number of Participants (5)	Percentage (%)
1. Settings English is used			
International Congress/Conferences	P.H.26-P.P.27-P.P.28- P.P.29- P.P.30	5	100
Working with international colleagues	P.P.27	1	20
Reading medical resources	P.P.27-P.P.28-P.P.29	3	60
Academic studies	P.P.27-P.P.28	2	40
2. Problems			
Speaking	P.H.26 -P.P.27- P.P.28- P.P.29-P.P.30	5	100
3. Opinions and feelings about medical English			
A must	P.P.27-P.P.28-P.H.26	3	60
Universal	P.P.29	1	20
Scientific English is different from general English	P.P.29-P.P.30	2	40
One of the most leading disciplines	P.P.27	1	20

60% of the participants reported that English is a must in our life and profession. Arguments they are putting forward:

P.P.28: When the word medicine is announced, human springs to mind. Medical English is different from general English. It is a social language.

P.P.29: Knowledge of English paves the way for looking at everything.

The interview data analysis results confirm the hypothesis of Strevens (1988) who suggests that “the learner usually has at least a rough idea of what he wishes to be able to do in English. Often this rough idea is accurate (p. 40).

CHAPTER 5- CONCLUSION

In this chapter, first, the study will be summarised (5.1). Second, main findings will be presented with some methodological and pedagogical implications of the study (5.2). Third, limitations of the study will be discussed (5.4). Finally, the Chapter will conclude with the recommendations for further research (5.5).

5.1 Summary of the study

This study used ongoing critical needs analysis to tailor Medical English courses to the specific needs of students focusing on triangulation of data and methods, which requires special attention in needs analysis since we reached almost all the potential stakeholders to identify students' needs. As a longitudinal study -both interview- and questionnaire-based study-, four different types of instrument were used, namely ethnographic methods, reflective journal, questionnaire and interview for the validity and reliability of the findings. The critical needs analysis has eight domains, which are compatible with Dudley-Evans and St. John's (1998) suggestion about the types of needs analysis. The analysis of data revealed eight types of expectations and needs with regard to Medical English:

- 1- Qualifications of the instructors
- 2- Shortcomings
- 3- Methods and strategies
- 4- Affective domains
- 5- Setting (where English is used)
- 6- Problem (during Medical English learning process)
- 7- Importance of English
- 8- Aims regarding language competence

It is evident that academics and researchers should not downplay students' opinions in higher education and also administrators or instructors should not be viewed as the only

source of curriculum design because we cannot assure that instructors' or administrators' diagnosis regarding learners' needs are precise. Cooperation of parties at the universities is a necessity because "what is established as a need is a matter for agreement and judgement not discovery" (Lawson, 1979, p. 37). It is also noteworthy that students' motivation can increase when instructors involve them into decision making process when the course programme is planned.

5.2 Summary of the main findings

When the mean scores of the eight aspects of domains are examined and put in order after data analysis of the questionnaire, surprisingly, students' perceptions regarding the importance of English is the strongest. Qualifications of the instructor, methods and strategies used, attitudes towards English, the settings where English is used, aims regarding competence in English, self-perceived shortcomings and problems follow the importance of English respectively.

As the data analysis showed although some of the mean scores for old and new students were statistically significant, the size of the difference was less than 0.35 in the 5 point scale. The possibility of new students getting some experience of the learning environment of their seniors by their interactions with them cannot be ruled out, though. Reliability statistics assesses whether the constituent items measure some *underlying* construct and values closer to 1 indicate an underlying construct. It is used here as a justification for deriving a single value by averaging the responses for the constituent questions. The old and new students were more or less similar in their expression of learning needs although the seniors with the scaffolding environment expressed their learning needs in a determined way (e.g. response to Question A2- Instructors should plan the teaching process in detail-, A3- Instructors should prepare before coming to class-, A6- Instructors should have professional competencies, including the ability to ask relevant questions and to explain important points in a comprehensible way-, A10- Instructors should understand students' feelings and opinions- and C1- Learning English by using English words in sentences-). Regression analysis of the derived scores revealed its

dependence or otherwise of gender, age of the student and type of schools on it. Female students were more determined in their expression of learning needs compared to male students in all the items except F and H. The majority of the derived scores were not dependent on the age of the student (except A, B and D). The students from the three types of schools had comparable derived scores in general (exception D-items regarding affective domains- and G-importance of English-). Old students were more determined in their expression of learning needs, even after controlling for gender, age and type of schools in items A, C, D, E and G. Old and new students had similar scores for items B, F and H.

As for interviews, when the frequencies of salient sub-coding are examined, academics' and students' perceptions were very similar despite the fact that there are some differences such as the emphasis among the academics that English is important for communication and social interaction. With regard to individual aims to learn English students aimed to understand scientists in the original resources (33.3%). However, when we look at academics' comments, no one mentioned about this and most probably it was taken for granted as one of the daily activities academics do is reading. These two differences can be explained with the experience of academics in contrast with the inexperienced learners at work life. It is worth noting that another interesting finding is regarding instructors' role. Both the academics and students agree that instructors should encourage students. Moreover, students also highlight the importance of supportive instructor in contrast to academics. As for the doctors at private hospital and Bursa Health Directorship, the commonalities as for the perceptions are the same as the academics and students.

Courses should be much geared towards the specific needs of students because as shown with this empirical study students can be reliable source to consult regarding their needs. This study tentatively suggests that the data generated may be useful in understanding other similar teaching contexts in Turkey. In addition, these findings may be

useful for course coordinators who lack the time and resources to carry out the analysis and prepare the course content.

5.3 Limitations of the study

The main limitation of the study is the data confined with the medical students in the Department of Medicine at Uludag University. Second, the data was collected from stakeholders in medicine and additional data from ESP practitioners who are teaching Medical English could have provided new insights.

5.4 Suggestions for future research

Some directions for future investigations could provide more conclusive results. First, further research should be carried out in other universities in the Faculty of Medicine in Turkey to ascertain whether medical students' needs are similar and the newly developed questionnaire works. Second, Medical English courses and appropriate curriculums can be designed considering the findings of the critical needs analysis. Third, because discourse analysis can help the practitioners to design authentic teaching materials to teach language in the classrooms particularly for the teaching of English for academic and professional purposes, it would also be interesting to investigate the medical documents that medical students are supposed to understand in workplaces to enrich and broaden teaching EAP.

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APPENDICES

Appendix A Reliability of the questionnaire in the pilot study

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,813	,823	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0051	39,25	19,621	,429	,327	,805
MAD0055	39,48	19,651	,490	,383	,796
MAD0056	39,33	20,565	,380	,381	,809
MAD0057	38,75	20,921	,550	,341	,794
MAD0058	39,27	19,418	,545	,347	,790
MAD0059	38,92	20,461	,562	,374	,791
MAD0060	38,89	20,743	,453	,265	,800
MAD0061	39,01	19,794	,638	,452	,787
MAD0062	38,92	19,250	,409	,556	,780
MAD0063	39,27	19,810		,321	,807

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,819	,825	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0030	17,70	18,041	,573	,368	,794
MAD0031	17,99	17,375	,548	,423	,797
MAD0032	17,63	16,563	,685	,523	,769
MAD0033	18,10	15,326	,550	,322	,806
MAD0036	18,01	16,170	,688	,493	,767
MAD0037	18,14	17,952	,508	,316	,805

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,752	,755	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0040	28,48	13,840	,445	,307	,726
MAD0041	28,56	12,381	,540	,397	,707
MAD0042	28,10	13,583	,522	,321	,713
MAD0045	28,48	13,684	,449	,265	,725
MAD0047	28,78	14,337	,298	,156	,755
MAD0048	28,03	14,127	,491	,293	,720
MAD0049	28,19	14,112	,423	,250	,730
MAD0053	28,31	13,661	,441	,270	,727

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,765	,766	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0068	15,78	7,281	,655	,534	,677
MAD0069	15,66	7,680	,671	,542	,677
MAD0071	16,27	7,421	,532	,286	,726
MAD0072	15,92	8,521	,429	,190	,758
MAD0075	15,55	9,027	,410	,177	,761

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,761	,761	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0020	12,69	4,477	,483	,315	,743
MAD0021	12,84	3,555	,715	,547	,615
MAD0022	13,14	3,584	,602	,431	,681
MAD0023	12,87	4,202	,456	,216	,759

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,664	,680	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0005	11,87	12,800	,232	,087	,686
MAD0034	12,05	9,881	,557	,434	,545
MAD0035	12,27	10,452	,541	,422	,559
MAD0038	12,41	11,121	,523	,287	,575
MAD0073	12,33	10,323	,312	,109	,684

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,637	,639	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0064	8,62	1,687	,511	,277	,447
MAD0065	8,68	1,879	,369	,139	,648
MAD0066	8,52	1,822	,467	,248	,513

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,640	,635	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
MAD0014	10,69	6,721	,353	,153	,623
MAD0016	11,95	4,157	,553	,418	,463
MAD0017	11,49	4,339	,551	,404	,464
MAD0024	10,97	6,433	,272	,115	,662

Cronbach's Alpha 0.40 - 0.60 arasinda DUSUK DUZEYDE GUVENILIR
0.60 - 0.80 OLDUKCA GUVENILIR
0.80 ve uzeri YUKSEK DERECEDE GUVENILIR

Corrected Item-Total Correlation 0.20 NIN ALTINA DUSMEMELI

Appendix B

Additional excerpts from the reflective journal

.....

It was my first formal teaching in the Faculty of Medicine in 2009-2010 academic year, so I was a bit excited. There are students from different parts of Turkey and even from different countries with different attitudes, feelings, education, and backgrounds. I hope I can reach them. I have shared my document that I jot down on my PC about my expectations from my students. They laughed a lot and seemed surprised. Here it is:

My expectations from my students

1. If they will be a doctor, they should be aware of the significant role in people's lives.
2. Coming to the course with preparation.
3. Revising the topics, which we learn in and outside the course.
4. Looking up the update documents regarding the topics in medicine we learnt.
5. Starting reading medical articles.
6. Keeping a vocabulary notebook.

..

I have introduced a website <http://www.medscape.com/medscapetoday> to them to watch videos related with medicine. Prof. Dr. Vahide Savcı suggested me from the Faculty of Medicine when I talked to her about the possible websites to use to share with the students about Medical English.

.....

Today we did translation from English to Turkish. I have noticed that some students are afraid of not being able to translate the Turkish texts especially students from other countries. I tried to encourage them and focus on the short sentences to alleviate their anxiety. It worked. They asked me if I am thinking of asking a question that focuses on translation. I said yes.

.....

Today we studied the passage cardiac transplantation. There were not a number of keywords. It was an easy passage. I found it strange that they could not guess the meaning of physician [physician (n) especially American English- a doctor]. I emphasized the importance of derivation with a number of examples.

...

We altogether decided to focus on synonyms and antonyms of the words to be able to understand the passages better. What I have learnt from the mid-term experience are:

1. Revision really works. They said that they have not had any difficulty in answering the vocabulary part. It is because we have repeated the target vocabulary a number of times.
2. The paragraphs for the final exam can be easier to encourage them.
3. Testing is a difficult process so I should read more articles to improve myself.
4. The profile of the students in the Faculty of Medicine is very different. They are autonomous learners. They are also very competitive. Everybody is different and unique. However, I observed that they are not willing to speak in English. Maybe because they are shy or maybe because they are afraid of making a mistake despite all the encouraging talks I give in the classroom.

...

Before studying the passage, we talked about the format of the TUS and how to deal with the questions. We have studied a number of passages so far; however, both the reading passage and questions were in English. I tried to encourage my students to get used to study on upper-intermediate passage. On the other hand, the difference in TUS is that the reading passages are all in English but the questions are in Turkish. Therefore, they found it very easy. I wanted them to use the strategies they used before while dealing with the readings. The first paragraph was about asthma. There were many reading texts about the topic that we have studied before, so reading the paragraph made students more motivated and they said that they can now understand why I focused on studying both specified and general English words. Actually, the passage in the TUS exam was a kind of summary that what we have done and why we have studied strategies. At the end of the lesson everybody seemed to be happy.

Appendix C

Questionnaire in the pilot study

TIBBİ İNGİLİZCE ÖĞRETİMİ SÜRECİNDE ÖĞRENCİ İHTİYAÇ ANALİZİ

İngilizce öğrenirken, farklı iletişim ihtiyaçlarının gerektirdiği çeşitli dilbilgisel yapılar, bunlara ilişkin kurallar, bazı kalıplar, kelime grupları ya da kelimeler öğrenilir.

Bu anlamda, aşağıda sıralanan konulara ilişkin cevaplarınız “**öğrenme ihtiyacınızın öncelik derecesini**” belirleyecektir.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok öncelikli ④Öncelikli ③Az öncelikli ②Öncelikli değil ①Hiç öncelikli değil

A-YAPI VE KELİME BİLGİSİ	
1. Tıp ile ilgili İngilizce kelimeler	⑤ ④ ③ ② ①
2. Bir hekimin hastalarıyla iletişim kurarken kullanmaya ihtiyaç duyacağı İngilizce yapılar	⑤ ④ ③ ② ①
3. Mesleki resmi yazışmalarda gerekli olan (yazışma kuralları da dâhil olmak üzere) İngilizce yapılar	⑤ ④ ③ ② ①
4. Bazı kelimelerin genel İngilizce anlamları ile tıp alanında yüklendikleri özel anlamları arasındaki farklar	⑤ ④ ③ ② ①
5. İngilizce kelime türleri (bağlaç, sıfat, zarf) ile bu türlerin iletişim işlevleri (zıtlık belirtme, açıklama, nitelendirme) arası ilişkiler	⑤ ④ ③ ② ①
6. Dile hâkim olmak için İngilizce dilbilgisi kuralları	⑤ ④ ③ ② ①

Dil öğrenirken, (sınıfın mevcudu, sınıfın büyüklüğü, oturma düzeni gibi) öğrenme ortamının özelliklerinin, doğrudan ya da dolaylı olarak dil öğrenme üzerinde etkisinin olduğu bilinmektedir. Bu etki, öğrencinin kişisel olarak kendisini rahat bir öğrenme ortamında hissetmesi şeklinde olabileceği gibi, iletişimi ve etkinlikleri kolaylaştırıp, güçleştirmesi şeklinde de ortaya çıkabilir. Bu bakış açısıyla, **aşağıdaki yargılara katılma derecesini belirtiniz.**

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Kesinlikle katılıyorum. ④Katılıyorum. ③Çok az katılıyorum. ②Katılmıyorum. ①Hiç katılmıyorum.

B-SINIF YAPISI VE SINIF İÇİ ETKİLEŞİM	
7. Sınıf mevcudu, her öğrenciye yeterince İngilizce konuşma fırsatı sağlayacak kadar az olmalıdır.	⑤ ④ ③ ② ①
8. Sınıfta değişik konularda İngilizce konuşulabilecek ortamlar oluşturulmalıdır.	⑤ ④ ③ ② ①
9. İngilizce öğrenmek için sınıfta derse katılım gereklidir.	⑤ ④ ③ ② ①
10. Derse katılım, öğretmenin özel olarak çaba sarf etmesini gerektirmeden, öğrencilerin kendi isteğiyle olmalıdır.	⑤ ④ ③ ② ①
11. Öğretmen soru sorarken, öğrencilere söz hakkı verirken, bir etkinlik için kişi seçerken, bu seçimi tüm öğrenciler arasından kendisi yapmalıdır.	⑤ ④ ③ ② ①
12. Öğretmen soru sorarken, öğrencilere söz hakkı verirken, bir etkinlik için kişi seçerken, seçimini, katılmak isteyen öğrencilerin arasından yapmalıdır.	⑤ ④ ③ ② ①
13. İngilizcenin günlük kullanım örnekleri, sınıfta, hasta-doktor diyalogları bağlamında verilmelidir.	⑤ ④ ③ ② ①

İngilizce öğretiminde, İngilizceyi öğrenen kişilerin, İngilizceyi amaçlarını gerçekleştirmeye yetecek düzeyde öğrenmeleri istenir. Bu durum, yabancı dilin gerekli olduğu süreçlerin başında, bir sınavla belirlenir ve bu sınav sonucuna göre, kişilerin yabancı dil düzeylerinin, o süreci izlemeye yetip yetmeyeceği belirlenmeye çalışılır. Buna dil yeterlik düzeyi denir. Bu anlamda, belli bir dil yeterlik düzeyine ulaşma ile ilgili **şağıdaki durumların, sizin için önem derecesini belirtiniz.**

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok önemli ④Önemli ③Az önemli ②Önemsiz ①Hiç önemli değil

C-DİL YETERLİK DÜZEYİ	
14. Yurt dışındaki tıp merkezlerinde araştırmalar yapmak veya çalışmak için koşul niteliğindeki uluslararası İngilizce yeterlik sınavlarda başarılı olmak	⑤ ④ ③ ② ①
15. Tıpta Uzmanlık Sınavı (TUS) için gereken İngilizce dil yeterliğine sahip olmak	⑤ ④ ③ ② ①
16. KPDS' de (Kamu Personeli Dil Sınavı-Yabancı dil tazminatından yararlanmayı düşünen memurların, araştırma görevlisi olmak veya yurt dışına görevli olarak gitmek isteyen kişilerin girmesi gereken sınavdır.) başarılı olmak	⑤ ④ ③ ② ①
17. ÜDS' de (Üniversitelerarası Dil Sınavı-Fen Bilimleri, Sosyal Bilimler ve Sağlık Bilimleri olmak üzere üç alana ayrılan ve yüksek lisans ve doktora başvurularında kullanılabilen sınavdır.) başarılı olmak	⑤ ④ ③ ② ①

İngilizce öğrenen kişilerin, amaçlarını gerçekleştirmek için, İngilizceyi kullanmayı düşündükleri değişik ortamlar vardır. Aşağıda İngilizcenin (dil öğrenme amaçlarımızla uyumlu olacak şekilde) bazı kullanılma ortamlarında, değişik kullanılma şekilleri vardır. Bu anlamda, aşağıda sıralanan, İngilizceyi kullana bağlamlarının/ortamlarının (öncelikle hangi ortamlarda kullanmak istediğinizin göstergesi olacak şekilde) sizin için **öncelik derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok öncelikli ④Öncelikli ③Az öncelikli ②Öncelikli değil ①Hiç öncelikli değil

D-DİLİ KULLANMA ORTAMI	
18. İngilizce konuşan hastalarla yüz yüze iletişim kurarken	⑤ ④ ③ ② ①
19. Uluslararası kongre, seminer gibi etkinliklerde	⑤ ④ ③ ② ①
20. Bildiri, makale vb. çalışmalarını yazarken	⑤ ④ ③ ② ①
21. Yurt dışındaki meslektaşlarla, (e-posta dâhil) bireysel yazışmalar aracılığıyla bilgi ve deneyim paylaşırken	⑤ ④ ③ ② ①
22. İnternet ortamındaki forum, tartışma platformu gibi yerleri izlerken veya bunlara katılırken	⑤ ④ ③ ② ①
23. Ses ve görüntülü uzaktan iletişim aracı ile sağlanan ortamlarda, değişik katılımcıların işbirliğiyle yapılan tıbbi operasyon ve benzeri etkinliklerde yer alırken	⑤ ④ ③ ② ①

İngilizce öğrenme bir tür stratejik yatırımdır ve kişiler, öğrenmek için emek ve zaman harcadıkları, maddi olarak fedakârlıkta buldukları İngilizce ile bazı bireysel beklentilerini ve hedeflerini gerçekleştirmek isterler. Aşağıda, İngilizce ile gerçekleştirilecek bazı bireysel beklenti ve hedef örnekleri vardır. Bu anlamda, aşağıda yer alan ve bireysel hedef ifade eden durumların **sizin için öncelik derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok öncelikli ④Öncelikli ③Az öncelikli ②Öncelikli değil ①Hiç öncelikli değil

E-BİREYSEL HEDEFLER	
24. Yurt dışında, tıp alanı ile ilgili eğitim almak	⑤ ④ ③ ② ①
25. Meslekle ilgili bilgileri güncel tutmak	⑤ ④ ③ ② ①
26. Meslekle ilgili gelişme ve güncel olaylardan haberdar olmak	⑤ ④ ③ ② ①
27. Mesleki konulardaki düşünceleri İngilizce olarak ifade edebilmek	⑤ ④ ③ ② ①
28. Meslekle ilgili gelişmelere birincil kaynaklardan ulaşmak	⑤ ④ ③ ② ①
29. Bilgi ve deneyimleri uluslararası platformda ilgililerle paylaşmak	⑤ ④ ③ ② ①

Dil öğrenme bireysel bir süreçtir ve dil öğrenen kişilerin zaman zaman öz değerlendirmeler yaparak, kendi yetersizliklerini saptamalı ve bunları gidermek için yollar aramalıdır. Aşağıda, İngilizce öğrenen birisinin karşılaştığı sorunlar yer almaktadır. Bu sorunların **sizin için geçerli olma derecesini belirtiniz.**

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok geçerli ④Geçerli ③Biraz geçerli ②Geçersiz ①Hiç geçerli değil

F-EKSİKLİKLER	
30. Tıbbi metinleri anlama sorunu	⑤ ④ ③ ② ①
31. Kelimeleri doğru telaffuz edememe sorunu	⑤ ④ ③ ② ①
32. İngilizce konuşurken kendini ifade etmede sorun	⑤ ④ ③ ② ①
33. Hazırlık sınıfının kazandırdığı İngilizce düzeyinin yeterli olmaması sorunu	⑤ ④ ③ ② ①
34. İngilizce derslerine yeterince hazırlanamama sorunu	⑤ ④ ③ ② ①
35. İngilizce öğrenirken sunulan materyallerden yeterince faydalanamama sorunu	⑤ ④ ③ ② ①
36. İngilizce söylenen ifadeleri anlamada sorun	⑤ ④ ③ ② ①
37. İngilizceden Türkçeye bir metni çevirmede sorun	⑤ ④ ③ ② ①
38. İngilizce gramer bilgisinde eksiklikler	⑤ ④ ③ ② ①

İngilizce öğrenme ve öğretme sürecinde, hem öğrenciler hem de öğretmenler tarafından kullanılan çeşitli yöntem ve stratejiler vardır. Bu yöntem ve stratejilerin kullanılmasında amaç, eğitim sürecinin daha etkin olmasını, öğrencinin İngilizceyi öğrenirken kullanılan öğretim metotlarının ve kendi kullandığı stratejilerin farkına varmasını ve bu suretle eğitim sürecinde öğrencinin başarılı olmasını sağlamaktır. Bu anlamda aşağıda sıralanan yöntem ve stratejilerin sizin için **önem derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok önemli ④ Önemli ③ Biraz önemli ② Önemli değil ① Hiç önemli değil

G-YÖNTEM VE STRATEJİ	
39. İngilizceyi, İngilizce bir metni Türkçeye çevirerek öğrenmek	⑤ ④ ③ ② ①
40. İngilizce kelimeleri cümle içinde kullanarak öğrenmek	⑤ ④ ③ ② ①
41. İngilizce kelimeleri sadece anlamlarıyla değil, (sıfat, zamir, fiil gibi) ne tür kelime olduklarıyla ve birlikte kullanıldığı kelimelerle birlikte öğrenmek	⑤ ④ ③ ② ①
42. İngilizce kelime öğrenmede öğrenilen kelimeleri tekrarlarla pekiştirerek öğrenmek	⑤ ④ ③ ② ①
43. İngilizce kelimeleri, Türkçe anlamlarıyla birlikte öğrenmek	⑤ ④ ③ ② ①
44. Kelimeleri eğlenceli oyunlar aracılığı ile öğrenmek	⑤ ④ ③ ② ①
45. Kelimeleri, cümleler içinde, farklı bağlamlarda kullanarak öğrenmek	⑤ ④ ③ ② ①
46. Kelimeleri, Türkçelerinin verilmesi yerine, İngilizce açıklanmalarıyla öğrenmek	⑤ ④ ③ ② ①
47. Kelimeleri farklı öğrenme yollarını deneyerek öğrenmek	⑤ ④ ③ ② ①
48. Kelime öğretiminde, kelimelerin tıp ile ilgili makalelerde kullanılma şekillerinin vurgulanması yoluyla öğrenmek	⑤ ④ ③ ② ①
49. Öğretilecek yapı ve kelimeleri, bu yapı ve kelimelerin çokça geçtiği örnek metinlerden yararlanarak öğrenmek	⑤ ④ ③ ② ①
50. İngilizce olarak işlenen ders aracılığı ile İngilizceyi geliştirmek	⑤ ④ ③ ② ①
51. Öğretmenin dersi ilginç ve zevkli hale getirdiğinde, İngilizce öğrenmenin kolaylaşması	⑤ ④ ③ ② ①
52. İlk kez İngilizce öğrenmeye başladığımızda öğretimde uygulanan yöntemlerin, daha sonraki öğrenmeler üzerinde etkisinin olması	⑤ ④ ③ ② ①
53. Bazı Mesleki İngilizce terimleri ile Genel İngilizce kelimelerinin anlam farklılıkları üzerinde durarak öğrenmek	⑤ ④ ③ ② ①

İngilizce öğretimi sürecinde öğretmenin çeşitli rolleri vardır. Bu rollerin öğretim sürecini etkilediği düşünülmektedir. Her şeyden önce, yabancı dil öğretmenleri, öğrencilerle etkileşime girip öğrenme ortamını hazırlar ve öğretmenin niteliklerinin sağlanan bu öğrenme ortamı üzerinde etkisi çoktur. Bu anlamda aşağıda sıralanan öğretici niteliklerinin sizin için **önem derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok önemli ④ Önemli ③ Biraz önemli ② Önemli değil ① Hiç önemli değil

H-ÖĞRETİCİ NİTELİKLERİ	
54. İngilizce öğretmenin kişisel özellikleri	⑤ ④ ③ ② ①
55. İngilizce öğretim sürecini önceden ayrıntılı olarak planlanması	⑤ ④ ③ ② ①
56. Sınıfa gelmeden önce hazırlık yapması	⑤ ④ ③ ② ①
57. Mesleğini önemsemesi, öğretmeyi sevmesi ve motivasyonunun yüksek olması	⑤ ④ ③ ② ①
58. Belli zaman dilimlerinde dersle ilgili anlaşılmayan konularla ilgili sorular için zaman ayırması gibi öğrencileri için özveride bulunması	⑤ ④ ③ ② ①
59. Uygun soru sorma, önemli noktaları anlaşılır biçimde açıklama gibi öğretim becerilerindeki yetkinliği	⑤ ④ ③ ② ①
60. İngilizce alan bilgisindeki yeterliliği	⑤ ④ ③ ② ①

61. Sınıf içinde rahat bir ortam oluşturması	⑤ ④ ③ ② ①
62. Dersi, sevdirecek bir tarzda işlemesi	⑤ ④ ③ ② ①
63. Öğrencilerinin duygu ve düşüncelerini anlaması	⑤ ④ ③ ② ①

İngilizce, çeşitli amaçlar için öğrenilmektedir. Ancak, farklı amaçlar için öğrenilen dilin de (kelime seçiminden yapı farklılıklarına kadar) değişik özellikleri olabilmektedir (Örneğin, “die”, “pass away”, “draw the last breath”, “kick the bucket”, “x” aynı anlamı taşır ama farklı amaçlar için kullanılır) Özel amaçlar için dil öğretim programlarında, dilin bu değişik özelliklerinin öğretilmesi de önemsenmektedir. Bu anlamda, aşağıda sıralanan **dil özelliklerinin**, özel amaçlar için İngilizce öğrenme adına, **sizin için önem derecesini** belirleyiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok önemli ④Önemli ③Az önemli ②Önemsiz ①Hiç önemli değil

I-DİL ÖZELLİKLERİ	
64. İngilizcenin, mesleki amaçları gerçekleştirebilecek araç olması	⑤ ④ ③ ② ①
65. İngilizcenin “tıp alanında kullanılan İngilizce” olması	⑤ ④ ③ ② ①
66. İngilizcenin mesleğimi yaparken kullanabileceğim ortamlarla ilişkili olması	⑤ ④ ③ ② ①
67. Mesleki İngilizceyi genel İngilizceden farklı kılan özellikleri	⑤ ④ ③ ② ①

Duyuşsal alan, bir konuya karşı var olan ilginiz, tutumlarınız ve duygularınız gibi eğilimleriniz gibi konularla ilgilidir. Mesleki İngilizce dersine olan ilgi, tutum ve duyguları içeren aşağıdaki yargıların sizin için **geçerli olma** derecesini belirleyiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok geçerli ④Geçerli ③Az geçerli ②Geçersiz ①Hiç geçerli değil

J-DUYUŞSAL ÖZELLİKLER	
68. Bu ders aracılığı ile öğrenmekte olduğum İngilizceyi bir ihtiyaç olarak görüyorum.	⑤ ④ ③ ② ①
69. Öğrenmekte olduğum İngilizcenin mesleki gelişimim için önemli olduğunu düşünüyorum.	⑤ ④ ③ ② ①
70. Dersin önemini dersin kredi-saat sayısı ile belirlerim.	⑤ ④ ③ ② ①
71. Bu dersi alıyor olmak beni mutlu ediyor.	⑤ ④ ③ ② ①
72. Bu dersi başarabileceğime olan inancım, derste verilenlere karşı tutumlarımı etkiliyor.	⑤ ④ ③ ② ①
73. İngilizce öğrenmeye karşı önyargım (geçmişteki öğrenim sürecinde bazı kişiler/olaylardan etkilenmem nedeniyle edindiğim olumlu/olumsuz fikir) var.	⑤ ④ ③ ② ①
74. İngilizcenin dünyada ortak iletişim dili olduğunu ve bu nedenle öğrenilmesinin çok gerekli olduğunu düşünüyorum.	⑤ ④ ③ ② ①
75. Bu dersin, gelecekte karşıma çıkacak fırsatları değerlendirmemde bana yararlı olacağına inanıyorum.	⑤ ④ ③ ② ①
76. Derste, derse ilişkin ihtiyaç ve beklentilerimin sorulması öğrenme sürecinde motivasyonumu (derse istekli olarak katılımımı) artırır.	⑤ ④ ③ ② ①
77. İngilizcenin zor ve karışık bir dil olduğunu düşünüyorum.	⑤ ④ ③ ② ①

Demografik Bilgiler

1. Cinsiyetiniz: Erkek Kız

2. Yaşınız: _____

3. Kaçınıcı sınıfa devam ediyorsunuz?

Hazırlık Birinci İkinci Üçüncü Dördüncü Besinci Altıncı

4. Mezun olduğunuz lise veya dengi okulun türü nedir?

Anadolu Lisesi

Özel Lise

Genel Lise

Diğer (Lütfen açıklayınız.).....

5. En son mezun olduğunuz öğretim kurumunun (lise ve dengi okulun) açık adı ve bulunduğu yeri yazınız.

Nitelikli, aranan ve saygın doktorlar olmanız dileğiyle, bu çalışmaya ayırdığınız zaman ve değerli katkılarınız için teşekkür ederim.

Okt. Neslihan Önder (Mesleki İngilizce-I Ders Koordinatörü)

Appendix D

Newly designed questionnaire in the main study

STUDENT NEEDS ANALYSIS DURING TEACHING MEDICAL ENGLISH

A- QUALIFICATIONS OF THE INSTRUCTOR

Instructors have various roles in English language teaching process. It is thought that these roles affect the teaching process. First and foremost, the language instructors interact with the students and prepare the learning environment. In addition, it is regarded that the qualifications of the teacher have considerable effects on learning environment.

In this respect, please specify the “**degree of importance**” concerning the qualifications of the teacher for you.

Please use the following scale in your judgements.

⑤very important ④important ③partially important ②unimportant ①absolutely unimportant

1. Instructors should make the course interesting and entertaining, to facilitate learning English	⑤ ④ ③ ② ①
2. Instructors should plan teaching process in detail beforehand.	⑤ ④ ③ ② ①
3. Instructors should make preparation before coming to the classroom.	⑤ ④ ③ ② ①
4. Instructors should care his/her job, love teaching, and have high motivation.	⑤ ④ ③ ② ①
5. Instructors should make sacrifices for his/her students such as allocating time for a particular period of time for the questions which are not understood.	⑤ ④ ③ ② ①
6. Instructors should have professional competencies including asking relevant questions and explaining the important points in a comprehensible way.	⑤ ④ ③ ② ①
7. Instructors should have a high level of proficiency in English.	⑤ ④ ③ ② ①
8. Instructors should create a relaxing atmosphere in the classroom.	⑤ ④ ③ ② ①
9. Instructors should teach English in a way that students love English.	⑤ ④ ③ ② ①
10. Instructors should understand students’ feelings and opinions	⑤ ④ ③ ② ①

B- LACKS

Learning a language is an individual process and learners need to identify the weak points and look for ways to compensate them by being open to the self-criticism. The problems which English language learners might face are listed below. Please specify the “**degree of validity**” of these problems for you.

Please use the following scale in your judgements.

⑤top validity ④valid ③low validity ②invalid ①absolutely invalid

11. Difficulty in understanding medical articles	⑤ ④ ③ ② ①
12. Not to be able to pronounce the words	⑤ ④ ③ ② ①
13. Difficulty in expressing myself while speaking	⑤ ④ ③ ② ①
14. That the level of English, which has been gained through preparatory	⑤ ④ ③ ② ①

classroom, is not sufficient	
15. Problem in understanding English expressions and statements	⑤ ④ ③ ② ①
16. Difficulty in translating a text from English to Turkish	⑤ ④ ③ ② ①

C-METHODS AND STRATEGIES

There are various method and strategies which are employed by students and teachers during learning and teaching process. The aim of using these methods and strategies is to make the education process more effective, make students aware of the teaching methods and personal strategies while learning English and also enable the students to become successful. Please specify the “**degree of importance**” of methods and strategies that are listed below.

Please use the following scale in your judgements.

⑤very important ④important ③partially important ②unimportant ①absolutely unimportant

17. Learning English through using English words in sentences	⑤ ④ ③ ② ①
18. Learning English words not only with the meanings but also learning word classes (adjective, verb, etc.) and collocations (conduct research)	⑤ ④ ③ ② ①
19. Reinforcing the target words by repeating them	⑤ ④ ③ ② ①
20. Learning English words in sentences and in different contexts	⑤ ④ ③ ② ①
21. Learning words through experiencing different learning strategies	⑤ ④ ③ ② ①
22. Learning words through emphasizing how the words are used in medical articles	⑤ ④ ③ ② ①
23. Learning English structures and words through the sample texts which include the target structures and words a lot	⑤ ④ ③ ② ①
24. Learning through emphasizing the differences between some medical English terminology and General English words	⑤ ④ ③ ② ①

D- AFFECTIVE DOMAINS

Affective domain is related to the subjects such as your interests, attitudes, emotions, and tendencies. Determine “**the degree of validity**” of the following judgements which cover your interest, attitudes and emotions regarding Medical English.

Please use the following scale.

⑤top validity ④valid ③low validity ②invalid ① absolutely invalid

25. I regard English as a need that I am learning through this course	⑤ ④ ③ ② ①
26. English, which I am learning now, is significant for my professional development	⑤ ④ ③ ② ①
27. Taking this course makes me happy	⑤ ④ ③ ② ①
28. My belief in succeeding in learning Medical English affects my attitude towards the course	⑤ ④ ③ ② ①
29. I think English is a common global language in the world and it is crucial to learn	⑤ ④ ③ ② ①

E- SETTINGS (WHERE ENGLISH WILL BE USED)

There are different settings in which people who are learning English think of using English. There are some settings below that English is used in different ways. In this respect, the following statements determine “**the degree of priority**” of settings that you will use English. (in a way to be compatible with your learning needs)

Please use the following scale in your judgements.

⑤top priority ④ priority ③low priority ②not priority ①absolutely not priority

30. While writing a paper, article, etc.	⑤ ④ ③ ② ①
31. While exchanging knowledge and experience with the colleagues abroad through individual correspondence (including e-mails)	⑤ ④ ③ ② ①
32. While watching or participating in the discussion forums or a platform, etc. on the Internet	⑤ ④ ③ ② ①
33. Using English in the settings where distance communication access is available and also while taking part in the medical operations or such activities which are carried out with the collaboration of the participants	⑤ ④ ③ ② ①

F- PROBLEMS (DURING MEDICAL ENGLISH LEARNING PROCESS)

When we are learning English, we face with a variety of problems and these problems make the learning process difficult. In this scope, the answers you give to the questions will determine “**the degree of priority**” of the problem.

Please use the following scale in your judgements.

⑤top priority ④ priority ③low priority ②not priority ①absolutely not priority

34. Not to be able to get prepared for the English courses	⑤ ④ ③ ② ①
35. Not to be able to benefit from the course materials which are presented while learning English	⑤ ④ ③ ② ①
36. Problems in understanding English expressions, statements	⑤ ④ ③ ② ①
37. The relationship between functions in communication (showing contrast, explanation, characterization, etc.)	⑤ ④ ③ ② ①
38. I have a bias towards learning English. (I have positive or negative opinions due to some people or events that I was affected in the past.)	⑤ ④ ③ ② ①

G-IMPORTANCE OF ENGLISH

Language learning is coming into prominence in the education process. In this scope, the answers you give to the questions will determine “**the degree of importance**” of English in your education life.

Please use the following scale in your judgements.

⑤very important ④important ③partially important ②unimportant ①absolutely unimportant

39. That Medical English is a tool to realize occupational aims	⑤ ④ ③ ② ①
40. That English will be “Medical English”	⑤ ④ ③ ② ①
41. That English is relevant to my work environment for my future profession	⑤ ④ ③ ② ①

H- AIMS REGARDING LANGUAGE COMPETENCE

Your answers to the questions will determine “**the degree of priority**” of your aims concerning language competence.

Please use the following scale in your judgements.

⑤top priority ④ priority ③low priority ②not priority ①absolutely not priority

42. To become successful in the international English proficiency exams which are prerequisite in order to carry out research and work abroad	⑤ ④ ③ ② ①
43. To have education abroad on medicine	⑤ ④ ③ ② ①
44. To be successful in the Foreign Language Examination for Civil Servants (KPDS)- It is an examination that officers, research assistants, or the people who want to study abroad must take	⑤ ④ ③ ② ①
45. To be successful in the Interuniversity Foreign Language Examination (ÜDS)-It is the examination which is divided in three parts: Science, Social Sciences, and Health Sciences. It can be used when applying for MA or PhD degree	⑤ ④ ③ ② ①

Demographic Information

1. Your gender: Male Female

2. Your age: _____

3. Which grade are you in?

Preparatory First Second Third Fourth Fifth Sixth

4. Which high school did you graduate from?

Anatolian High School

Private High School

General High School

Other (Please specify).....

5. Please write the name and place of the high school you are graduated from.

I hope that you will be professionally qualified and widely respected doctors. Thank you for your time and vital contribution for the research.

Best wishes,

Lecturer Neslihan ONDER -Medical English I-Course Coordinator

Anketin Türkçe Örneği

TIBBİ İNGİLİZCE ÖĞRETİMİ SÜRECİNDE ÖĞRENCİ İHTİYAÇ ANALİZİ

A- ÖĞRETİCİ NİTELİKLERİ

İngilizce öğretimi sürecinde öğretmenin çeşitli rolleri vardır. Bu rollerin öğretim sürecini etkilediği düşünülmektedir. Her şeyden önce, yabancı dil öğretmenleri, öğrencilerle etkileşime girip öğrenme ortamını hazırlar ve öğretmenin niteliklerinin sağlanan bu öğrenme ortamı üzerinde etkisi çoktur. Bu anlamda aşağıda sıralanan öğretici niteliklerinin **sizin için önem derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok önemli ④ Önemli ③Biraz önemli ② Önemli değil ①Hiç önemli değil

1. Öğretmenin dersi ilginç ve zevkli hale getirdiğinde, İngilizce öğrenmenin kolaylaşması	⑤ ④ ③ ② ①
2. İngilizce öğretim sürecini önceden ayrıntılı olarak planlanması	⑤ ④ ③ ② ①
3. Sınıfa gelmeden önce hazırlık yapması	⑤ ④ ③ ② ①
4. Mesleğini önemsemesi, öğretmeyi sevmesi ve motivasyonunun yüksek olması	⑤ ④ ③ ② ①
5. Belli zaman dilimlerinde dersle ilgili anlaşılmayan konularla ilgili sorular için zaman ayırması gibi öğrencileri için özveride bulunması	⑤ ④ ③ ② ①
6. Uygun soru sorma, önemli noktaları anlaşılır biçimde açıklama gibi öğretim becerilerindeki yetkinliği	⑤ ④ ③ ② ①
7. İngilizce alan bilgisindeki yeterliliği	⑤ ④ ③ ② ①
8. Sınıf içinde rahat bir ortam oluşturması	⑤ ④ ③ ② ①
9. Dersi, sevdirecek bir tarzda işlemesi	⑤ ④ ③ ② ①
10. Öğrencilerinin duygu ve düşüncelerini anlaması	⑤ ④ ③ ② ①

B- EKSİKLİKLER

Dil öğrenme bireysel bir süreçtir ve dil öğrenen kişilerin zaman zaman öz değerlendirmeler yaparak, kendi yetersizliklerini saptamalı ve bunları gidermek için yollar aramalıdır. Aşağıda, İngilizce öğrenen birisinin karşılaştığı sorunlar yer almaktadır. Bu sorunların **sizin için geçerli olma derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok geçerli ④Geçerli ③Biraz geçerli ②Geçersiz ①Hiç geçerli değil

11. Tıbbi metinleri anlama sorunu	⑤ ④ ③ ② ①
12. Kelimeleri doğru telaffuz edememe sorunu	⑤ ④ ③ ② ①
13. İngilizce konuşurken kendini ifade etmede sorun	⑤ ④ ③ ② ①
14. Hazırlık sınıfının kazandırdığı İngilizce düzeyinin yeterli olmaması sorunu	⑤ ④ ③ ② ①
15. İngilizce söylenen ifadeleri anlamada sorun	⑤ ④ ③ ② ①
16. İngilizceden Türkçeye bir metni çevirmede sorun	⑤ ④ ③ ② ①

C- YÖNTEM VE STRATEJİ

İngilizce öğrenme ve öğretme sürecinde, hem öğrenciler hem de öğretmenler tarafından kullanılan çeşitli yöntem ve stratejiler vardır. Bu yöntem ve stratejilerin kullanılmasında amaç, eğitim sürecinin daha etkin olmasını, öğrencinin İngilizceyi öğrenirken kullanılan öğretim metotlarının ve kendi kullandığı stratejilerin farkına varmasını ve bu suretle eğitim sürecinde öğrencinin başarılı olmasını sağlamaktır. Bu anlamda aşağıda sıralanan yöntem ve stratejilerin **sizin için önem derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok önemli ④ Önemli ③Biraz önemli ② Önemli değil ①Hiç önemli değil

17. İngilizce kelimeleri cümle içinde kullanarak öğrenmek	⑤ ④ ③ ② ①
18. İngilizce kelimeleri sadece anlamlarıyla değil, (sıfat, zamir, fiil gibi) ne tür kelime olduklarıyla ve birlikte kullanıldığı kelimelerle birlikte öğrenmek	⑤ ④ ③ ② ①
19. İngilizce kelime öğrenmede öğrenilen kelimeleri tekrarlarla pekiştirerek öğrenmek	⑤ ④ ③ ② ①
20. Kelimeleri, cümleler içinde, farklı bağlamlarda kullanarak öğrenmek	⑤ ④ ③ ② ①
21. Kelimeleri farklı öğrenme yollarını deneyerek öğrenmek	⑤ ④ ③ ② ①
22. Kelime öğretiminde, kelimelerin tıp ile ilgili makalelerde kullanılma şekillerinin vurgulanması yoluyla öğrenmek	⑤ ④ ③ ② ①
23. Öğretilecek yapı ve kelimeleri, bu yapı ve kelimelerin çokça geçtiği örnek metinlerden yararlanarak öğrenmek	⑤ ④ ③ ② ①
24. Bazı Mesleki İngilizce terimleri ile Genel İngilizce kelimelerinin anlam farklılıkları üzerinde durarak öğrenmek	⑤ ④ ③ ② ①

D- DUYUŞSAL ÖZELLİKLER

Duyuşsal alan, bir konuya karşı var olan ilginiz, tutumlarınız ve duygularınız gibi eğilimleriniz gibi konularla ilgilidir. Mesleki İngilizce dersine olan ilgi, tutum ve duyguları içeren aşağıdaki yargıların **sizin için geçerli olma** derecesini belirleyiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤Çok geçerli ④Geçerli ③Az geçerli ②Geçersiz ①Hiç geçerli değil

25. Bu ders aracılığı ile öğrenmekte olduğum İngilizceyi bir ihtiyaç olarak görüyorum.	⑤ ④ ③ ② ①
26. Öğrenmekte olduğum İngilizcenin mesleki gelişimim için önemli olduğunu düşünüyorum.	⑤ ④ ③ ② ①
27. Bu dersi alıyor olmak beni mutlu ediyor.	⑤ ④ ③ ② ①
28. Bu dersi başarabileceğime olan inancım, derste verilenlere karşı tutumlarımı etkiliyor.	⑤ ④ ③ ② ①
29. İngilizcenin dünyada ortak iletişim dili olduğunu ve bu nedenle öğrenilmesinin çok gerekli olduğunu düşünüyorum.	⑤ ④ ③ ② ①

E- DİLİ KULLANMA ORTAMI

İngilizce öğrenen kişilerin, amaçlarını gerçekleştirmek için, İngilizceyi kullanmayı düşündükleri değişik ortamlar vardır. Aşağıda İngilizcenin (dil öğrenme amaçlarınızla uyumlu olacak şekilde) bazı kullanılma ortamlarında, değişik kullanılma şekilleri vardır. Bu anlamda, aşağıda sıralanan,

İngilizceyi kullana bağlamlarının/ortamlarının (öncelikle hangi ortamlarda kullanmak istediğinizin göstergesi olacak şekilde) **sizin için öncelik derecesini** belirtiniz.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok öncelikli ④ Öncelikli ③ Az öncelikli ② Öncelikli değil ① Hiç öncelikli değil

30. Bildiri, makale vb. çalışmalarımı yazarken	⑤ ④ ③ ② ①
31. Yurt dışındaki meslektaşlarla, (e-posta dâhil) bireysel yazışmalar aracılığıyla bilgi ve deneyim paylaşırken	⑤ ④ ③ ② ①
32. İnternet ortamındaki forum, tartışma platformu gibi yerleri izlerken veya bunlara katılırken	⑤ ④ ③ ② ①
33. Ses ve görüntülü uzaktan iletişim aracıyla ile sağlanan ortamlarda, değişik katılımcıların işbirliğiyle yapılan tıbbi operasyon ve benzeri etkinliklerde yer alırken	⑤ ④ ③ ② ①

G- DİL ÖĞRENİMİ SÜRECİNDE YAŞANAN SORUNLAR

İngilizce öğrenirken, karşılaştığımız çeşitli sorunlar vardır ve bu sorunlar dil öğrenmemizi zorlaştırır. Bu anlamda, aşağıda sıralanan konulara ilişkin cevaplarınız dil öğrenim sürecinde yaşadığınız sorunların **sizin için öncelik derecesini** belirleyecektir.

Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok öncelikli ④ Öncelikli ③ Az öncelikli ② Öncelikli değil ① Hiç öncelikli değil

34. İngilizce derslerine yeterince hazırlanamama sorunu	⑤ ④ ③ ② ①
35. İngilizce öğrenirken sunulan materyallerden yeterince faydalanamama sorunu	⑤ ④ ③ ② ①
36. İngilizce gramer bilgisinde eksiklikler	⑤ ④ ③ ② ①
37. İngilizce kelime türleri (bağlaç, sıfat, zarf) ile bu türlerin iletişim işlevleri (zıtlık belirtme, açıklama, niteleme) arası ilişkiler sorunu	⑤ ④ ③ ② ①
38. İngilizce öğrenmeye karşı önyargımın (geçmişteki öğrenim sürecinde bazı kişiler/olaylardan etkilenmem nedeniyle edindiğim olumlu/olumsuz fikir) olması	⑤ ④ ③ ② ①

H-İNGİLİZCENİN ÖNEMİ

Günümüzde dil öğrenimi eğitim sürecinde gittikçe önem kazanmaktadır. Bu anlamda, aşağıda sıralanan konulara ilişkin cevaplarınız İngilizcenin **eğitim hayatınızdaki önem derecesini** belirleyecektir. Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok önemli ④ Önemli ③ Biraz önemli ② Önemli değil ① Hiç önemli değil

39. İngilizcenin, mesleki amaçları gerçekleştirebilecek araç olması	⑤ ④ ③ ② ①
40. İngilizcenin “tıp alanında kullanılan İngilizce” olması	⑤ ④ ③ ② ①
41. İngilizcenin mesleğimi yaparken kullanabileceğim ortamlarla ilişkili olması	⑤ ④ ③ ② ①

I- DİL YETERLİLİĞİ İLE İLGİLİ AMAÇLAR

Aşağıda sıralanan konulara ilişkin cevaplarınız **dil yeterliliğiniz ile ilgili amaçlarınızın öncelik derecesini** belirleyecektir. Değerlendirmenizde **lütfen aşağıdaki ölçeği** kullanın.

⑤ Çok öncelikli ④ Öncelikli ③ Az öncelikli ② Öncelikli değil ① Hiç öncelikli değil

42. Yurt dışındaki tıp merkezlerinde araştırmalar yapmak veya çalışmak için	⑤ ④ ③ ② ①
-----------------------------------------------------------------------------	-----------

koşul niteliğindeki uluslararası İngilizce yeterlik sınavlarda başarılı olmak	
43. Yurt dışında tıp alanı ile ilgili eğitim almak	⑤ ④ ③ ② ①
44. KPDS' de (Kamu Personeli Dil Sınavı-Yabancı dil tazminatından yararlanmayı düşünen memurların, araştırma görevlisi olmak veya yurt dışına görevli olarak gitmek isteyen kişilerin girmesi gereken sınavdır.) başarılı olmak	⑤ ④ ③ ② ①
45. ÜDS' de (Üniversitelerarası Dil Sınavı-Fen Bilimleri, Sosyal Bilimler ve Sağlık Bilimleri olmak üzere üç alana ayrılan ve yüksek lisans ve doktora başvurularında kullanılabilen sınavdır.) başarılı olmak	⑤ ④ ③ ② ①

Aşağıda verilen ifade ile ilgili düşüncenizi belirtiniz.

Derste, derse ilişkin ihtiyaç ve beklentilerimin sorulması öğrenme sürecinde **motivasyonumu** ve **derse istekli olarak katılımımı** artırır.

EVET

HAYIR

DEMOGRAFİK BİLGİLER

1. Cinsiyetiniz: Erkek Kız

2. Yaşınız: _____

3. Kaçınıcı sınıfa devam ediyorsunuz?

Hazırlık Birinci İkinci Üçüncü Dördüncü Besinci Altıncı

4. Mezun olduğunuz lise veya dengi okulun türü nedir?

Anadolu Lisesi

Özel Lise

Genel Lise

Diğer (Lütfen açıklayınız.) _____

5. En son mezun olduğunuz öğretim kurumunun (lise ve dengi okulun) açık adı ve bulunduğu yeri yazınız.

Nitelikli, aranan ve saygın doktorlar olmanız dileğiyle, bu çalışmaya ayırdığınız zaman ve değerli katkılarınız için teşekkür ederim.

Okt. Neslihan Önder (Mesleki İngilizce-I Ders Koordinatörü)

Appendix E

Interview questions in Turkish for medical students/doctors

Öğrencinin Adı:	Tarih:	Yer:
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Giriş Konuşması

Merhaba! Öncelikle gönüllü olarak Türkiye’de Uludağ Üniversitesinde yaptığım “Tıbbi İngilizce Öğretiminde Öğrenci İhtiyaç Analizi” adlı çalışma kapsamında düşüncelerini bizimle paylaşmayı kabul ettiğin(iz) için teşekkür ederim. Tıp fakültesindeki öğrencilerin Akademik Amaçlar için İngilizce kapsamında Mesleki İngilizce dersi ile ilgili çalışmaya katılan Tıp Fakültesi öğrencileri ile görüşüyorum.

Konuşurken isim vermen gerekmemektedir. Biz Uludağ Üniversitesinin Tıp Fakültesinde okuyan gönüllü öğrencilerin, Tıp Fakültesinde okuyan öğrencilerin, çalışan öğretim üyelerinin ve doktorların görüşlerini alarak çalışmanın içeriğini zenginleştirmek istiyorum.

Bu görüşmedeki amaçlarım

- Tıp Fakültesi eğitim programında seçmeli ders olarak yer alan Tıbbi İngilizce (Mesleki İngilizce) öğrenim sürecinde, dersi seçen öğrencilerin dersle ilgili ihtiyaçlarını, isteklerini ve beklentilerini ortaya çıkarmak;
- Araştırma sonuçlarını inceleyerek, toplanan verileri analiz edip sonuçları Tıp Fakültesinde görev yapan öğretim üyeleri, doktorlar ve öğrenciler ile paylaşmak;
- Sonuçları değerlendirilmesinden sonra öğrencilerin Mesleki İngilizce ile ilgili ihtiyaçlarını belirleyerek eğitim programının geliştirilmesi için önerilerde bulunmaktır.

Sorular

1. İngilizce öğrenirken, farklı iletişim ihtiyaçlarının gerektirdiği çeşitli dilbilgisel yapılar, bunlara ilişkin kurallar, bazı kalıplar, kelime grupları ya da kelimeler öğrenilir. Mesleki İngilizce dersini göz önünde bulundurduğunda bu konu ile ilgili öğrenme ihtiyaçlarına yönelik görüşlerini(zi) öğrenebilir miyiz?
2. Dil öğrenirken, öğrenme ortamının özelliklerinin (sınıfın mevcudu, sınıfın büyüklüğü, oturma düzeni gibi) doğrudan ya da dolaylı olarak dil öğrenme üzerinde etkisinin olduğu bilinmektedir. Bu etki, öğrencinin kişisel olarak kendisini rahat bir öğrenme ortamında hissetmesi şeklinde olabileceği gibi, iletişimi ve etkinlikleri kolaylaştırıp, güçleştirmesi şeklinde de ortaya çıkabilir. Öğrenme ortamının öğrenme üzerindeki etkileri hakkındaki görüşlerini(zi) öğrenebilir miyiz?
3. İngilizce öğretiminde, İngilizceyi öğrenen kişilerin, amaçlarını gerçekleştirmeye yetecek düzeyde İngilizce öğrenmeleri istenir. Dil yeterliliğini göstermek için geçmeyi istediğin(iz) sınavlar nelerdir? Senin için dil yeterliliğini gösteren en önemli sınav(lar) hangisidir?
4. İngilizce öğrenen kişilerin, amaçlarını gerçekleştirmek için, İngilizceyi kullanmayı düşündükleri değişik ortamlar vardır. İngilizceyi en çok hangi ortamlarda kullanacağını düşünüyorsun?
5. İngilizce öğrenme bir tür stratejik yatırımdır ve kişiler İngilizceyi öğrenmek için emek ve zaman harcadıkları, maddi olarak fedakârlıkta buldukları için bazı bireysel beklentilerini ve hedeflerini gerçekleştirmek isterler. Senin İngilizce öğrenmek istemendeki bireysel hedeflerin(iz) nelerdir?
6. Dil öğrenme bireysel bir süreçtir ve dil öğrenen kişiler zaman zaman öz değerlendirmeler yaparak, kendi yetersizliklerini saptamalı ve bunları gidermek için yollar aramalıdır. Bu bağlamda İngilizce öğrenme sürecinde karşılaştığın sorunlar nelerdir? Hangi konularda ya da dil becerilerince kendini eksik görüyorsun(uz)?

7. İngilizce öğrenme ve öğretme sürecinde, hem öğrenciler hem de öğretmenler tarafından kullanılan çeşitli yöntem ve stratejiler vardır. Bu yöntem ve stratejilerin kullanılmasında amaç, eğitim sürecinin daha etkin olmasını, öğrencinin İngilizceyi öğrenirken kullanılan öğretim metotlarının ve kendi kullandığı stratejilerin farkına varmasını ve bu suretle eğitim sürecinde öğrencinin başarılı olmasını sağlamaktır. Hangi metot ve stratejiler sizin (sizin) için önemlidir?
8. İngilizce öğretimi sürecinde öğretmenin çeşitli rolleri vardır. Bu rollerin öğretim sürecini etkilediği düşünülmektedir. Bu konudaki düşünceni(zi) paylaşabilir misin?
9. Duyuşsal alan, bir konuya karşı var olan ilginiz, tutumlarınız, duygularınız ve eğilimleriniz gibi konularla ilgilidir. Genel olarak İngilizce öğrenimi ile ilgili görüş ve duyguların(ız) nedir?
10. Tıbbi İngilizceyi öğrenme ile ilgili ihtiyaç, beklenti ve isteklerinizle ilgili eklemek istediğin(iz) bir şey var mı?

Teşekkür ederim...
Neslihan ÖNDER

Interview questions in English for medical students/doctors

Opening Speech

Hello!

Firstly, I want to thank you for volunteering to share your opinions with me in support of my study regarding medical students' needs analysis of the process of learning Medical English. As part of this research, I am interviewing students in the Faculty of Medicine regarding their learning needs.

When you are interviewed, you do not need to tell your name. I would like to enrich the findings of research by obtaining your opinion as a volunteer medical student, together with those of lecturers and doctors.

The aims of the interview are

- To reveal the students' needs, wants and expectations in the process of learning Medical English as an elective course in the programme in the Faculty of Medicine;
- To share the findings of the study obtained by analysing the data which have been collected, with teaching and administrative staff, doctors and students;
- After analysing all the data, to make recommendations to improve the programme.

Accordingly, I will be glad if you could share your opinions sincerely with us regarding your needs, wants and expectations with regard to the Medical English course.

Questions

1. While we are learning English, we learn various grammatical structures, some rules related to these structures, and collocations or words that different communication tools require. When you consider Medical English, can we obtain your opinions about your learning needs in this respect?

2. It is well known that while learning English, the characteristics of the learning environment/setting has an effect on language learning, both directly and indirectly. What do you think about the effects of the learning environment here in the Faculty of Medicine at Uludag University on your learning?

3. In English language teaching, it is expected that the learners should learn English in order to realize their aims. Do you have any aims with regard to the language proficiency tests that you have to sit? Which examination(s) is/are significant to you in terms of showing your language proficiency?

4. People who are learning English aim to use the language in different places and settings. In which settings are you thinking of using English most?

5. Learning English is a strategic investment, and people want to realize their individual expectations and aims in repayment for the hard work, time and money spent. What are your individual aims with regard to learning English?

6. Learning a language is an individual process, and people who are learning a language should sometimes undertake self-assessment in order to identify their inadequacies and to look for ways to compensate for them. What are the problems you face in this process? In which areas do you think you are lacking?
7. There are a number of methods and strategies employed both by teachers and learners, in language learning and in the teaching process. The aim of these methods and strategies is to make the education process more effective, to make the learners conscious of which methods and strategies they are using, in order to ensure the students' success. Which learning strategies are important for you?
8. Teachers have various roles to play in the English language teaching process. What kind of roles should the teacher play? Could you share your opinions, please?
9. Affective development relates to your individual tendencies such as your interests, attitudes, and emotions. What are your opinions and feelings about English courses in general?
10. Is there anything you want to add concerning your needs, wants and expectations with regard to learn Medical English?

**Interview questions for doctors who are working for private hospital and Bursa Health
Directorship**

1. People who are learning English aim to use the language in different places and settings. In which settings are you thinking of using English most?
2. Learning a language is an individual process, and people who are learning a language should sometimes undertake self-assessment in order to identify their inadequacies and to look for ways to compensate for them. What are the problems you face in this process? In which areas do you think you are lacking?
3. Affective development relates to your individual tendencies such as your interests, attitudes, and emotions. What are your opinions and feelings about English courses in general?

Appendix F

Descriptive statistics for each item in the main questionnaire

A. QUALIFICATIONS OF THE INSTRUCTOR

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
Instructors should make the course interesting and entertaining to facilitate learning English	324	1	5	4.55	0.70
Instructors should plan the teaching process in detail	322	1	5	4.11	0.92
Instructors should prepare before coming to class	323	1	5	4.14	0.94
Instructors should care about their job, love teaching, and be highly motivated	324	2	5	4.67	0.60
Instructors should accommodate students by allocating specific time for questions	323	1	5	4.16	0.87
Instructors should have professional competencies, including the ability to ask relevant questions and to explain important points in a comprehensible way	322	1	5	4.46	0.75
Instructors should have a high level of proficiency in English	323	1	5	4.58	0.67
Instructors should create a relaxing atmosphere in the classroom	324	1	5	4.34	0.83
Instructors should teach English in a way that makes students love English	323	1	5	4.59	0.67
Instructors should understand students' feelings and opinions	324	1	5	4.20	0.88

B. SHORTCOMINGS

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
Difficulty understanding medical articles	323	1	5	3.87	0.95
Not able to pronounce the words	322	1	5	3.47	1.09
Difficulty expressing myself while speaking	319	1	5	3.81	1.12
Insufficient level of English gained in the classroom	311	1	5	3.40	1.46
Problems understanding English expressions and statements	324	1	5	3.47	1.08
Difficulty translating a text from English to Turkish	324	1	5	3.58	1.07

C. METHODS AND STRATEGIES

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
Learning English by using English words in sentences	323	1	5	4.36	0.71
Learning not only the meanings of English words but also the parts of speech of words (adjective, verb, etc.) and collocations (conducting research)	323	1	5	4.16	0.86
Reinforcing the target words by repetition	324	1	5	4.37	0.74
Learning English words in sentences and in different contexts	323	1	5	4.15	0.83
Learning words through different learning strategies	321	1	5	3.89	0.91
Learning words by emphasising how the words are used in medical articles	324	1	5	4.36	0.77
Learning English structures and words through the sample texts, which include the target structures and words	324	1	5	4.14	0.83
Learning by emphasising the differences between medical English terminology and general English words	323	1	5	4.17	0.85

D. AFFECTIVE DOMAINS

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
I regard English as a need that I am filling through this course	323	1	5	4.35	0.83
Learning English is important for my professional development	323	1	5	4.45	0.78
Taking this course makes me happy	323	1	5	3.68	1.07
My desire to succeed in learning medical English affects my attitude toward the course	324	1	5	3.89	0.92
I think English is a common global language and is crucial to learn	324	1	5	4.39	0.90

E. SETTINGS (WHERE ENGLISH WILL BE USED)

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
While writing a paper, article, etc	323	1	5	4.15	0.93
While exchanging knowledge and experience with colleagues abroad through individual correspondence (including e-mails)	323	1	5	4.11	0.94
While watching or participating in discussion forums or websites on the Internet	323	1	5	3.98	1.00
Where access to distance communication is available and while participating in medical operations or other activities	322	1	5	4.21	1.03

F. PROBLEMS (DURING THE MEDICAL ENGLISH LEARNING PROCESS)

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
Unprepared for the English courses	323	1	5	3.58	1.05
Unable to benefit from the course materials presented	321	1	5	3.29	1.05
Problems understanding English expressions and statements	323	1	5	3.10	1.15

Problems with the relationship between communication functions (showing contrast, explanation, characterisation, etc.)	323	1	5	3.36	1.16
I have a bias toward learning English. (I have positive or negative opinions because of people or events in the past.)	323	1	5	2.96	1.41

G. IMPORTANCE OF ENGLISH

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
Medical English is a tool to realise occupational aims	322	2	5	4.48	0.70
The English that I learn will be "medical English".	322	1	5	4.42	0.77
English is relevant for my future profession	322	2	5	4.42	0.76

H. AIMS REGARDING LANGUAGE COMPETENCE

Item	No. of students	Mean scores			
		Minimum	Maximum	Mean	Standard deviation
To be successful on the international English proficiency exams, which are a prerequisite for conducting research and working abroad	322	1	5	4.27	0.86
To pursue education abroad in medicine	322	1	5	4.11	0.96
To be successful on the Foreign Language Examination for Civil Servants (KPDS), the exam that must be taken by officers, research assistants, and people who want to study abroad	319	1	5	3.29	1.29
To be successful on the Interuniversity Foreign Language Examination (ÜDS), which is divided into three parts: Science, Social Sciences, and Health Sciences. (This exam can be used when applying for an MA or PhD degree.)	322	1	5	3.73	1.15

Appendix G
Categories and sub-categories in interview data analysis

Summary of insider participants' comments regarding Medical English

Domains	Participant Code (P.)	Number of the Participants		Percentage(%)	
		Academics (10)	Students (15)	Academics	Students
1. Learning Needs					
Speaking	P.D.1-P.C.3-P.C.4-P.C.5-P.I.7-P.I.8-P.R.10-P.S.12-P.S.18	7	2	70	13,3
Listening	P.D.1-P.C.3-P.C.4-P.C.5-P.S.14	4	1	40	6,7
Reading	P.D.1-P.C.4-P.C.5- P.S.17-P.S.18 - P.S.19-P.S.21-P.S.25	3	5	30	33,3
Writing	P.D.1	1	0		
Medical vocabulary	P.C.2-P.C.3-P.C.6-P.I.7-P.I.8-P.S.11-P.S.12-P.S.13-P.S.14-P.S.15- P.S.16-P.S.17-P.S.18-P.S.19-P.S.20-P.S.21-P.S.22-P.S.23-P.S.24-P.S.25	5	15	50	100
Stimulations	P.I.7	1	0	10	0
Knowledge of general English and medical English	P.I.9	1	0	10	0
Repeating grammar subjects briefly to remember	P.S.17	0	1	0	6,7
How to use the medical words in a sentence	P.S.22	0	1	0	6,7
Medical dialogues	P.S.18-P.S.25	0	2	0	13,3
2. Teaching environment (Setting)					
Learning in small groups	P.D.1-P.C.4-P.C.5-P.C.6-P.I.7-P.I.8-P.I.9-P.R.10-P.S.11-P.S.12- P.S.13-P.S.14-P.S.15- P.S.16-P.S.18-P.S.19-P.S.20-P.S.21-P.S.22-P.S.23-P.S.24-P.S.25	8	14	80	93,3

A supportive teacher	P.C.3-P.I.8-P.S.20-P.S.23	2	2	20	13,3
Interactive teaching	P.C.2-P.C.3-P.C.4-P.C.5-P.C.6-P.S.13-P.S.20	5	2	50	13,3
3. English proficiency					
TOEFL	P.D.1-P.C.6-P.C.3-P.I.8- P.S.18-P.S.20-P.S.21	4	3	40	20
IELTS	P.C.3-P.S.18	1	1	10	6,7
UDS	P.C.3-P.C.4-P.I.9	3	0	30	0
KPDS	P.I.9	1	0	10	0
None of the examinations	P.C.2-P.C.5-P.S.15-P.S.16-P.S.17-P.S.19-P.S.20-P.S.23-P.S.24-P.S.25	2	8	20	53,3
Reading and understanding	P.I.7-P.I.9- P.S.12-P.S.24	2	2	20	13,3
To work/study abroad	P.I.9	1	0	10	0
Speaking	P.I.7-P.S.13-P.S.14-P.S.15-P.S.17-P.S.19-P.S.24-P.S.22-P.S.25	1	8	10	53,3
Writing	P.I.7-P.R.10-P.S.13-P.S.22	2	2	20	13,3
I am not familiar with the national English examinations in higher education	P.S.11	0	1	0	6,7
Sufficient [English] proficiency for your daily needs and academic studies	P.S.21	0	1	0	6,7
4. Settings English is used					
Communication/Social interaction	P.C.2-P.C.3-P.C.4-P.I.7-P.I.8-P.I.9-P.R.10	7	0	70	0
International Congress/Conferences	P.C.2-P.C.3-P.C.4-P.C.5-P.C.6-P.I.7-P.I.8-P.R.10-P.S.11- P.S.13-P.S.17-P.S.18-P.S.19-P.S.23-P.S.25	8	7	80	46,7
Working abroad	P.C.2-P.C.4 P.I.7-P.S.14-P.S.15-P.S.18 -P.S.19-P.S.23-P.S.24	3	6	30	40
Working with colleagues from abroad	P.C.2	1	0	10	0
Keeping up with the developments in medicine	P.C.3-P.C.5-P.C.3-P.I.7	4	0	40	0
Corresponding with academics worldwide	P.C.2- P.I.7-P.S.22	2	1	20	6,7

Academic studies	P.C.5-P.C.3- P.C.4-P.I.7-P.S.12- P.S.14-P.S.19-P.S.21-P.S.23	4	5	40	33,3
Talking to patients	P.I.8-P.S.14- P.S.16-P.S.18-P.S.21- P.S.22	1	5	10	33,3
For my hobbies	P.C.4-P.S.24	1	1	10	6,7
Everywhere	P.D.1	1	0	10	0
5. Individual aims with regard to learning English					
Academic studies	P.D.1-P.C.2-P.C.3-P.C.4-P.C.6-P.I.8- P.R.10-P.S.12-P.S.13- P.S.20-P.S.21- P.S.22-P.S.23	7	6	70	40
Being a scientist	P.C.3	1	0	10	0
Speaking as an academic	P.D.1-P.C.4-P.C.5-P.S.13-P.S.20- P.S.24-P.S.25	3	4	30	26,7
Understanding the speaking	P.D.1-P.C.4-P.S.22	2	1	20	6,7
Going abroad	P.D.1	1	0	10	0
Being a citizen of the world	P.I.7	1	0	10	0
Having a prestigious position as an academic	P.I.9-P.S.20	1	1	10	6,7
Working abroad	P.S.11-P.S.13-P.S.14-P.S.21-P.S.25	0	5	0	33,3
Reading Shakespeare from his original language	P.S.11	0	1		6,7
Understanding the scientists in their own languages	P.S.11-P.S.14-P.S.16-P.S.18-P.S.24	0	5	0	33,3
Listening to music in English	P.S.15-P.S.18	0	2	0	13,3
Learning medical vocabulary	P.S.16	0	1	0	6,7
Improving my English	P.S.17-P.S.19	0	2	0	13,3
A great combination: My profession	P.S.17	0	1	0	6,7
Keeping up with the current medical literature	P.S.17-P.S.20-P.S.25	0	3	0	20
Opening new doors	P.S.19	0	1	0	6,7
Being more culture people	P.S.19	0	1	0	6,7
Watching movies in their original language	P.S.24	0	1	0	6,7

6. Problems					
English language education system in Turkey	P.C.2	1	0	10	0
Using medical academic words appropriately	P.C.2-P.S.13	1	1	10	6,7
Speaking	P.C.3-P.C.4-P.C.5- P.I.8 P.I.9-P.R.10- P.S.11-P.S.12-P.S.13-P.S.14- P.S.18- P.S.20-P.S.21-P.S.22-P.S.23-P.S.24- P.S.25	6	11	60	73,3
Expressing my feelings	P.C.3	1	0	10	0
Understanding spoken language	P.C.4	1	0	10	0
Understanding different accents	P.C.4-P.C.5	1	1	10	6,7
Remembering English medical words	P.C.4-P.S.11-P.S.15	1	2	10	13,3
Understanding academic words that are not related with my expertise	P.C.6	1	0	10	0
Writing	P.D.1	1	0	10	0
Lacking of knowledge regarding the culture of a foreign language	P.I.7	1	0	10	0
Listening	P.I.7	1	0	10	0
Reading	P.S.15-P.S.16	0	2	0	13,3
To identify my shortcomings, I need to do practice in real life but I did not	P.S.17	0	1	0	6,7
Difficult to practice [because] we have much more going on. Nine or ten classes in a term	P.S.19	0	1	0	6,7
7. Learning strategies					
Translating research articles	P.C.2-P.C.4-P.C.5	3	0	30	0
Reading novels in English	P.C.3-P.C.5	2	0	20	0
Watching movies in English	P.C.3	1	0	10	0
Learning vocabulary	P.C.5- P.S.13	1	1	10	6,7
Watching videos (patient-doctor)	P.C.6	1	0	10	0
Listening	P.C.6-P.S.15-P.S.21	1	2	10	13,3
Attending English courses	P.D.1	1	0	10	0

Reading research articles	P.D.1-P.C.6-P.R.10-P.S.18	3	1	30	6,7
Reading Turkish Daily news	P.I.7	1	0	10	0
Looking up the dictionaries for unknown words	P.I.7-P.S.11-P.S.25	1	2	10	13,3
Underlying/highlighting important words/fixed phrases	P.I.8-P.S.11-P.S.12	1	2	10	13,3
Writing	P.I.8-P.I.9P.S.12-P.S.17	2	2	20	13,3
Repeating	P.S.13-P.S.16-P.S.20	0	3	0	20
Learning English words with their Turkish translation	P.S.14	0	1	0	6,7
Studying in groups with my classmates	P.S.15	0	1	0	6,7
Guessing strategy when there are unknown words	P.S.18-P.S.23-P.S.24	0	3	0	20
Associating words with events	P.I.7-P.S.18	1	1	10	6,7
Seeing the word in another context remember better	P.S.19	0	1	0	6,7
Visiting medical websites	P.S.22	0	1	0	6,7
Learning derivations of the words	P.S.24	0	1	0	6,7
8. Instructors' roles					
Teaching English in a way that students love English	P.C.2-P.S.15	1	1	10	6,7
Giving information regarding medicine in Turkish	P.C.2	1	0	10	0
Attracting students' attention	P.C.3	1	0	10	0
Being positive	P.C.4	1	0	10	0
Encouraging students	P.D.1-P.C.4-P.I.7-P.S.11-P.S.20-P.S.23	3	3	30	20
Being friendly	P.C.5	1	0	10	0
Being a good model	P.C.6	1	0	10	0
Describing the steps students will experience in the future	P.C.6-P.I.8	2	0	20	0
Explaining the benefits of learning English to medical students (both in daily	P.I.7-P.S.12	1	1	10	6,7

and professional life)					
Training students with some learning strategies	P.I.8	1	0	10	0
Being supportive	P.S.11-P.S.20-P.S.21-P.S.23	0	4	0	26,7
Being idealist	P.S.11	0	1	0	6,7
Providing opportunities for medical students to talk to foreigners	P.S.14	0	1	0	6,7
Relaxing students about course examination	P.S.12	0	1	0	6,7
Coming to the classroom with preparation	P.S.13	0	1	0	6,7
Planning the course considering students' aims, wants and behaviour	P.S.13	0	1	0	6,7
Being punctual	P.S.13	0	1	0	6,7
Teaching effectively	P.S.16	0	1	0	6,7
Having positive attitude	P.S.19-P.S.20	0	2	0	13,3
Being passionate	P.S.19	0	1	0	6,7
Affecting my decision to attend the course regularly or not	P.S.21	0	1	0	6,7
Being ready to teach if I am ready to learn	P.S.22	0	1	0	6,7
Overcoming students' bias (negative attitude towards English)	P.S.24	0	1	0	6,7
Integrating students into courses	P.S.25	0	1	0	6,7
If the student loves the teacher, s(h)e loves the course, too	P.S.17-P.S.18	0	2	0	13,3
9. Opinions and feelings about learning English					
Positive attitude towards English	P.C.2- P.C.4-P.S.13- P.S.15-P.S.16- P.S.17-P.S.18-P.S.19- P.S.20-P.S.21- P.S.22-P.S.23-P.S.24-P.S.25	2	11	20	73,3
A must	P.D.1-P.C.3-P.C.6- P.S.11-P.S.12- P.S.14-P.S.15-P.S.21-P.S.22-P.S.24	3	7	30	46,7
The language of science	P.C.3	1	0	10	0

Positive contribution to our life	P.C.4	1	0	10	0
Enjoyable	P.C.4	1	0	10	0
Learning English is lifelong learning	P.C.5	1	0	10	0
Universal	P.D.1-P.C.5-P.I.7-P.I.9-P.S.18-P.S.21	4	2	40	13,3
Significant to keep up with the recent developments	P.D.1-P.I.7	2	0	20	0
Making a positive contribution to our life	P.I.7-P.I.8	2	0	20	0
When I have difficulty in understanding the texts, I get bored	P.S.16	0	1	0	6,7
It is great to understand music and movies in English	P.S.18	0	1	0	6,7
10. Additional					
Different intelligence types affect learning	P.C.2	1	0	10	0
Learning a language is an individual effort	P.C.2	1	0	10	0
There are a lot of opportunities to learn English	P.C.3	1	0	10	0
The responsibility of material preparation belongs to the teacher	P.C.5	1	0	10	0
Everybody should learn English	P.D.1	1	0	10	0
Motivating the students to learn English	P.I.7	1	0	10	0
English is significant to follow the medical literature	P.I.8	1	0	10	0
Speaking must be emphasized in the programmes	P.I.8	1	0	10	0
Students are lack of motivation	P.I.9	1	0	10	0
Doing practise [i.e. speaking] is important in English	P.R.10	1	0	10	0
Students should benefit from each opportunity to speak to the people from other countries	P.R.10	1	0	10	0
Listening should be accompanied by	P.S.11	0	1	0	6,7

video					
Dialogues such as patient-doctor should be taught	P.S.14	0	1	0	6,7
There must be a sparkle in the students to learn English	P.S.15	0	1	0	6,7
After taking Medical English course, my confidence on my ability in English increased	P.S.17	0	1	0	6,7
Being a prominent doctor	P.S.18	0	1	0	6,7
So far I am content with what we have studied	P.S.19	0	1	0	6,7
All the lecturers should come together and prepare the curriculum considering our needs and shortcomings	P.S.20	0	1	0	6,7
Videos, movies and music also should be used in the classroom	P.S.21	0	1	0	6,7
Some documents from the news should be added	P.S.22	0	1	0	6,7
The teachers must put as much effort as possible to make the course less exam oriented	P.S.23	0	1	0	6,7
There must be an hour to read medical research articles	P.S.24	0	1	0	6,7
University should put more effort to create opportunities that help us improve medical English	P.S.25	0	1	0	6,7

ÖZGEÇMİŞ

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Aldığı Ödüller

Kompozisyon yazma ödülü-Kültür ve Turizm Bakanlığı-Türkiye İkinciliği (1998)
Kompozisyon yazma ödülü-Uludağ Üniversitesi- İkincilik ödülü (1998)
Kompozisyon yazma ödülü-Uludağ Üniversitesi- Birincilik ödülü (2000)

Yurt dışı katıldığı projeler

1. AB projesi: Network for Intercultural Dialogue and Education (Proje Asistanı)
2. Effective English Language Teaching in Europe Language Education and Culture for Teachers of English as a Foreign Language (Llangollen/İngiltere-Hizmetiçi Eğitim)

Yurt içi ve yurt dışı bilimsel sunumlar

1. Onder, N. (2012). Compiling a written corpus of English as an academic lingua franca: Medical research articles of Turkish academics. *5th International Conference of English as a Lingua Franca*. Bogazici University, Turkey.
2. Onder, N. (2012). Who should teach Medical English: A content teacher or an ESP practitioner? *International symposium on language and communication: Research Trends and Challenges*. Ege University, Turkey.
3. Onder, N.(2011). An action research plan to teach Medical English terminology. *45th IATEFL Conference and Exhibition*, Brighton, UK.
4. Onder, N. (2011). ESP teachers'/practitioners' roles in light of empirical studies. *English Language Teaching Connections Conference*, Leeds Metropolitan University, UK (Guest Speaker).
5. Onder, N. (2011). An integration of corpus-based and genre-based approaches in EAP: National English examinations in Turkey. *7th LangUE 2011 Postgraduate Conference*. University of Essex, UK.
6. Onder, N.(2011). Research article abstracts in applied linguistics: An intra-disciplinary study. *8th METU International Postgraduate Conference on Linguistics and Language Teaching*. METU, Turkey.
7. Onder, N.(2010). Identifying the EAP needs of medical students. *IATEFL ESP/EAP SIG Conferences: EAP in University Settings: Teacher and Learner Competencies*. Bilkent University, Turkey.