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COMMON LANGUAGE NEEDS OF EFL LEARNERS ACROSS DISCIPLINES
AND LEVELS OF EDUCATION

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DECLARATION OF ORIGINALITY

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ABSTRACT

COMMON LANGUAGE NEEDS OF EFL LEARNERS ACROSS DISCIPLINES AND LEVELS OF EDUCATION

English for Specific Purposes (ESP) research and practices have been the subject of several controversial issues. One of these issues is ESP course design, which has been approached from two perspectives: narrow-angled and wide-angled. The former refers to designing ESP courses for a group of learners with highly discipline-specific content, while the latter advocates for ESP courses for learners from various disciplines with common needs (Basturkmen, 2003). The Common Language Hypothesis is also part of the ESP course design debates, which argues that there is a common core language across different academic disciplines that should be prioritized in ESP instruction (Farhady et al., 2018). Closely related to these issues, the relationship between ESP and EGP has also been a matter of discussion in ESP research. While some researchers drew a clear line between the two, others focused on the similarities (Karimkhanliu, 2005; Popescu, 2010) and discussed the common core language between English for General Purposes (EGP) and ESP (e Haq, Shah, Bilal, and Qasim, 2012). Lastly, there are two opposing views regarding the need for an EGP level threshold for ESP classes, which is not independent of ESP course design and common core language. Thus, the present study addressed these controversial issues in ESP. More specifically, it analyzed the common and different ELT objectives across three instructional levels: high schools, preparatory programs, and ESP programs. A common set of ELT objectives across these three instructional levels was identified through document analysis. Additionally, the exclusive objectives for each level were also determined. This study also conducted a comprehensive common EAP needs analysis of learners from three different macro disciplines, Technology, Physical Sciences, and Social Sciences, and EOP needs of

professionals working in different fields. A questionnaire was developed to administer to undergraduate students, and data was collected through semi-structured interviews and graphic elicitation tasks from the ESP teachers and employees. The needs analysis findings revealed a set of common EAP needs of students from different disciplines and a set of common EOP needs of employees from different fields, which showed congruence with the wide-angled perspective. Furthermore, the common ESP needs analysis results were incorporated with the findings of different ELT level objective analyses, and the common core language between ESP and EGP was identified, which was suggested to be taught at the first level of EGP instruction. Based on the analyses, a hierarchical pyramid for the objectives of the following successive ELT levels was suggested. These analyses also showed a need for an EGP level threshold before the ESP classes, which was supported by ESP learners, teachers, and employees.

Keywords: English for Specific Purposes, English for General Purposes, Course Design, Wide-angled Perspective, Narrow-angled Perspective, Common Core Language, Language Level Threshold

ÖZET

FARKLI DİSİPLİN VE ÖĞRETİM KADEMELERİNDEKİ İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRENENLERİN ORTAK DİL İHTİYAÇLARI

Özel Amaçlı İngilizcenin (ÖAİ) ortaya çıkışından bu yana, ÖAİ araştırma ve uygulamalarında birçok tartışmalı konu olmuştur. ÖAİ dersi tasarımı bu konulardan biridir ve konuyla ilgili literatürde iki bakış açısı hâkim olmuştur: dar açılı ve geniş açılı perspektifler. İlki, belli bir disipline özgü içeriğe sahip bir grup öğrenci için ÖAİ derslerinin tasarlanmasını ifade ederken, ikincisi, ortak ihtiyaçları olan çeşitli disiplinlerden öğrenciler için bir ÖAİ kursunun tasarlanmasını savunur (Baştürkmen, 2003). Farklı dil varyasyonlarında ortak çekirdek dilin varlığını savunan Ortak Dil Hipotezi de ÖAİ ders tasarımı tartışmalarının bir parçası olmuştur. Geniş açılı perspektifin savunucuları, farklı akademik disiplinler arasında ortak bir çekirdek dil olduğunu ve bu nedenle ÖAİ eğitiminde önceliğin buna verilmesi gerektiğini iddia etmektedirler (Farhady vd., 2018). Bu konularla yakından ilişkili olarak ÖAİ ve Genel Amaçlı İngilizce (GAİ) arasındaki ilişki de ÖAİ araştırmalarında tartışma konusu olmuştur. Bazı araştırmacılar ikisi arasında net bir çizgi çizerken, diğerleri benzerliklerine odaklanmış (Karimkhanliu, 2005; Popescu, 2010) ve GAİ ile ÖAİ arasındaki ortak çekirdek dilin varlığı üzerinde durmuşlardır (e Haq vd., 2012). Son olarak, ÖAİ dersleri için bir GAİ seviyesi eşiğinin gerekliliği konusunda iki karşıt görüş bulunmaktadır ve bu tartışma da ÖAİ ders tasarımından ve ortak çekirdek dil konularından bağımsız değildir. Bazı araştırmacılar, öğrencilerin ÖAİ'nin öğretiminden önce bir GAİ seviyesi eşiğine ihtiyaç duyduklarını düşünürken, diğerleri öğrencilerin bir ÖAİ seviyesi eşiğine ihtiyaç duymadan bu dersleri doğrudan öğrenmeye başlayabileceklerini savunmaktadırlar. Bu çalışma ÖAİ alanındaki bu çekişmeli konuları ele almıştır. Daha spesifik olarak belirtmek gerekirse, bu çalışma şu konular üzerinde durmuştur: üç öğretim aşaması olan lise, hazırlık ve ÖAİ programlarının ortak ve farklı İngiliz Dili Eğitimi (İDE) hedeflerini analiz etmiştir. Doküman analizi

aracılığıyla, bu üç öğretim aşamasında bulunan ortak İDE hedefler kümesi ve bunun yanı sıra, her öğretim aşamasına özgü olan hedefler belirlenmiştir. Bu çalışma ayrıca, Teknoloji, Fen Bilimleri ve Sosyal Bilimler olmak üzere 3 farklı makro disiplinden öğrencilerin kapsamlı bir ortak Akademik Amaçlı İngilizce (AAİ) ve farklı alanlardan çalışanların ortak Mesleki Amaçlı İngilizce (MAİ) ihtiyaç analizini gerçekleştirmiştir. Veri toplamak amacıyla, lisans öğrencilerine uygulanmak üzere bir anket geliştirilmiştir. Bunun yanı sıra, ÖAİ öğretmenleri ve çalışanlardan veri toplamak için yarı yapılandırılmış görüşmeler ve grafik çıkarım görevleri kullanılmıştır. İhtiyaç analizi bulguları, farklı disiplinlerden öğrencilerin bir takım ortak AAİ ihtiyaçlarının ve farklı iş alanlarındaki çalışanların da bir takım ortak MAİ ihtiyaçlarının olduğunu ortaya çıkarmıştır. Bu bulgular, geniş açılı perspektifle uyum göstermektedir. Ayrıca, ortak ÖAİ ihtiyaç analizinin sonuçları, farklı İDE seviyelerinin hedef analizlerinin bulgularıyla birleştirilmiş ve ÖAİ ile GAİ arasında ortak çekirdek dil saptanmış ve bu ortak çekirdek dilin GAİ'nin ilk seviyesi olan liselerde öğretilmesi önerilmiştir. Ayrıca analizlere dayalı olarak birbirini takip eden İDE seviyelerinin hedefleri için hiyerarşik bir piramit önerilmiştir. Son olarak, bu analizler ÖAİ derslerinden önce bir GAİ seviye eşiğine ihtiyaç olduğunu göstermiştir, bu da ÖAİ öğrencileri, öğretmenleri ve çalışanlar tarafından desteklenen bir öneridir.

Anahtar Kelimeler: Özel Amaçlı İngilizce, Genel Amaçlı İngilizce, Ders Tasarımı, Dar Açılı Perspektif, Geniş Açılı Perspektif, Ortak Çekirdek Dil, Dil Seviyesi Eşliği

DEDICATION

I dedicate this dissertation to people who have stood by me
and supported me throughout this process:

To my beloved family;
my parents, my sisters, my brothers, and my husband...
....and many friends.



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TABLE OF CONTENTS

DECLARATION OF ORIGINALITY	i
ABSTRACT	ii
ÖZET	iv
DEDICATION	vi
ACKNOWLEDGEMENTS	vii
TABLE OF CONTENTS	viii
LIST OF FIGURES	xi
LIST OF TABLES	xii
LIST OF APPENDICES	xiv
1. INTRODUCTION.....	1
1.1 Background to the Study	1
1.2 Statement of the Problem.....	4
1.3 The Purpose of the Study.....	6
1.4 Research Questions.....	7
1.5 Justification of the Study	8
1.6 Significance of the Study.....	8
2. REVIEW OF LITERATURE.....	10
2.1 ESP	10
2.1.1 Branches of ESP	11
2.1.2 EAP.....	13
2.1.3 EOP.....	13
2.2 Needs Analysis in ESP	14
2.2.1 ESP Needs Analysis Components	15
2.2.1.1 Present Situation Analysis	15
2.2.1.2 Target Situation Analysis	16
2.2.2 ESP Needs Analysis Models	16
2.3 ESP vs. EGP	17
2.4 Common Core Language and ESP	19
2.5 Narrow-Angled vs. Wide-angled Perspectives in ESP Course Design	21
2.5.1 The Role of ESP Teacher in Narrow and Wide-angled Perspectives.....	25
2.6 The Debates on EGP Threshold for ESP Instruction.....	27
2.7 Summary of Controversial and Interrelated Issues in ESP.....	29
3. METHOD.....	31
3.1 Participants	31

3.1.1 ESP learners.....	32
3.1.2 ESP Teachers.....	33
3.1.3 Professionals.....	34
3.2 Research Design	36
3.3 Instrumentation	38
3.3.1 Documents: Public Records.....	38
3.1.1.1 Document Analysis	39
3.1.1.2 ELT Objectives Data Analysis	40
3.3.2 Needs Analysis Instruments	41
3.3.2.1 Needs Analysis Framework of the Study	41
3.3.2.2 Stages of ESP Needs Analysis Questionnaire Development.....	43
3.3.2.2.1 Information from the review of the relevant literature review	43
3.3.2.2.2 Semi-structured Interviews.....	44
3.3.2.2.3 Focus Group Interviews.....	44
3.3.2.2.4 Individual Interviews.....	45
3.3.2.2.5 Crosscheck between the ESP Literature and the Findings of the Interviews	46
3.3.2.2.6 Chi-Square Analysis.....	46
3.3.2.3 Analyses of the ESP Needs Analysis Questionnaire	47
3.3.2.3.1 Pre-Piloting of the Questionnaire	47
3.3.2.3.2 Piloting Stage.....	47
3.3.2.3.4 Validity Factor Analysis of Piloted Version.....	48
EAP Part	48
EOP Part	51
3.3.2.3.5 Creation of the ESP Skills Model.....	54
3.3.2.3.5.1 The Detailed Process of Creation of the Model.....	56
3.3.2.3.6 Preparation of the Final Form of the Questionnaire for the Main Administration	57
3.3.2.3.7 The Main Administration of the Final Form of the Questionnaire.....	57
3.3.2.2.8 Reliability of the Final Form of the Questionnaire after the Main Administration	57
3.3.2.2.9 Validity of the Final Form of the Questionnaire after the Main Administration....	58
3.3.2.2.9.1 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EAP Part	58
3.3.2.2.9.2 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EOP Part.....	71
3.3.3 Qualitative Instruments: Semi-structured Interviews and Graphic Elicitation Tasks.....	81
3.3.3.1 Piloting the Interview Items and Graphic Elicitation Tasks	81
3.3.3.2 Main Administration of the Interviews and Graphic Elicitation Tasks	82
3.3.3.3 Confidentiality and Anonymity	83
3.3.3.4 Member checking	83

3.3.4 Qualitative Data Analysis: Coding and Analysis of the Interviews	83
3.3.4.1 Reliability of Qualitative Data Analysis.....	85
4. RESULTS.....	86
4.1 The Similarities and Differences of ELT Learning Objectives across High Schools, Preparatory Programs, and ESP Programs	86
4.1.1 Common Objectives Across Different ELT Levels.....	86
4.1.2 Common Objectives Across Skills	91
4.2 Common ESP Needs Across Three Macro Disciplines.....	96
4.2.1 Common EAP Needs.....	97
4.2.1.1 Common EAP Needs from the Perspectives of Students	97
4.2.1.2 Common EAP Needs from the Perspective of ESP Teachers	102
4.2.1.2.1 The Common EAP needs	102
4.2.1.3 The Common EAP Needs from the Perspective of Two Stakeholders: Students and ESP Teachers.....	111
4.2.1.4 Common EAP Needs Between Two Disciplines and EAP Needs Exclusive to Each Discipline.....	113
4.2.2 Common EOP Needs.....	113
4.2.2.1 Common EOP Needs from the Perspective of Students.....	113
4.2.2.2 Common EOP Needs from the Perspective of ESP Teachers	117
4.2.2.3 Common EOP Needs from the Perspective of the Workplace Experts	124
Common EOP Skills.....	125
4.2.2.5 Common ESP Needs Based on the Common EAP and EOP Needs	138
4.3 Common Core Language (Needs/Objectives)	140
4.4 Suggestion of Objectives for Educational Levels Based on the Objective and Needs Analysis	141
4.4.1 High Schools	141
4.4.2 Preparatory Programs	143
4.4.3 EAP Programs	143
4.4.4 EOP Programs	145
5 CONCLUSION	146
5.1 Overview of the Study	146
5.2 Discussion.....	148
5.3 Implications	160
5.4 Applications.....	163
5.5 Limitations	164
5.6 Suggestions for Further Research	165
REFERENCES	167
APPENDICES	180

LIST OF FIGURES

Figure 1. The Hierarchical Pyramid for the Objectives to be Set at Four Successive ELT Levels	159
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LIST OF TABLES

Table 1 Classification of ESP branches according to Basturkmen.....	12
Table 2 The differences between the narrow-angled and wide-angled perspectives	27
Table 3 Controversial and Interrelated Issues in ESP	30
Table 4 Macro Disciplines, Micro Disciplines, and Majors for Data Collection for Common ESP Needs Analysis	32
Table 5 Distribution of the Student as participants in the Needs Analysis Questionnaire.....	33
Table 6 Distribution of the ESP Teachers Interviewed for the Needs Analysis.....	34
Table 7 Distribution of the Degrees of the Workplace Experts Interviewed for the Needs Analysis	35
Table 8 The design of the present study	37
Table 9 The Setting of the 1 st Research Question.....	39
Table 10 The results of the ELT Objective Data Analysis	40
Table 11 Needs Analysis Framework of the Present Study	43
Table 12 The number of the Participants in the Focus Group and Individual Interviews.....	45
Table 13 Reliability of the piloted student needs analysis questionnaire	48
Table 14 Matching and Mismatching Items after the Piloting: EAP Part	50
Table 15 Matching and Mismatching Items after the Piloting: EOP Part	53
Table 16 Model for Categorization of ESP Skills (EAP/EOP)	55
Table 17 Reliability statistics for the main administration of the Student Common ESP Needs Analysis Questionnaire.....	57
Table 18 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EAP Part	59
Table 19 Item-by-item Analysis for the EAP Part of the Student Questionnaire.....	61
Table 20 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EOP Part	71
Table 21 Item-by-item Analysis for the EOP Part of the Student Questionnaire.....	72
Table 22 A part of the codebook developed for the present study	84
Table 23 Common Objectives Across 3 Levels: ESP, Prep, High Schools (The Core Language Features)	87
Table 24 Common Objectives Across ESP and Preparatory Programs	88
Table 25 Common Objectives Across ESP Programs and High Schools	88
Table 26 Common Objectives Across Prep Programs and High Schools	89
Table 27 Objectives Exclusive to ESP	90
Table 28 Objectives Exclusive to Preparatory Programs	91
Table 29 Objectives Exclusive to High Schools.....	91
Table 30 Common objectives across all language skills	92
Table 31 Common objectives across Reading, Listening, and Speaking	92
Table 32 Common Objectives Across Reading, Writing, and Speaking.....	93
Table 33 Common objectives across two skills: Reading and Listening	93
Table 34 Common objectives across two levels: Speaking and Listening.....	94
Table 35 Common objectives across two levels: Reading and Writing	94
Table 36 Objectives Exclusive to Listening	95
Table 37 Objectives Exclusive to Speaking	95
Table 38 Objectives Exclusive to Reading.....	96

Table 39 Objectives Exclusive to Writing.....	96
Table 40 Frequency of the Answers to the Options Sufficiently and A Lot by Students from Three Macro Disciplines to the EAP Part	98
Table 41 Common EAP Needs from the Perspective of Students and ESP Teachers	111
Table 42 Common EAP Needs Between Two Disciplines: Technology and Social Sciences	113
Table 43 Frequency of the Answers to the Options Sufficiently and A Lot by Students from Three Macro Disciplines to the EOP Part	114
Table 44 Common EOP Needs from the Perspective of Three Stakeholders: Students, ESP Teachers, and Employees	137
Table 45 Common ESP Needs Based on the Common EAP and EOP Needs	139
Table 46 Common Core Language Based on the Common Objectives across Different ELT Levels and Common ESP Needs across Different Disciplines	140
Table 47 ELT Objectives Suggested for the High School Level.....	142
Table 48 ELT Objectives Suggested for the Preparatory Programs.....	143
Table 49 ELT Objectives for the EAP Programs	144
Table 50 ELT Objectives for the EOP Programs	145
Table 51 The Issues the Present Study Focused on and the Findings	148
Table 52 Lists of Commonalities of the ELT Objectives Across Educational Levels and ESP Needs Across Macro Disciplines	149

LIST OF APPENDICES

Appendix A : The taxonomy ESP skills, sub-skills/study skills/strategies based on the Literature	180
Appendix B : Categorization of the Findings of the Focus Group Interviews.....	186
Appendix C: Categorization of the Findings of the Individual Interviews	189
Appendix D : The Chi-square analysis of three sources: Literature, Individual Interviews and Focus Group Interviews	194
Appendix E The Factor Analysis of the Piloted Student ESP Needs Analysis Questionnaire: EAP Part.....	198
Appendix F The Factor Analysis of the Piloted Student ESP Needs Analysis Questionnaire: EOP Part.....	201
Appendix G Categorization of EAP/EOP skills and sub-skills based on the relevant literature, qualitative interviews, and the factor analysis results of the piloted questionnaire	204
Appendix H The Student Common Needs Analysis Questionnaire.....	209
Appendix I: Interview Protocols	215
Appendix J Common EAP Needs Across Three Disciplines: Technology Physical Sciences, Social Sciences.....	223
Appendix K: Themes, Sub-themes, and Codes Emerged from the PSA Part of the ESP Teacher Interviews	225
Appendix L: Common EOP Needs Across Three Disciplines: Technology, Physical Sciences, Social Sciences.....	227
Appendix M: Themes, Sub-themes, and Codes Emerged from the TSA Part of the ESP Teacher Interviews	229
Appendix N : Themes, Sub-themes, and Codes Emerged from the Interviews with Workplace Experts on the Occupational English Needs	231

1. INTRODUCTION

1.1 Background to the Study

English for Specific Purposes (ESP) has become increasingly important since the 1960s due to three main factors: the demands of the modern world, changes in linguistics, and learner-centered teaching (Hutchinson & Waters, 1987). With the emergence of fast-developing technology, science, and economy, there was a need for an international language. Additionally, the revolution in linguistics led to a shift towards teaching English based on the needs of learners for specific purposes. Finally, learner-centered instruction gained importance, with a focus on learners' experience, motivation, needs, and interests, resulting in new English language learning and teaching practices with ESP. Since its inception, ESP has been a dynamic area of research, focusing on teaching specific skills (Day & Krzanowski, 2011), and finding ways to meet the needs of learners (Kirkgoz & Dikilitas, 2018). The ESP course design has also been of interest to research. Two main trends have emerged in this regard: narrow-angled and wide-angled perspectives. While the former advocates designing ESP courses for learners of the same discipline with nearly the exact needs, the latter argues for designing a course for learners from different disciplines, assuming those learners have common ESP needs (Basturkmen, 2003; Nhã, 2015). Based on the narrow-angled approach, highly specified ESP course design became popular in the 60s and 70s, and many studies were conducted in that direction. In the 80s, however, when the wide-angled approach became prominent, it was criticized sharply by the narrow-angled advocates. They discussed this tendency on the grounds of the lack of funding and the unwillingness of higher education institutions to provide adequate funding for the relevant resources (Ferris, 2001; Hyland, 2002). On the other hand, scholars who advocated that the ESP course design should be made according to the wide-angled approach did not hesitate to present their criticisms

against narrow-angled thinking and their reasons for it being wide-angled. Among the many criticisms that have been directed against narrow-angled, the most important one has been that the narrow-angled course design approach limits language and, therefore, offers a restricted language to students; in this case, the emergence of language training rather than language education occurs (Widdowson, 1983; Basturkmen, 2003). Common Language Hypothesis has also been a part of these debates, suggesting the presence of common linguistic features in many varieties. Concerning ESP, it is claimed that there are language elements and skills that are common to different academic skills and professional fields. Thus, regardless of the discipline or occupational field of the learners, first, the common core of the language should be acquired by the learners (Farhady et al., 2018). Another issue closely connected to these discussions is the EGP and ESP relationship. While some researchers state that there is a significant difference between EGP and ESP (Boston, 2016), others express their doubts about this difference and draw attention to the similarities between the two (Bernard & Zemach, 2003; e Haq et al., 2012; Karimkhanliu, 2005). Finally, the debate about whether there should be a General English (GE) threshold for ESP instruction is another issue that is not independent of all the above discussions. While some scholars argue that ESP instruction can start at a beginner level (Dudley-Evans & St John, 1998; Mangiante, 2017 as cited in Cedric, 2021; Tarnopolsky, 2013), others state that GE instruction should be given before teaching ESP (Hutchinson & Waters, 1987; Stojković, 2020).

In Turkey, where English is taught as a foreign language, English language teaching (ELT) starts in primary schools. Moreover, before studying at the undergraduate level, most of the universities in Turkey offer one-year preparatory programs. These programs are designed to instruct students before they start studying in their departments. They are offered mostly in cases where the language of instruction is English (EMI) or Turkish-English (T-EMI). Furthermore, general English courses are offered in departments where the medium of

instruction is Turkish (TMI). The ELT at the tertiary level shifts into EAP as an obligatory course, and then EOP courses are offered as elective courses. The types of English teaching in Turkey can be listed as follows: EGP, EGAP, Mixed EGP-EGAP, ESAP, and EOP. The ELT curriculum at primary, secondary, and high school levels is standardized by the Ministry of National Education (MoNE). However, preparatory and ESP programs are offered at the tertiary level, and they are designed locally by each university. In the study by Kırkgöz (2009), 93% of the participants stated that there was a gap between the English preparatory programs and the requirements of the courses they took while studying in their disciplines. Based on her findings, Kırkgöz (2009) suggests the need for comprehensive research in EAP course design. Thus, one of the aims of this study is to identify similar and different ELT objectives across the three successive levels: high schools, preparatory programs, and ESP programs.

Since 1987, ESP-based studies have been in the interest of researchers in Turkey. Although several studies focused on needs analysis and course/syllabus design (Akbaş, 2021), no study was conducted in line with the wide-angled course design approach. In other words, no study attempted to identify the common needs across different disciplines. Today, the debates on the wide-angled and narrow-angled course design continue, and further research on wide-angled course design is needed (Basturkmen, 2003). Thus, another aim of this study is to analyze the common ESP needs across three different macro disciplines. The aim is to see whether there is a common core of needs across different disciplines (Farhady, 2008).

Lastly, concerning the core language and wide-angled vs. narrow-angled debates, this study aspires to find the best English language proficiency level as a threshold to start ESP instruction from the perspectives of ESP stakeholders: ESP learners, ESP teachers and employees.

1.2 Statement of the Problem

Since its emergence, ESP has had different views and research trends, both within itself and regarding its relationship with the EGP. These issues have also led to different practices related to ESP. One of these views and practices concerns ESP course design, and there are two different dominant views on it: narrow-angled and wide-angled course design perspectives (Basturkmen, 2003; Belcher, 2006; Farhady, 1994; Ferris, 2001; Hyland, 2003; Hyland, 2007; Li & Huo, 2014; Paltridge, 2009). Narrow-angled course design perspective advocates designing ESP courses for homogeneous student groups with very similar or common needs and teaching highly specialized content to that group of students in ESP classes, while wide-angled thinking suggests designing a common ESP course by focusing on the similar needs of heterogeneous groups (Basturkmen, 2003; Paltridge, 2009; Thanh Nhã, 2015). Today, the narrow-angled ESP course design approach is still widely adopted in ESP research and practice. However, wide-angled proponents have expressed their concerns and criticisms on this view and practice: The Narrow-angled perspective will teach the students a limited language and, therefore, will be training rather than teaching. Besides, these superficial language structures will ignore common core grammatical structures and words, resulting in restricted language training. It will further be impractical, put a huge burden on ESP practitioners, and will not provide learners the ability to reach the ever-changing knowledge (Anthony, 2011; Dovey, 2006; Widdowson, 1983). The common core language, closely related to the issue where these two perspectives cannot reconcile, is also a matter of discussion between two different views in ESP research. In line with the view advocated by the wide-angled perspective, there is a debate among researchers regarding the existence of common core language across various academic disciplines, and the instruction of this common core language is suggested before the discipline-specific language (Coxhead & Nation, 2001; Farhady, 2018; Wood, 2001). There is a further topic of discussion that is not

independent of the course design perspectives and common core language discussions: the relationship between ESP and EGP. While some researchers argue that EGP and ESP are different from each other and they draw a clear line between the two (Boston, 2016), others highlight the blurriness of that line and emphasize the commonalities between the two (Bernard & Zemach, 2003; e Haq et al., 2012; Karimkhanliu, 2005). Finally, another controversial issue closely linked to these discussions concerns whether there should be an EGP level threshold for starting ESP lessons. As in the previous issues, there are two different views. One of them argues that there is no need for a certain EGP proficiency level to start ESP lessons, so the students can start taking ESP classes directly, while the other argues that there should be an EGP level threshold before starting ESP learning (Dudley-Evans, 1998; Hutchinson & Waters, 1987; Mangiante, 2017 as cited in Cedric, 2021; Stojković, 2020; Tarnopolsky, 2013). As mentioned earlier, these issues related to ESP and EGP are not independent; on the contrary, they are closely related. Adopting a narrow-angled approach to ESP course design, rejecting the existence of common core language across different disciplines, ignoring the relationship between ESP and EGP, and suggesting that ESP language education be started without an EGP threshold would result in problems in terms of language proficiency. These problems can be listed as being exposed to limited language proficiency and not being fully competent in the language, as well as other problems such as practicality, economic problems, placing burdens on the ESP teacher, and preventing students from catching up with the ever-changing world of knowledge.

Thus, this study will first analyze the objectives of EGP and ESP programs, namely high schools, preparatory programs, and ESP programs in Turkey, to gain insight into the relationship between EGP and ESP. As a result of this analysis, it will attempt to identify the common core language between ESP and EGP. Additionally, it will explore the common ESP needs of students studying in different academic disciplines and professionals working in

different occupational fields. As a result, the common needs of ESP learners will be identified, and it will be determined whether it will be suitable for a wide-angled course design. The present study will further reveal whether these different academic disciplines and fields of study will have a common core language. Finally, whether an EGP level threshold is needed for ESP classes will be discussed.

Comprehensive research on these issues will pave the way for more efficient language teaching in EGP and ESP. It will benefit learners, institutions, practitioners, curriculum, and material developers. For instance, a comprehensive study in the Iranian context (Farhady, 2008) provides an essential source for EAP material development, supporting a wide-angled approach to ESP course design. Thus, conducting such a study will shed light on the ESP and EGP course design in Turkey.

This study will have benefits for future research as well. The instrument developed for this study can be adopted or adapted for research in other countries. In ESP teaching and research, topics such as course design perspective, the relationship between ESP and EGP, the common core notion, and the EGP level threshold before ESP classes are world-wide controversial issues. Thus, using the instrument developed for this research will also be helpful in other contexts.

1.3 The Purpose of the Study

ESP course design, and thus material development, has been the subject of research since the birth of ESP, and different perspectives and practices have emerged. Among these, the narrow-angled perspective was dominant, especially in the 70s, and it still shows its effect today. However, studies have shown that a narrow-angled approach is costly, more complicated, and, most importantly, poses some problems in language instruction. The wide-angled perspective, however, will provide complete language learning and will be more

practical, economical, and teacher-friendly, and better prepare students for the professional world.

Contrary to what narrow-angled ESP course design claims, there is a common core language of different academic disciplines and fields of occupation. Rather than designing a separate course for each discipline, identifying and teaching this common core language would be more beneficial. Additionally, contrary to the claims that there is no need for an EGP level threshold to start ESP classes and that one can directly receive ESP courses, it is important to argue that an EGP level is crucial before ESP instruction. This EGP level will act as a common core language to be learned before the discipline-specific ESP courses, which points to the similarity between EGP and ESP.

As a result, the main purpose of this study is to identify the similarity of language needs and objectives between different academic disciplines and fields of occupation, on the one hand, and to find a common core language by identifying the commonality between EGP and ESP programs, on the other hand. It will further attempt to identify whether there is a need for an EGP level threshold before the ESP classes or not, and if there is, it will identify that EGP level.

1.4 Research Questions

Based on the purposes mentioned above, this study aims to find answers to the following research questions:

1. What are similar and different ELT objectives across high schools, preparatory programs, and ESP programs?
2. What are the common needs of ESP learners across different academic disciplines and the ones across different fields of occupation?

3. What would be the most appropriate level of language ability in EGP that would enable ESP students to continue their ESP instruction from the perspectives of various stakeholders?

1.5 Justification of the Study

There has been an ongoing debate about the connection between EGP (English for General Purposes) and ESP. However, there are very few studies that focus on the common language between the two. To the best of our knowledge, no research has yet attempted to analyze the common objectives across different ELT levels in Turkey. Furthermore, even though the design of the ESP course has been a controversial topic in the field, few studies have attempted to conduct a comprehensive ESP needs analysis to provide suggestions on the matter. Additionally, Basturkmen (2003) suggested the need for a wide-angled course design, which has been a part of the ongoing discussions. Concerning it, Farhady (2007) conducted a comprehensive common EAP (English for Academic Purposes) needs analysis in the tertiary settings in Iran and came up with significant findings that support the wide-angled ESP course design perspective. However, no studies have attempted to identify the common needs of ESP learners at the tertiary level in Turkey. Additionally, while most ESP-related studies focused on learners' academic needs, very few studies examined the occupational needs of employees in Turkey. Finally, there is a need for an EGP level threshold to start ESP classes, and this has been a subject of discussion in the ESP literature and practice. Nevertheless, very few studies have sought the opinions of three critical stakeholders related to the issue: learners, teachers, and employees.

1.6 Significance of the Study

Determining common learning objectives across disciplines is of significance in moderating the language to be taught. It would make important contributions to the instruction of English Language Teaching (ELT). Similarly, suggesting ELT objectives for each

instructional level based on the similarities and differences across those levels is important for ELT education.

It is also essential to analyze whether common ESP needs exist across different academic disciplines. Identifying significant commonalities across disciplines would provide guidelines for instructing common ESP skills. This, in turn, would offer several advantages for ESP instruction, such as making it more effective, practical, and economical.

Finally, there are two different perspectives on whether there should be an EGP level threshold before ESP instruction. The three critical stakeholders of ESP instruction are learners, ESP teachers, and employees. Therefore, it's crucial to investigate the opinions of these important stakeholders on whether an EGP level threshold is necessary to succeed in ESP.

2. REVIEW OF LITERATURE

This chapter aims to comprehensively review the relevant literature in six sections. The concept of ESP and its branches are defined in the first section. Next, the Needs Analysis and its importance in ESP course design are discussed, and the Needs Analysis models are presented. Then, the relationship between ESP and EGP is explored. Afterward, the common core notion is defined. Furthermore, wide-angled and narrow-angled approaches concerning ESP course design in literature are reviewed. Finally, the debates on the GE threshold for ESP instruction are presented.

2.1 ESP

The advances in science, technology, and business and the use of an international language in these areas led to a rise in the number of international students studying in English-speaking countries and the tertiary institutions in non-English speaking countries where English is used as a medium of instruction. When the general English language programs fell short of meeting the specific needs of these students in the new world order, a new approach, ESP, emerged in the 1960s to cater to the learners' language needs.

According to Belcher (2006), ESP is an approach in progress with two essential features: purpose-driven and problem-solving. This approach takes the purposes and interests of students or their motivation for learning English (Dudley-Evans & St. John, 2001). Paltridge and Starfield (2013) define ESP as English instruction as a second or foreign language where learners aim to use it in a specific domain. Concerning the goals of the learners, Li and Huo (2014) assert those goals to be identified with a needs analysis, an important aspect of ESP. The other aspect they argue is the cooperation of ESP practitioners and specialty experts (Li & Huo, 2014). The definition by Dashtestani and Stojković (2016) also focuses on the characteristics of needs-based instruction as well as being learner-

centered. Similarly, Wingate (2022) states that since its emergence, the essential principle of ESP has been tailoring language instruction to the learners' needs and their specific settings. Furthermore, Nunan (2004), who also focuses on the needs of learners, states that the emergence of a needs-based approach was triggered by the insight that saw language as a means of communication, not a set of structures. A learner does not need to learn everything in a language but rather the items she or he will need in the context where the language will be used. For instance, someone who plans to travel abroad for touristic purposes does not have to learn the same English as an engineer who works at an international company.

Therefore, ESP is a learner-centered approach concerning itself English instruction based on the main factor of the special needs and aims of learners. The new world order, such as technological, scientific, and commercial development, linguistic changes, and learner-centered instruction indeed shape these factors.

2.1.1 Branches of ESP

Several scholars presented different classifications of ESP. Among them, one of the most recent classifications was presented by Basturkmen (2015), which is presented below in Table 1:

Table 1

Classification of ESP branches according to Basturkmen

Branches	Sub Branches	Examples
English for Academic Purposes (EAP)	- English for General Academic Purposes (EGAP) - English for Specific Academic Purposes (ESAP)	English for academic writing English for law studies
English for Professional Purposes (EPP)	- English for General Professional Purposes (EGPP) - English for Specific Professional Purposes (ESPP)	English for the health care sector English for nursing
English for Occupational Purposes (EOP)	- English for General Occupational Purposes (EGOP) - English for Specific Occupational Purposes (ESOP)	English for the hospitality industry English for hotel Receptionists

Source: Basturkmen, 2015:6

According to Basturkmen's (2015) classification, ESP has three branches with sub-branches categorized under them. First, there is EAP, whose sub-branches are English for General Academic Purposes (EGAP) and English for Specific Academic Purposes (ESAP). The second branch is English for Professional Purposes (EPP), and the sub-branches are English for General Professional Purposes and English for Specific Professional Purposes. The last branch is English for Occupational Purposes, and the sub-branches are English for General Occupational Purposes and English for Specific Occupational Purposes. Each of the two sub-branches differs in specificity. While the ones that start with a "General" label refer to more common core elements that can be found across different disciplines, the ones labeled with "Specific" refer to the language elements and skills that are specific to one discipline.

2.1.2 EAP

When it emerged for the first time, EAP was called English for Educational Purposes, a term that is hardly used today. It is both the cause and effect of English having become the leading language in the academic sphere, which has affected the academic lives of students for whom it has become a must to master English in order to be able to study in their disciplines. Today, there is an increase in the number of students studying in countries where English is the first language and non-English speaking countries with English as a medium of instruction, which in turn led to an increase in demand for EAP (Liyanage & Birch, 2001). Dearden (2015) describes the demand for EMI as “a global growing phenomenon” (p.2), and Camiciottoli (2010) points out how this growth has increased the challenges the learners face in a foreign language and how it is related to the need for EAP and ESP at the tertiary level. Lastly, Marginson and van der Wende (2006) state that the internalization of education has led to the rise of EAP.

Scholars have proposed varying definitions of EAP. According to Wingate (2022), EAP is language study and language teaching that is centered on the specific communicative needs and practices of specific groups of learners in academic settings. In their work, Alexander et al. (2008) differentiate between EAP and EGP, pointing out that while EAP focuses on study and cognitive skills like critical thinking, EGP prioritizes language learning as the main objective, without giving much attention to these skills. Gillet (2012), on the other hand, disagrees with this sharp distinction and states that “EAP is often considered to be a branch of ELT. It is a type of ESP in that the teaching content is explicitly matched to the language, practices, and study needs of the learners” (p. 1).

2.1.3 EOP

EOP is another branch of ESP. While EAP prepares learners for their academic studies, EOP aims to instruct English so that learners can use it for their fields of

specialization in the professional context (Rautenbach et al., 2018). In general terms, it is the instruction of English for occupational purposes. Similar to internationalization in the academic sphere, globalization has also affected the internationalization of trade. Thus, like in the academic world, English has become the leading language in international trade, increasing English's importance in occupational settings.

One of the essential characteristics of EOP is being naturally learner-centered. While EOP teachers/practitioners are experts in the language to be taught, EOP learners are experts in their occupations. Thus, teachers consult “the course design tasks” with learners, creating a learner-centered approach (Rodriguez, 2006; p. 28). It can be said that similar to EAP and other areas of ESP, it is the needs that are the primary concern of EOP. Therefore, EOP courses are designed based on learners’ occupational needs.

Like EAP, EOP also differs from EGP in terms of its focus. As mentioned before, the main focus of EOP is the needs of learners specific to their occupational context. Thus, the courses are designed based on those specific needs (Friedenberg et al., 2003)

Concerning the materials used in EOP, they can be developed either by the teacher of the course or EOP learners. While novice EOP teachers can benefit from available materials, experienced ones can develop them in cooperation with and based on the needs of their learners (Rodriguez, 2006).

2.2 Needs Analysis in ESP

Needs analysis is considered a crucial contribution of ESP to the ELT world. It guides ESP teachers to gain insight into the needs of their learners, so it is argued in the literature that one of the main criteria for the success of ESP teachers is the identification of students' needs (Alsamadani, 2017; Cowling, 2007; Taillefer, 2007). Similarly, Otilia (2015) states that needs

analysis is the basis for creating educational materials, methods, and content that can promote greater student achievement and motivation.

Needs analysis is a process that needs to be done before designing a syllabus and planning a language instruction program, material development and selection, identifying the appropriate methodology, and evaluation process. Hyland (2012) highlights how important it is as it "can be used to measure students' needs with "precision and accountability" (p. 12). Furthermore, a needs analysis should be carried out to revise and see the objectives' effectiveness and the course design's effectiveness (Basturkmen, 2015; Richards, 2017). All these statements show the crucial role needs analysis plays in ESP course design.

In the ESP context, needs analysis is vital for identifying language aspects that are important for the learners. For identifying that language, there are several sources for ESP needs analysis, such as students, former students, workplace people, co-workers and employers, customers, field-related documents, and ESP-related studies (Dudley-Evans & St John, 1998). Furthermore, several ways can be adopted to conduct a needs analysis, such as questionnaires, interviews, observations, assessments, discussions, and so forth (Hutchinson & Waters, 1987; Robinson, 1991; Dudley-Evans & St John, 1998).

2.2.1 ESP Needs Analysis Components

Early definitions of ESP needs analysis had fewer components and were considered simpler. However, the modern ones have more components and are therefore considered more sophisticated (Basturkmen, 2015). Among these components, Target Situation Analysis (TSA) and Present Situation Analysis (PSA) are considered fundamental.

2.2.1.1 Present Situation Analysis

As per Dudley-Evans & St. John's (1998) research, PSA aims to assess the language, skills, and learning experience of learners in order to identify their strengths and weaknesses

(p.124). Brown (2016) also asserts that PSA evaluates the ESP abilities of learners at the start of their language learning journey.

2.2.1.2 Target Situation Analysis

TSA focuses on the language needs of ESP learners in the academic or occupational context (West, 1994). According to Robinson, TSA is the needs analysis that centers on the needs of learners at the end of a language course. Moreover, Dudley-Evans & St. John (1998, p.124) state, "TSA refers to task and activities learners are/will be using English for target situation."

2.2.2 ESP Needs Analysis Models

Exploring the ESP needs analysis literature, several needs analysis models can be found, such as the ones by Munby (1978), McDonough (1984), Hutchinson & Waters (1987), Robinson (1991), West (1994), Jordan (1997) and Dudley-Evans & St. John (1998). The common primary purpose of all these models is to analyze the needs of ESP learners. However, they show a difference in the “focus of needs analysis, the data analysis, and the development of the training program in the context of ESP” (Rahman, 2015, p.28). Among these models, the Communicative Syllabus Design by Munby (1978) is the earliest one, and its main focus is designing a communicative syllabus. However, there have been criticisms against this model based on different aspects. These criticisms include not collecting data from different perspectives, such as learners, teachers, and employees (Ferris, 1998); not being flexible, time-effective, and simple for the sake of being systematic and comprehensive; not prioritizing practicality and not choosing authentic language items (Jordan, 1997).

The following needs analysis model was suggested by McDonough (1984), which comprises an integrated procedure that puts the learners in the center of the system. Furthermore, in this model, needs are defined as changing rather than static. Lastly, it

considers the opinions of different standpoints, a lacking aspect that was criticized in Munby's (1978) model. However, this model is criticized for not focusing on learning needs but only considering target and present needs.

The model proposed by Hutchinson and Waters (1987) has three main components: target needs, present needs, and learning needs. Nevertheless, it has also been criticized because of a lack of means analysis, linguistic analysis, discourse analysis, and genre analysis, aspects that are given importance by Dudley-Evans & St John (1998).

One of the most recent models was suggested by Dudley-Evans & and St John (1998), which is considered the most comprehensive model of all. It centers upon eight main aspects: learners' professional information, learners' personal information, learners' language information about the target situations, learners' lacks, learners' needs from the course, language learning needs, communication information in the target situation, and environmental information.

2.3 ESP vs. EGP

EGP and ESP are claimed to be two broad branches of ELT. As mentioned above, ESP emerged to cater to the specific needs of learners in the 1960s. Since then, it has been asserted to be growing independently of EGP. Several differences and similarities between ESP and EGP are claimed by the researchers:

According to Basturkmen (2015), with a focus on the learners' needs analysis, ESP courses are narrower than general English courses. In this respect, EGP is described as a top-down process while ESP is seen as a bottom-up as in the latter, the ESP practitioners would give priority to the needs of learners over other issues (Boston, 2016).

Holme (1996) states that "all sensible course designers must begin by trying to assess students' specific needs. ESP is simply a narrowing of this needs spectrum" (p 3-4). Thus,

contrary to the claims that the needs of learners distinguish ESP from EGP, according to Holme (1996), it is the specification of those needs in ESP that makes it different from EGP. Concerning the difference between the two, Basturkmen (2006) asserts that the EGP instruction starts from a definite point and continues to an indefinite point. Conversely, ESP leads learners to a definite endpoint, aiming them to reach specific objectives. With respect to this argument, she suggests, “The emphasis in ESP on going from A to B in the most time- and energy-efficient manner can lead to the view that ESP is an essentially practical endeavor” (Basturkmen, 2006, p. 9).

According to Dudley-Evans & St John (1998), the main difference between EGP and ESP is that ESP is more focused, practical, and object-oriented. EGP, on the other hand, refers to teaching the English language in contexts in which language learning reasons are not as clear as those of ESP learners. Dudley-Evans & St John (2001) further state that the role of EGP is to make learners ready to acquire “the skills and language that are common to all disciplines” (p. 41). EGP is not restricted to a specific discipline; it is supposed to pave the way for ESP as it is assumed to be the ground for ESP. Thus, ESP learners need to benefit from their EGP knowledge if they need to use language in an ESP context, e.g., for lecture comprehension or writing a CV. This argument shows a relationship between the ESP and EGP. Basturkmen (2006) suggests a stronger argument concerning the relationship between ESP and EGP, stating that ESP benefits from EGP at any time, so it cannot be independent. Moreover, Barnard and Zemach (2003), express their doubts about the sharp distinction between the two and state that the difference between ESP and EGP is not always clear. For instance, a course for learners who need to learn English for occupational purposes but need a better proficiency level should include a lot of general English. While this kind of a course would be considered ESP because of the role of needs analysis and clear definition of aims, Barnard and Zemach (2003; pp. 306–7) assert that ESP should not be classified as a different

“division of ELT, but simply an area (with blurred boundaries) whose courses are usually more focused in their aims and make use of a narrower range of topics” (pp. 306–7). They support their assertion with the example of a businessperson who needs English for professional purposes. If she has a low level of English, the language instruction would probably mostly be General English but called ESP because of the role of needs and clearly defined aims.

Salmani-Nodushan (2020) uses the metaphor of driving a car to explain the relationship between EGP and ESP. Just like a skilled driver can drive any car with some adjustments, a person who speaks English can use it in specific situations. The key is to adjust their language use to the specific genre. According to Salmani-Nodushan (2020), “EGP refers to discipline-independent language use, whereas ESP refers to discipline-specific language use.” (pp. 249-250). Moreover, Popescu (2010) points out the vague line where EGP stops and ESP starts, which are closely interrelated. She further asserts this close relation between the two as the reason for the effect of the ESP on EGP (Popescu, 2010). Lastly, e Haq et al. (2012) conducted a study to identify the commonalities between ESP and EGP at macro and micro levels. The study showed that ESP and EGP shared significant similarities in vocabulary, content, exercises, instructional methods, and lesson plans (e Haq et al., 2012).

Therefore, it can be inferred that contrary to the claims that put the sharp distinction between EGP and ESP, there is no clear-cut between them.

2.4 Common Core Language and ESP

As mentioned in the previous section, the common core language has been a part of the debates concerning the relationship between the EGP and ESP. Those arguments are related to the common core hypothesis, an essential notion in Applied Linguistics. This notion has also been an important part of the specificity issue concerning the wide-angled and narrow-angled debates.

David Cristal's *A Dictionary of Linguistics and Phonetics* defines the term common-core notion as "a set of linguistic features common to all variants, dialects, etc. of a language." Accordingly, this commonality in the language is not confined to any geographical area, level of education, social class, profession, or topic. Furthermore, there are few differences in lexis and grammar (Fagong, 2003). According to Basturkmen (2008), the common core is a general pool of language that includes the items that are high in terms of frequency and "predominate all uses of languages" (p.16). As great importance is given to the common core hypothesis in applied linguistics, it has had an important impact on syllabus design and teaching materials selection (Bloor & Bloor, 1986). Similarly, the increase in ESP research has led to a significant interest in the "common core," which is a characteristic of ESP and refers to the common language elements or structures and skills across different disciplines and occupations. Concerning it, some studies and arguments will be presented below.

A study by Wood (2001) showed that there were common specific types of rhetorical structures and words present in scientific and technical texts of different disciplines. Furthermore, in Coxhead and Nation (2001, p.252), English vocabulary is categorized under four sections:

- 1- The high-frequency words (80 %)
- 2- The academic vocabulary (8.5% - 10%)
- 3- Technical vocabulary (up to 5%)
- 4- The low-frequency words (very narrow range and low frequency)

It can be interpreted that one can cope with any specific or technical situation with the knowledge of high-frequency words that constitute 80 % of English vocabulary, and lack of technical vocabulary knowledge that forms 5 % of the whole vocabulary would not be a problem for a learner. Farhady's (2008) comprehensive study to investigate the common linguistic and communicative elements among academic texts strongly supports these

arguments. The results of the study showed that there were 872 words shared by all disciplines, which is the common core vocabulary among those groups (Farhady, 2008). It further revealed that there were nine common grammatical structures out of seventeen shared by twenty-nine different micro disciplines. Farhady (2008) states that those nine common structures should be covered first, and then the rest of the structures should be taught to students in different disciplines.

2.5 Narrow-Angled vs. Wide-angled Perspectives in ESP Course Design

In addition to the debates on the difference and the relationship between EGP and ESP and core language in ESP, content to be included in ESP courses has also led to controversial debates. Regarding this issue, two types of designs for ESP courses have dominated the ESP research literature: narrow-angled and wide-angled designs. While the former refers to the design of ESP courses “for a group of learners with almost homogenous needs” in which the target groups consist of a specific discipline or occupation, the latter, on the other hand, is concerned with designing ESP courses for a broad “group of learners with somewhat similar needs” (Basturkmen, 2003; p.49).

It was the narrow-angled approach that dominated the 1960s and 70s. Many studies were done to identify the students' special linguistic needs that they could use in the target settings. Despite not addressing directly the narrow-angled tendency, Farhady (1994) defines that period to be misled by different approaches, among them register and syntactic analysis. While defenders of the former developed their research on the ground that the main difference between the ESP and the EGP was the lexicon and aimed to find the specific words for different areas, resulting in several materials being designed; the followers of the latter attempted to find the most frequent syntactic structures exclusive to different fields of ESP. Although another approach, rhetorical functional analysis was seen to be the most effective

treatment of the issues in ESP, Farhady (1994) states that despite being necessary, for a comprehensive treatment of ESP more is needed.

There were further and direct criticisms against the narrow-angled course design perspective (Hutchinson & Waters, 1980; Widdowson, 1983; Basturkmen, 2003), and the wide-angled approach became prominent in the 80s. Ferris (2001) explains the reason for this tendency as the lack of funds. Furthermore, Hyland (2002) criticizes the increasing tendency toward a wide-angled perspective and attributed it to the unwillingness of tertiary institutions to allocate financial resources to the narrow-angled EAP programs. Supporting Hyland's (2002, 2004) narrow-angled thinking, Paltridge (2009) points out that language use "cannot be divorced from the teaching of the subject itself" (pp. 291-292). Besides, Li and Huo (2014) also advocate for the narrow-angled perspective and state that an ESP course is designed based on the needs of the learners and also meets specific communicative needs. Lastly, as a support for the narrow-angled approach, Hyland (2007) and Belcher (2006) state that the focus of ESP is catering to the students' specific language-learning needs in a particular academic discipline or profession.

However, the advocates of the wide-angled perspective have presented their concerns on the narrow-angled thinking and reasons for defending the wide-angled perspective. Among them, the problem of restricted language has been at the center of the debates concerning using a narrow-angled approach in ESP course design. According to Widdowson (1983), the high specificity of an English course would lead to a more restricted competence. To put it differently, surface-level linguistic forms disregard core grammatical structures and vocabulary, resulting in a limited form of English. Widdowson (1983), therefore, argues that it will be language training, not language education if the objectives of a course are equivalent to the aims. He states that this restriction, "no matter how justified it may be on other grounds, runs counter to educational principles (Widdowson, 1983; p.108). He further argues that an

ESP course design should not be "determined by eventual aims but decided on by reference to pedagogic objectives (p.107). He argues it because it can hardly lead to competent learners, and it further fails to provide the learners with the generative base that would allow them to use the language creatively. Basturkmen (2003) supports these criticisms of the narrow-angled approach based on the premise that some narrow-angled courses are restricted to give students a limited set of linguistic forms. She further (2003) suggests that generative structures could be useful in ESP; and touches on the probability of not needing those surface-level linguistic elements, which would, in turn, invalidate the content of ESP.

Anthony's (2011) arguments support assertions by Widdowson (1983) and Basturkmen (2003). He states that an ESP education based on a narrow-angled perspective will meet very little of what students need in the real world. Anthony (2011) further discusses that in comparison with the narrow-angled perspective, the wide-angled approach has many benefits both for working with heterogeneous disciplines and the demands of professional settings in the "new knowledge economy" (Anthony, 2011; Dovey, 2006, p.390). Concerning this, Dovey (2006) points out that in today's professional settings, the knowledge that is considered to be valuable is changing very fast as the processes of learning new knowledge are given more importance than the knowledge itself in the workplace as the knowledge that is learned through the education years by the learners may be no longer in use. Thus, instead of the knowledge itself, learning how to learn knowledge closely related to skills such as discussion, debates, negotiation-based communication, working in teams, and collaboration is more critical. Therefore, it is discussed that what is becoming more valuable is the ability to communicate effectively (Dovey, 2006). In a wide-angled ESP classroom setting, it will be more beneficial for learners from various disciplines as they can share and combine their experiences, knowledge, and background through discussions, debates, and negotiations. (Dovey, 2006).

Some other aspects have been discussed to be the advantages of wide-angled ESP courses, touching on the negative sides of narrow-angled ones. Practicality has been one of them, based on which narrow-angled was criticized, and wide-angled was favored. Concerning this aspect, Spack (1988) mentions the difficulty of teaching highly subject-specific conventions in terms of language teachers. He argues that language teachers lack the necessary expertise and confidence to teach those specific linguistic forms (Spack, 1988). Anthony (2011) supports the arguments by Spack (1988) on the grounds that it puts a great burden on ESP teachers. Basturkmen (2003) is another scholar who discusses the narrow-angled approach in terms of practicality. Regarding the amount of research and time to design, a highly specific ESP course poses difficulties. In addition to being more practical, wide-angled ESP course designs are argued to be more economical in comparison with narrow-angled ones. Thus, developing a course for a mixed group of students that targets their common needs eliminates the need for creating different courses for each group (Basturkmen, 2003).

Interest or motivation can be another topic concerning the debates about which approach to use. While narrow-angled courses are suggested to be more motivating by followers of this perspective on the ground that it teaches learners the specific language they need for their disciplines or professions, Basturkmen (2003) argues that learners can be more interested in the language beyond their own narrow specialist area so that it can be another good side of the wide-angled course design presented (2003). To support those arguments, she gives an example from Uvin's (1996) taken from Basturkmen's (2003) study concerning the design of an English course focused on the needs of healthcare workers. However, the participants showed little interest in the course content. They rather had the motivation to learn the language that is needed beyond their occupations, which would allow them to progress beyond their current positions.

A comprehensive needs analysis conducted by Farhady (2008) identified the EAP needs of students from 29 academic majors. The study, based on the collection of data from different groups of stakeholders, showed that “a common and limited set of needs was claimed to be prominent across three different participants”, which Farhady (2008) asserts to be “within the domain of reductionism”. Farhady (2008) further emphasizes how it is important to meet even that limited set of common needs of different disciplines due to time and resource constraints. The findings of this study support the arguments of the wide-angled perspective strongly, but Basturkmen (2003) states that more studies are needed for wide-angled thinking.

Lastly, the results of a study by Farhady, Tavassoli, and Irani (2018) also support the wide-angled thinking. They noted the lack of selection and integration of grammatical structures in ESP/EAP materials. They attributed it to the narrow-angled approach in which different disciplines used different grammatical structures. Thus, they conducted a 150-million-word corpus analysis from the ESP/EAP materials belonging to 29 micro and 6 macro disciplines. The results showed the existence of a set of a limited number of grammatical structures used by many disciplines and more commonality rather than diversity across those disciplines at the beginning of ESP instruction, which refutes the narrow-angled perspective (Farhady et al., 2018). As an implication of the study, they suggested that even teaching those common structures would be important in a situation where there were time and resource constraints (Farhady et al., 2018).

2.5.1 The Role of ESP Teacher in Narrow and Wide-angled Perspectives

Closely related to the narrow and wide-angled perspective discussions, one of the questions concerning ESP teaching is who can give ESP classes and the level of content area knowledge that ESP teacher possesses. According to Master (2005), ESP instructors should give ESP classes rather than content instructors, as the former are better prepared than the

latter. Flowerdew (2013), on the other hand, states that it is ‘discipline-based practitioners’, not ESP specialists, that give EOP classes. Similarly, Ardeo (2012) discusses that an ESP/EAP practitioner needs to possess both functional academic literacy and content knowledge of the area. Without them, ESP practitioners would not be ready to incorporate authentic materials belonging to those content areas in their ESP classes. He further suggests that ESP/EAP practitioners receive special training to meet their students' needs at the college level (Ardeo, 2012).

Criticizing the arguments that ESP practitioners should be experts in their teaching disciplines, Anthony (2011) discusses that the change of the conventional product-oriented orientation in ESP instruction is inevitable in a world that is evolving quickly. This further would lead to the loss of self-confidence in ESP practitioners, resulting in the adoption of published, mass-market materials (Anthony, 2011; Terauchi et al., 2010 as cited in Bhatia et al., 2011). Another negative effect of this argument would be the misperception by the administrative level at the faculties that they would underestimate the competence of an ESP teacher without a specialist subject background and assign subject specialists who do not have any training in language instruction to give ESP classes instead of language teachers (Anthony, 2009; Anthony, 2011; Howell, 2009). Anthony (2011) argues that as a result, content knowledge precedes language instruction, and in fact, some institutions leave ESP teaching entirely and turn to preparation training for exams such as TOEFL.

To sum up, based on the suggestions and debates concerning both perspectives, the table below was created to show the difference between the two perspectives.

Table 2

The differences between the narrow-angled and wide-angled perspectives

Narrow-angled	Wide-angled
1. The focus is on meeting the specific needs of a particular discipline or occupation that share similar characteristics. (Basturkmen, 2003; Hyland, 2002)	1) The focus is on somewhat similar needs targeting a variety of disciplines or occupations (Basturkmen, 2003)
2. Particular needs of learners from particular disciplines or occupations.	2) Common needs of learners from different but related disciplines and occupations (Basturkmen, 2003)
3. Surface-level linguistic forms (structures, vocabulary, academic conventions, and genres) of a particular discipline or occupation (Basturkmen, 2003; Jordan, 1997; Widdowson, 1983)	3) They address core language skills shared by different disciplines and occupations (Basturkmen, 2003; Widdowson, 1983)
4. Non-generic skills	4) Generic skills transferable across the disciplines.
5. Difficulty in terms of practicality for research and course design (Basturkmen, 2003; p.57)	5) Practical in terms of research and course design (Basturkmen, 2003; p.57)
6. Not economical (Basturkmen, 2003)	6) More economical (Basturkmen, 2003; Ferris, 2001; Hyland, 2002)
7. Language teachers may lack the expertise to teach discipline-specific forms. (Anthony, 2011; Spack, 1988).	7) There will not be a problem/burden of expertise for language teachers (Anthony, 2011).

2.6 The Debates on EGP Threshold for ESP Instruction

In addition to concerning the core language and narrow-angled and wide-angled debates, the EGP threshold for ESP instruction has been a matter of discussion in ESP. In Dudley-Evans and St John's (1998) classification of ELT, there is a five-point continuum that goes from general to specific purposes. It starts with general English on the left, continues with common-core language and skills, general academic and general business purposes, and ends with the most specific ones. The continuum matches the assertion by Hutchinson and Waters (1987) that it would be more effective to teach general English before moving on to

ESP. However, Dudley-Evans and St. John (1998) still suggest that beginner-level learners can be presented with EOP while also thinking that students should receive the basic level of the language, which supports Hutchinson and Waters' (1987) claim. Tarnopolsky (2013) also supports Dudley-Evans and St Johns' (1998) arguments that ESP can be taught at the beginning level and argues that low-level students can receive ESP instruction. Mangiante (2017, as cited in Cedric, 2021) approaches the issue from the French for Specific Purposes and states that learners do not have to have a threshold level in the language, so they can start learning a specific variety at any level on the grounds that there is no connection between complexity and specialization of language.

However, Stojković (2020), who criticizes the narrow-angled perspective because it limits the knowledge of learners that enables them to express themselves freely, asserts general English proficiency to be a prerequisite for ESP. Additionally, based on his study conducted at the University of Tabriz with undergraduate students, Zohrabi (2010) states that students need more EGP than EAP. He points out that the students need to possess an adequate level of English, and only when they reach that level of proficiency they could deal with their discipline-specific text without difficulty. Similarly, Anbarshahi and Shabani Minaabad (2021) analyzed ESP courses from the perspectives of students and ESP teachers in Iran, and they found that the students had low English levels, which was shown as a significant challenge by the students. Thus, Anbarshahi and Shabani Minaabad (2021) suggest that general English should be given importance before the start of ESP courses as they think that with the lack of sufficient proficiency, it is impossible for students to take ESP. All these suggestions are based on the perspective that a common core language pre-exists in varieties. On the other hand, the narrow-angled perspective opposes the idea of the pre-existence of the common core of language to varieties (Basturkmen, 2014; p.17). Concerning this view Bloor and Bloor (1986) state that "All language learning is acquired from one variety or another,

even if it is 'classroom English' variety. A language learner is as likely to acquire 'the language' from one variety as from another, but the use of language, being geared to the situation and participants, is learned in appropriate contexts. This view supports a theory of language use as the basis of language acquisition theory" (p. 28). Based on this perspective, they further assert that the instruction of a specific variety of English can start at any level, including beginners. They suggest it to be quite effective as the learners learn the language items with the meanings used in educational and/or occupational contexts.

2.7 Summary of Controversial and Interrelated Issues in ESP

The literature review section of this study explored the literature on issues related to ESP: the concept of ESP and its branches; the importance of Needs Analysis in ESP course design along with Needs Analysis models; the relationship between ESP and EGP; the common core notion; wide-angled and narrow-angled approaches; and the debates on the GE threshold for ESP instruction.

The literature presented in this section has shown how the controversial issues focused on in this study are closely interrelated: ESP Course Design Perspectives; ESP Course Content, the Relationship between EGP and ESP; and the EGP Level Threshold. The summary of different perspectives on these issues are presented in Table 3.

Table 3*Controversial and Interrelated Issues in ESP*

	1st View	2nd View
1. ESP Course Design Perspectives	Narrow-angled	Wide-angled
2. ESP Course Content	Highly discipline-specific content	Common core language across different disciplines
3. Relationship Between EGP and ESP	Focus on differences	Focus on commonalities
4. EGP Level Threshold before ESP Instruction	Can start at a beginner level	EGP level threshold before ESP instruction

Thus, this study aims to shed light on these controversial and interrelated issues at one heat, the steps of which will be presented in detail in the following sections.

3. METHOD

3.1 Participants

One of the purposes of this study is to analyze the common needs of ESP learners across different disciplines and proficiency levels. In the ESP needs analysis, it is recommended to consider not only the students but also the opinions of other stakeholders, such as teachers and workplace people, especially for the analysis of needs in occupational contexts (Bacha & Bahous, 2008; Farhady, 2008; Rahman, 2015). Thus, there were three groups of participants who took part in this study: ESP learners, ESP teachers, and employees.

For the identification of disciplines, the hierarchy of academic disciplines developed by Farhady (2008) was used. Based on his hierarchy, three different macro disciplines were chosen: Social Sciences, Physical Sciences, and Technology. The macro disciplines were purposefully chosen to include the most contrasting disciplines (Hard and Soft Sciences) to see the common ESP needs of learners from those disciplines. Additionally, under each macro discipline, micro disciplines and majors were chosen. The majors were carefully selected from various micro disciplines to accurately represent their macro disciplines.

Table 4 shows the macro disciplines and micro disciplines under each macro discipline followed by the university majors under each micro discipline as the sources of data collection. All three sets of participants, namely learners, ESP teachers, and professionals were selected from these macro and micro disciplines and majors.

Table 4

Macro Disciplines, Micro Disciplines, and Majors for Data Collection for Common ESP Needs Analysis

Macro Disciplines	Micro Disciplines	Majors
SOCIAL SCIENCES	Economics	Economics
	Management	Business Administration (Management)
	Politics	International Relations
	Sociology	Sociology
PHYSICAL SCIENCES	Chemistry	Chemistry
	Mathematics	Mathematics
	Physics	Physics
TECHNOLOGY	Computer	Computer Engineering
	Electronics	Electrical and Electronic Engineering
	Mechanics	Mechanical Engineering

Based on the disciplines, three different groups of stakeholders related to those three disciplines are addressed as participants in this study: ESP learners, ESP teachers, and professionals.

3.1.1 ESP learners

The study involved ESP learners from 10 different academic majors across nine public and seven foundation universities in Turkey. The distribution of ESP learners based on their college majors is shown in Table 5. A total of 886 undergraduate students participated in the ESP needs analysis questionnaire, with 368 from Technology, 227 from Physical Sciences, and 291 from Social Sciences. The students were enrolled in EMI or partially EMI programs, with 70% or 30% of the classes taught in English. Most of the participants were aged between 18 and 26 years old, though there were a few who were older.

Table 5

Distribution of the Student as participants in the Needs Analysis Questionnaire

	MAJOR	STUDENT (Quantitative)* Questionnaire Number
TECHNOLOGY	Computer Engineering	175
	Mechanical Engineering	82
	Electrical-Electronics Engineering	111
PHYSICAL SCIENCES	Physics	77
	Chemistry	79
	Mathematics	71
SOCIAL SCIENCES	International Relations	83
	Business Administration	79
	Sociology	74
	Economics	55

3.1.2 ESP Teachers

As part of this study, a group of ESP teachers who taught students from various majors were interviewed. These teachers came from both public and foundation universities in Turkey. They provided valuable feedback through qualitative interviews for the ESP needs analysis. Table 6 presents the distribution of ESP teachers based on the majors they taught. The table shows that some teachers taught discipline-specific courses, while others taught mixed groups as a common ESP course.

Table 6*Distribution of the ESP Teachers Interviewed for the Needs Analysis*

	MAJOR	TEACHER (Qualitative) Interview Number	
		Discipline-specific	Common
TECHNOLOGY	Computer Engineering	2	3
	Mechanical Engineering		3
	Electrical-Electronics Engineering	1	4
PHYSICAL SCIENCES	Physics	1	2
	Chemistry		2
	Mathematics		2
SOCIAL SCIENCES	International Relations	3	
	Business Administration	3	2
	Sociology	2	1
	Economics	1	3

3.1.3 Professionals

The third group of participants of the study was employees who graduated and were working in the specific areas selected for this study. Table 7 demonstrates the distribution of the degrees and number of professionals interviewed for the ESP needs analysis.

Table 7

Distribution of the Degrees of the Workplace Experts Interviewed for the Needs Analysis

	MAJOR	EMPLOYEE Interview Number
TECHNO LOGY	Computer Engineering	5
	Mechanical Engineering	4
	Electrical-Electronics Engineering	4
PHYSICAL SCIENCES	Physics	3
	Chemistry	3
	Mathematics	5
SOCIAL SCIENCES	International Relations	5
	Business Administration	3
	Sociology	3
	Economics	5

As can be seen in the tables above, three groups of participants contributed to this study.

As the purpose is to identify the common needs across different disciplines, three diverse macro disciplines were chosen. Furthermore, choosing majors from diverse micro disciplines reflects the diversity of the participants. The three groups of participants, namely students, ESP teachers, and employees, contributed from different public and foundation universities in different cities in Turkey. Furthermore, the professionals, the third group of participants were from different workplaces.

3.2 Research Design

The study followed a mixed-method design with quantitative and qualitative data collection and analysis methods. In order to answer the first research question, the ELT objectives of high schools set by MoNE (2018), the ELT objectives of the 31 preparatory programs, and the ones in 34 ESP programs from various public and foundational universities were analyzed.

The purpose was to establish a starting point for identifying the common objectives among all levels and objectives exclusive to each instructional level. A questionnaire was developed for the second research question to analyze the ESP needs analysis from the student's perspective. Furthermore, semi-structured interviews and graphic elicitation tasks were used to collect data from two other stakeholders, namely ESP instructors and employees. Lastly, the qualitative and quantitative data collected for the first and second research questions were used to identify the appropriate level of language ability in EGP for students to be able to continue their studies in ESP.

Table 8 shows a summary of the processes of the present study:

Table 8*The design of the present study*

Research Questions	Participants	Data Collection Instruments	Data Analysis	Purpose of the Analysis
1.What are the similarities and differences across the ELT learning objectives in high schools, in preparatory programs, and in ESP programs?		Documents (Public Records): -The ELT Objectives of high schools by MoNE - The ELT objectives of 31 preparatory programs -The ELT objectives of 34 ESP programs	Document - Analysis: Content Analysis	To find out the similarities and differences of ELT objectives across high schools, prep programs, and ESP programs and to identify the common ELT objectives and exclusive ones.
2. What are the common needs of ESP learners across different disciplines?	-ESP learners from selected majors -ESP teachers teaching different majors -Workplace people from different fields	-Needs analysis questionnaire -Semi-structured interviews -Graphic elicitation tasks	-Factor Analysis - Chi-Square Analysis - Content Analysis -Initial Coding	- To identify the common needs of ESP learners across different disciplines and identify the core language elements common to all these disciplines
3. What would be the most appropriate level of language ability in EGP that would enable ESP students to continue their ESP instruction from the perspectives of various stakeholders?	-ESP learners from selected majors -ESP teachers teaching different majors -Workplace people from different fields	-Needs analysis questionnaire -Semi-structured interviews -Graphic elicitation tasks	-Factor Analysis -Chi-Square Analysis -Content Analysis -Initial Coding	To find out the most appropriate level of English proficiency in EGP to shift ESP

3.3 Instrumentation

3.3.1 Documents: Public Records

According to Merriam (1988), “Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem” (p. 118). Public records are one of the main types of documents that can be used in research and are official records of an organization. Educational institutions are among those organizations, and according to Bowen (2009), they can be both printed or electronic materials for which agendas, manuals, brochures, books, and program proposals can be given as examples.

The first research question of this study is “*What are similar and different ELT objectives across high schools, preparatory programs, and ESP programs?*” In order to answer this research question, electronic materials, which were public records of ELT objectives of these programs, were collected from the websites of these programs (Bowen, 2009). As the MoNE standardizes the ELT objectives of high schools, the objectives were taken from the website of the MoNE (2018). ELT objectives of 31 university preparatory programs were collected from their respective university websites. These universities were both public and foundation universities located in different cities in Turkey. Lastly, the ELT objectives of the ESP programs were collected from 34 ESP programs at different universities. The setting of the study for the first research question is given in the following table.

Table 9*The Setting of the study for 1st Research Question*

Educational Level	Objectives (N. of Programs)	Type of the Universities	Cities where Universities are Located
High Schools	ELT Objectives set by MoNE	-	-
Preparatory Programs	31 Preparatory Programs	17 public 14 foundation	İstanbul, İzmir, Ankara, Gaziantep, Samsun, Eskişehir, Antalya, Bursa, Çanakkale, Düzce, Denizli, Aydın,
ESP Programs	34 ESP Programs	16 public 18 foundation	İstanbul, İzmir, Ankara, Gaziantep, Antalya

3.1.1.1 Document Analysis

Document analysis would enable the extraction of meaning and obtaining insight (Corbin & Strauss, 2008). It includes processes such as skimming, reading thoroughly, and interpreting, a process that “combines elements of content and thematic analysis” (Bowen, 2009, p.32).

Three sets of data were collected from three ELT levels to analyze and identify the common and different objectives across the three ELT levels, namely high schools, preparatory programs, and ESP programs. The ELT objectives of high schools set by MoNE (2018) were coded and categorized under language skills and sub-skills. Then, the ELT objectives of 31 preparation programs were collected, coded, and categorized under language skills and sub-skills. A similar procedure was followed for the objectives of ESP programs. The objectives of 34 ESP programs were coded and then categorized under language skills and sub-skills. The outcome was a comprehensive list of learning objectives translated into skills and sub-skills for each level. The next step was based on identifying the commonality across the objectives that were categorized under language skills and sub-skills, which would

identify the core objectives that EFL learners need to meet for the minimum competency level. The identification of the core or minimum competency level would enable us to see the needs beyond the minimum requirements for each level and skill. The following table shows the categorization of ELT objectives to identify the commonalities and differences across levels and skills, which will be presented in detail in the Results section of this study.

3.1.1.2 ELT Objectives Data Analysis

Table 10

The results of the ELT Objective Data Analysis

Common objectives across three levels	Common Objectives Across 3 Levels (ESP, Prep, High Schools) – The Core Language Needs
	Common Objectives Across ESP and Prep Programs
	Common Objectives Across ESP Programs and High Schools
	Common Objectives Across Prep Programs and High Schools
	Objectives Exclusive to ESP
	Objectives Exclusive to Prep Programs
	Objectives Exclusive to High Schools
Common objectives across skills	Common objectives across all language skills
	Common objectives across Reading, Listening, and Speaking
	Common objectives across Reading, Writing, and Speaking
	Common objectives across two levels: Reading and Listening
	Common objectives across two levels: Speaking and Listening
	Common objectives across two levels: Reading and Writing
	Common objectives across two levels: Reading and Speaking
	Objectives Exclusive to Listening
	Objectives Exclusive to Speaking
	Objectives Exclusive to Reading
	Objectives Exclusive to Writing

3.3.2 Needs Analysis Instruments

The study's second research question attempts to explore the common ESP needs of learners in different academic disciplines and professionals in different work fields. The data were collected from the different stakeholders in line with this purpose. For collecting quantitative data, a student ESP needs analysis questionnaire was developed. Furthermore, semi-structured interviews and graphic elicitation tasks were used to collect qualitative data from ESP teachers and workplace experts.

3.3.2.1 Needs Analysis Framework of the Study

The importance of Needs Analysis is described as the cornerstone for determining the learners' course objectives and communicative and linguistic needs (Basturkmen, 2010; Dudley-Evans & St John, 1998; Hyland, 2006). It is further argued that the establishment of language programs should be based on NA (Hutchinson & Waters, 1987, pp. 55-54). ESP is one area where NA is highly valued since it enables people involved in ESP instruction to uncover the needs of learners. Several models have been suggested to analyze ESP learners' specific needs, and PSA and TSA are considered to be two essential aspects of different needs analysis models.

Basturkmen (2010) explains the relationship between PSA and TSA with the analogy of two sides of the same coin. While the former aims to define the learners at the outset of the course in terms of their skills, attitudes, familiarity with the subject, and also learners' strengths and weaknesses (Hyland, 2006), the purpose of the latter is to identify the learners' language needs to prepare them to join their academic programs successfully and future careers (West, 1994).

One of the research questions that the present study attempts to answer is "What are the common needs of ESP learners across different disciplines and the ones across different fields of occupation?" To find a satisfactory answer to the question, the involvement of all

stakeholders, including learners, ESP teachers, and employees, was necessary. In line with the purpose of the second research question, a needs analysis questionnaire was developed to collect data from undergraduate students as they are one of the three stakeholders. The questionnaire consists of two main parts. While the first part explores the needs of EAP, the second part investigates their EOP needs. According to Hutchinson and Waters (1987), there is no clear-cut distinction between EAP and EOP, so apart from a few items, the items in both parts are the same. To illustrate, *Asking and answering questions in class* or *Participating in in-class discussions* are classroom-related skills and irrelevant to the occupational context. Thus, they are not included in the TSA section. The questionnaires also include parts that aim to collect participants' biodata. Furthermore, in the questionnaire, some parts attempt to collect data about their language background information. Students are also asked to give their opinions on the EGP level threshold to start ESP classes. Lastly, they are asked to rate their proficiency level in English language skills.

Semi-structured interviews and graphic elicitation tasks were used to collect data from two other groups of stakeholders, namely the ESP teachers and workplace experts. The graphic elicitation tasks and interviews conducted with ESP teachers also focused on the PSA and TSA of the learners. The interviews also included sections that collected bio-information on the teachers, such as their experiences, the discipline they were teaching, and other information including their knowledge of the subject content, the materials they used, the design of the ESP course, course content, learners' levels, their language learning background along with others.

Lastly, the data were collected from the workplace experts through semi-structured interviews and graphic elicitation tasks. Since the number of ESP teachers and workplace employees was limited, they provided qualitative data in line with the items in the questionnaire. The focus of the instrument was the occupational needs of workplace experts in

the occupational context. As well as the language skills the employees need, the semi-structured interviews also collected data on the following aspects: the reason and the way the language is used, the content area of the language they use, the people they use the language with, the context and frequency of the language use (Hutchison & Waters, 1987, pp. 59 - 60).

Table 11 presents the needs analysis framework of this study:

Table 11

Needs Analysis Framework of the Present Study

Needs Analysis Approach	Types of Information Gathered	Sources of Information	Instruments
PSA	Factual information about learners Learners' current skills and language use Learners' language use outside the class Language difficulties Available resources	Learners from different majors ESP teachers teaching different majors	Questionnaire Interviews Graphic elicitation tasks
TSA	Language skills and sub-skills Professional information about the learners Target situation How/When/Where/Who with the language will be used	Learners from different majors ESP teachers teaching different majors Workplace experts from different fields	Questionnaire Interviews Graphic elicitation tasks

3.3.2.2 Stages of ESP Needs Analysis Questionnaire Development

Multiple sources of information were used to develop the student ESP needs analysis questionnaire. These steps are explained below.

3.3.2.2.1 Information from the review of the relevant literature review

In order to develop the questionnaire to collect information from undergraduate students, the literature relevant to ESP was explored. Based on the literature, ESP skills, sub-skills, tasks, and techniques were coded and listed according to their frequencies. Then, a

taxonomy of the ESP sub-skills, techniques, and tasks has been developed based on this list (Farhady, 2008). The taxonomy served as one of the sources of information for preparing the items for the needs analysis questionnaire. (Appendix A).

3.3.2.2.2 Semi-structured Interviews

Semi-structured interviews were used as another source of information to contribute to the questionnaire design phase. Both focus group interviews and individual interviews were conducted with three groups of participants: ESP learners from different majors, ESP teachers, and employees who graduated from those majors.

3.3.2.2.3 Focus Group Interviews

Semi-structured focus group interviews were conducted with each group of participants. The questions for the interview were developed based on the relevant literature matching the items in the questionnaire. It was conducted at an ESP class in summer school at a private university in Istanbul. 10 students from various majors participated in the interview, which was recorded and later transcribed. The focus group interview with the ESP teachers was conducted at a state university in Istanbul. Six teachers teaching a variety of majors participated in the interview. The interview was recorded and then transcribed. Lastly, the focus group interview with the employees was conducted at a coffee shop. 7 employees from a variety of fields participated in the interview. The interview was recorded, and afterward, transcription was done.

The transcribed data were analyzed after conducting focus group interviews with three sets of participants. Content analysis and initial coding methods were used for the analysis. After the initial coding process, the codes obtained from the data were categorized under two main themes: the skills/sub-skills/tasks considered necessary in academic contexts (EAP) and the ones they think their students will need in their future careers (EOP). (Appendix B).

3.3.2.2.4 Individual Interviews

After conducting focus group interviews, individual semi-structured interviews were conducted with each set of participants. The questions for the individual interviews were developed based on the relevant literature and the topics and questions that emerged in the focus group interviews. Four ESP learners from different universities from Social Sciences, Technology, and Physical Sciences participated in the interview. Furthermore, individual interviews were conducted with ESP teachers teaching students from different majors. Three ESP teachers from a private university participated in the interview. Lastly, three workplace experts working in different sectors were interviewed individually. All the interviews were recorded and then transcribed. Similar to the focus group interviews, content analysis and initial coding methods were adopted for the analysis of the transcribed data. The findings were categorized under EAP and EOP needs. (Appendix C)

Finally, tables of individual and focus-group interviews were created based on the findings of the focus-group and individual interviews.

Table 12

The number of the Participants in the Focus Group and Individual Interviews

	Focus Group Interviews	Individual Interviews
Students (N)	10	4
ESP Teachers (N)	6	3
Professionals (N)	7	3

3.3.2.2.5 Crosscheck between the ESP Literature and the Findings of the Interviews

As mentioned above, a taxonomy of ESP skills was created by exploring ESP literature, which provided a good source for item development for the ESP needs analysis questionnaire. Conducting interviews also provided extra information, which was assumed to consolidate the information obtained from the literature. Therefore, to enhance the validity of the findings, the taxonomy was crosschecked based on the literature and the one based on the qualitative interviews.

It was seen that there was some similarity between the taxonomy and the table. For example, *making formal presentations* was frequently mentioned in the ESP literature. It was also mentioned a lot by the three different groups of participants as an important skill needed in academic and occupational settings. Thus, including this item and similar ones mentioned in the literature and the interviews in the questionnaire would also improve the validity of the findings. However, there were also some differences between the taxonomy and the table. For instance, *Making Skype calls in English* was not included in the taxonomy based on the literature. However, it was included in the table based on the interviews, as three different groups of participants mentioned it as a crucial occupational skill. Thus, this item and a few others frequently mentioned in the interviews were added to the questionnaire. Moreover, some items like *pronunciation accuracy* were eliminated from the questionnaire as they were never mentioned in the interviews.

3.3.2.2.6 Chi-Square Analysis

In order to develop items for the needs analysis questionnaire, a chi-square analysis of three data sources, a taxonomy based on the literature review, the individual interviews, and the focus-group interviews were run. The analysis results of these three resources were cross-checked to select the significant ones for the questionnaire. (See Appendix D).

3.3.2.3 Analyses of the ESP Needs Analysis Questionnaire

In order to collect data from the students for common ESP needs, a questionnaire was developed. The questionnaire consists of several sections: The first section includes questions to collect biodata information, the second section consists of questions on the English language usage background of the students, and in the third section, the students are asked to rate their proficiency in English language skills. Furthermore, the questionnaire has two main sections: PSA and TSA. While the PSA section aims to analyze the EAP needs of students to study in their departments, the TSA section aims to analyze the future career needs of these students. As there is “no clear-cut distinction between EAP and EOP” (Hutchinson & Waters, 1987) the items in both sections (PSA and TSA) are similar except for some differences. These differences include the skills used in an academic context but irrelevant to the occupational context.

Several analyses were done upon the development of the ESP needs analysis questionnaire, and these phases will be presented in the following sections.

3.3.2.3.1 Pre-Piloting of the Questionnaire

The questionnaire was sent to ten Ph.D. candidates in order to receive feedback before the piloting process. The participants were asked to review the questionnaire and give suggestions, such as whether there were any ambiguous items or incomprehensible statements. The aim was to improve the quality of the questionnaires before piloting them. The suggestions were taken into consideration, and the necessary modifications were made for the piloting stage. While some were word-level modifications, others were sentence-level to prevent vague statements in the questionnaire.

3.3.2.3.2 Piloting Stage

In order to pilot the ESP needs analysis questionnaire, it was administered to the students from Social Sciences, Physical Sciences, and Technology macro disciplines from

several universities. 80 undergraduate students participated in the piloting of the questionnaire. The reliability analysis of the piloted questionnaire was conducted, and as can be seen in Table 13, it showed high reliability.

Table 13

Reliability of the piloted student needs analysis questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,983	,984	84

Furthermore, descriptive and exploratory factor analyses of the piloted questionnaires were conducted. The factor analysis results of the piloted questionnaire were used to develop a theoretical model for the questionnaire, together with the relevant literature and the findings of the qualitative interviews, which will be explained in detail in the following section.

3.3.2.3.4 Validity Factor Analysis of Piloted Version

Exploratory factor analysis was performed to analyze the questionnaire construct validity. The components where the items of EAP and EOP parts of the questionnaire loaded were examined and both matching and non-matching items were carefully scrutinized.

EAP Part

The items of the EAP part of the questionnaire loaded on the seven components (Appendix E). While several items matched the categorization of language skills and sub-skills, some did not show congruence with the theoretical framework. The items loaded on the 1st component are Reading-related items, which showed congruence with the categorization of skills and sub-skills. Furthermore, analyzing them more closely, it was seen that they were

Reading strategies and techniques that help for a more efficient reading. Thus, it was interpreted that students had a separate categorization of the Reading strategies and techniques from the other Reading-related skills. The loadings on the 2nd component were listening-related skills and sub-skills, which showed a strong match. Upon analyzing the 3rd component, we observed that five sub-skills related to Listening & Speaking loaded on this component. However, four additional sub-skills on the same component were not related to Listening & Speaking. These items were *Reading and writing business letters, e-mails, and faxes; Translation; Occupational writing: lab reports, business reports, field trip reports (and abstracts for projects); and Writing a CV/ Cover letter*. Upon scrutinizing all items on the 3rd component, it was evident that they were both academic and occupational in nature. Thus, it could be said that apart from categorizing sub-skills and skills, students categorized the items as academic or occupational. The 4th component included Reading-related sub-skills, and they were categorized separately from the Reading strategies and techniques by the students. Furthermore, *Academic vocabulary* and *Field-specific/technical vocabulary/terminologies* loaded on the 4th component, which could be explained that students related these types of vocabulary with the Reading skill most. Four main language skills and elements loaded on the 5th component, which showed a complete match. However, some items that loaded on the 6th component showed incongruence. As well as four Listening-related items, there were Listening, Speaking and Reading-related items as well. Upon examination of the items, it was observed that all of the items loaded onto the sixth component were academic skills and sub-skills, which was similar to the emerged category on the third component. Lastly, *Making oral presentations* and *Use of Internet/technology (in English)* loaded on the 7th component. These two items require the integration of various or all language skills, which showed a different categorization by the students, so they were congruent. As a result of the analysis of the

components a table showing the expected category and the newly emerged category by the students was created, which is presented below.

Table 14

Matching and Mismatching Items after the Piloting: EAP Part

Component	Matching Items	Expected Category	Mismatching Items	Emergent Category by the Students
1	25. Reading efficiently: comprehension and speed 26. Skimming and scanning skills 27. Reading strategies 28. Identifying (understanding) main ideas, supporting ideas, and examples 29. Inference and guessing 31. Reading and note taking 32. Summarizing 33. Paraphrasing	Reading		Reading Strategies and Techniques
2	8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc. 9. Understanding and following instructions in fieldwork/laboratory. 10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations. 11. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.) 12. Listening and note taking (in lectures/seminars/tutorials/ discussions/supervisions.	Listening		Listening
3	15. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.) 16. Making phone calls 17. Job interviews (application skills) 18. Participating in communications in formal social interactions 19. Participating in communications in informal interactions	Listening and Speaking	30. Reading and writing business letters, e-mails, faxes 34. Translation 35. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects) 38. Writing a CV/ Cover letter	Occupational Skills
4	21. Reading academic/scientific journals/publications, papers, articles, and texts 22. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites 23. Reading instructions for assignments/exams/projects/exercises/labs	Reading	42. Academic vocabulary 43. Field-specific/technical vocabulary/terminologies	Reading

5	1. Listening 2. Speaking 3. Reading 4. Writing 5. Grammar 6. Vocabulary	Main Lang Skills and Elements		Main Language Skills and Elements
6	36. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc. 37. Writing assignment/homework 39. Writing essays 40. Planning, drafting, revising, editing	Writing	7. Listening to and understanding lectures 13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.) 14. Participate/follow/engage in in-class discussions 24. Reading (online) study notes and texts, handouts	Academic Skills
7			20. Making oral presentations 41. Use of Internet/technology (in English)	Integration of All Language Skills

EOP Part

Next, the exploratory factor analysis results for the EOP part were analyzed. There were seven components that the items of the EOP part loaded (**Appendix F**).

As in the EAP part, there were matching and mismatching items based on the expected categories of skills and sub-skills. The 1st component included main language skills and elements which showed congruence. However, there were also mismatching items:

Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.); Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.); and Making oral presentations. These items usually require the integration of all or most of these language skills and elements. For instance, *Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)* is not only related to Listening skill, but it can also be related to the different varieties of Grammar, Vocabulary, written language along with others. The 2nd component included the reading strategies and techniques for efficient

reading, which was the same category that emerged in the EAP part. It also included *Academic vocabulary* and *Field-specific/technical vocabulary/terminologies*, which showed that students related these types of vocabulary with reading strategies and techniques most. Reading & Writing-related items loaded on the 3rd component, which showed a strong match. However, *Listening and note-taking (in seminars/tutorials/ discussions/supervisions* loaded in the same category showed a mismatch. The underlying reason may be that students categorized it with the Writing-related category because of the note-taking. The 4th component consisted of Listening & Speaking-related items, which showed a strong match. The loading of the *Academic vocabulary* and *Field-specific/technical vocabulary/terminologies* can be because of the use or need of these types of vocabulary in Listening & Speaking-related sub-skills in occupational context according to the students. The 5th component included the Listening-related items, which were congruent with the categorization of language skills and sub-skills. However, the main loading of *Participate/follow/engage in discussions* in the same component was partly incongruent. The items that loaded on the 6th component were reading-related, and it is congruent with the theoretical framework. However, *Translation* also loaded on the same component. *Translation* can require the use of more than one language skill, but its loading on the Reading-related items demonstrated that students related it to Reading-based translation. Lastly, the *Use of the Internet/technology (in English)* loaded on the 7th component. It indicated that students saw this item as a different sub-categorization, which was reasonable as it may be both an academic and occupational skill, and it may not be categorized under any other categorization of main skills.

The following table shows the expected category and the newly emerged category as a result of the analysis of the items in the EOP part.

Table 15*Matching and Mismatching Items after the Piloting: EOP Part*

Component	Matching Items	Expected Category	Mismatching Items	Emerged Category by the Students
1	1. Listening 2. Speaking 3. Reading 4. Writing 5. Grammar 6. Vocabulary	Main Language Skills and Elements	10. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.) 12. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.) 19. Making oral presentations	
2	23. Reading efficiently: comprehension and speed 24. Skimming and scanning skills 25. Reading strategies 26. Identifying (understanding) main ideas, supporting ideas, and examples 27. Inference and guessing 29. Reading and note taking 30. Summarizing 31. Paraphrasing 32. Translation	Reading	40. Academic vocabulary 41. Field-specific/technical vocabulary/terminologies	Reading Strategies and Techniques
3	28. Reading and writing business letters, e-mails, faxes 33. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects) 34. Writing projects 35. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc. 36. Writing a CV/ Cover letter 37. Writing essays 38. Planning, drafting, revising, editing	Reading & Writing	11. Listening and note taking (in seminars/tutorials/discussions/supervisions.	Reading & Writing
4	13. Participate/follow/engage in discussions 14. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.) 15. Making phone calls 16. Job interviews (application skills) 17. Participating in communications in formal social interactions 18. Participating in communications in informal interactions 19. Making oral presentations	Listening & Speaking	40. Academic vocabulary 41. Field-specific/technical vocabulary/terminologies	Listening & Speaking

5	7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc. 8. Understanding and following instructions in fieldwork/laboratory. 9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations. 11. Listening and note taking (in seminars/tutorials/ discussions/supervisions.	Listening	13. Participate/follow/engage in discussions	Listening
6	20. Reading academic/scientific journals/publications, papers, articles, texts 21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites 22. Reading instructions for projects/labs	Reading	32. Translation	Reading
7	39. Use of Internet/technology (in English)			

3.3.2.3.5 Creation of the ESP Skills Model

After the factor analysis of the piloted needs analysis questionnaire, an ESP skills model has been created based on the factor analysis of the piloted questionnaires, relevant literature, and qualitative interviews. As can be seen in Table 16, the skills are categorized based on several dimensions, such as general skills, oral vs. written skills, occupational vs. academic skills, sub-categorization of skills, and sub-skills. This model was used as a reference for the main administration of the ESP needs analysis questionnaire for the students.

Table 16*Model for Categorization of ESP Skills (EAP/EOP)*

General Skills									
OTHER	Reading and Writing (R&W)				Listening - Speaking				
		Vocab	R&W	Reading	S.	Listening& Speaking	L & W	Listening	
Academic	Occupational	Academic			O & A	Academic & Occupational	Academic (A)	Occupational (O)	Listening to and understanding lectures
		Occupational							Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.
		Occupational							Understanding and following instructions in fieldwork/laboratory.
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
		Occupational							Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)
		Occupational							Participate/follow/engage in (in-class) discussions
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Participating in communications in formal social interactions
		Occupational							Making video calls (Videoconferencing, skype/Whatsapp calls, etc.)
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Making phone calls
		Occupational							Participating in communications in informal interactions
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Making oral presentations
		Occupational							Reading academic/scientific journals/publications, papers, articles, texts
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
		Occupational							Reading instructions for assignments/exams/projects/exercises/labs
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Reading (online) study notes and texts, handouts
		Occupational							Reading efficiently: comprehension and speed
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Skimming and scanning skills
		Occupational							Reading strategies
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Identifying (understanding) main ideas, supporting ideas, and examples
		Occupational							Inference and guessing
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Reading and note-taking
		Occupational							Summarizing
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Paraphrasing
		Occupational							Reading and writing business letters, e-mails, faxes
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
		Occupational							Writing a CV/ Cover letter
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.
		Occupational							Writing assignment/homework
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Writing essays
		Occupational							Planning, drafting, revising, editing
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Academic vocabulary
		Occupational							Field-specific/technical vocabulary/terminologies
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Job interviews (application skills)
		Occupational							Translation
Academic	Occupational	Academic			O	Reading Strategies	Occupational	Occupational (O)	Use of Internet/technology (in English)
		Occupational							

3.3.2.3.5.1 The Detailed Process of Creation of the Model

This part presents a detailed explanation of how the model in Table 16 was created. EAP/EOP skills and sub-skills based on the relevant literature, qualitative interviews, and the factor analysis results of the piloted questionnaire were categorized based on various dimensions: *General categorization of skills and sub-skills*, *Categorization of academic skills into sub-skills*, *Categorization of Occupational skills into sub-skills*, *The sub-categorization of sub-skills: reading strategies*, *The categorization of other skills*. (Appendix G).

The first dimension, *general categorization of skills and sub-skills*, includes all the skills and subcategorization of these skills in terms of main language skills. It is created based on relevant EAP/EOP literature, qualitative interviews, and factor analysis results from three piloted questionnaire types. The next dimension is based on the sub-categorization of these skills in terms of academic and occupational contexts. This type of categorization is also created based on the factor analysis results of three questionnaires, relevant literature, and qualitative interviews. As Hutchinson and Waters (1987) suggest, it's difficult to draw a clear line between EAP and EOP. Thus, in many cases, a skill learned or used in an academic context can be later used in an occupational context when students start working (Hutchinson & Waters, 1987). Accordingly, any occupational skill can be considered an academic skill as they are learned in an academic context. However, based on the interviews conducted, it was seen that every academic skill is not used in occupational situations because of the irrelevance of that skill in the professional context. Thus, it can be said that the skills/sub-skills presented in the general categorization of skills and sub-skills are all academic. Additionally, reading-related sub-skills were categorized under a new category: Reading strategies that can contribute to efficient reading. Lastly, some sub-skills were grouped under a new category as they require the integration of several language skills.

3.3.2.3.6 Preparation of the Final Form of the Questionnaire for the Main

Administration

After the procedures of pre-piloting, piloting, reliability, and validity analyses of the questionnaire and development of the ESP skills model, necessary revisions were done, and the final form of the questionnaire for the main administration was prepared. (Appendix H)

3.3.2.3.7 The Main Administration of the Final Form of the Questionnaire

The last form of the ESP needs analysis questionnaire was administered to 886 undergraduate students studying at various public and foundation universities in three macro disciplines: Technology, Physical Sciences, and Social Sciences.

3.3.2.2.8 Reliability of the Final Form of the Questionnaire after the Main

Administration

Below is the result of the reliability analysis for the Student Common ESP Needs Analysis Questionnaire. It can be seen that Cronbach's alpha is 0.978, which shows a high level of internal consistency for the questionnaire.

Table 17

Reliability statistics for the main administration of the Student Common ESP Needs Analysis Questionnaire

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,978	0,979	76

3.3.2.2.9 Validity of the Final Form of the Questionnaire after the Main Administration

As indicated previously, the model developed based on the factor analysis of piloted questionnaires, relevant literature, and qualitative interviews –hereinafter referred to as *the ESP Skills Model*- was used as a reference for the main administration of the common ESP needs analysis questionnaire. The factor analysis was conducted upon the main administration of the questionnaire with 886 ESP students from different majors. It was conducted separately for each main section of the questionnaire: The EAP and EOP parts. The analysis for each section will be explained in detail below. Furthermore, it was analyzed whether there was a match between the factor analysis of the main administration of the questionnaire and the ESP Skills Model.

3.3.2.2.9.1 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EAP

Part

As observed in Table 18, all 40 items in the EAP part of the questionnaire loaded on 6 factors. It is observed that for most of the components, there is compatibility between the main administration and the ESP Skills Model. Components and each item of the main administration will be scrutinized one by one in terms of their match with the ESP Skills Model in Table 16.

Table 18*The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EAP Part*

Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
1. Listening				0,634		
2. Speaking	0,501			0,356		0,481
3. Reading		0,535		0,326		0,470
4. Writing			0,364			0,675
5. Grammar						0,750
6. Vocabulary						0,643
7. Listening to and understanding lectures		0,311		0,738		
8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.	0,309			0,675		
9. Understanding and following instructions in fieldwork/laboratory				0,607		
10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations		0,365		0,616		
11. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)	0,533					
12. Listening and note-taking (in lectures/seminars/tutorials/discussions/supervisions	0,308	0,320		0,454	0,434	
13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)	0,450		0,307	0,414		
14. Participate/follow/engage in in-class discussions	0,515		0,306	0,373		
15. Making video calls (Video-conferencing, skype/Whatsapp calls, etc.)	0,765			0,305		
16. Making phone calls	0,838			0,352		
17. Participating in communications in formal social interactions	0,726					
18. Participating in communications in informal interactions	0,749					
19. Making oral presentations	0,503		0,314		0,381	
20. Reading academic/scientific journals/publications, papers, articles, texts		0,619			0,379	
21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites		0,614			0,371	

22. Reading instructions for assignments/exams/projects/exercises/labs		0,608	0,336			
23. Reading (online) study notes and texts, handouts		0,674	0,366			
24. Reading efficiently: comprehension and speed		0,602	0,353			
25. Skimming and scanning skills		0,565	0,337			
26. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.		0,511	0,526			
27. Reading and note taking		0,451	0,625			
28. Summarizing			0,675	0,370		
29. Paraphrasing			0,700	0,401		
30. Reading and writing business letters, e-mails, faxes			0,402		0,422	
31. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)			0,411		0,509	
32. Writing a CV/ Cover letter			0,314		0,608	
33. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.			0,498		0,563	
34. Writing assignment/homework			0,656			
35. Writing essays: Planning, drafting, revising, editing			0,672		0,312	
36. Academic vocabulary		0,379			0,599	
37. Field-specific/technical vocabulary/terminologies		0,472			0,600	
38. Job interviews (application skills)	0,370				0,666	
39. Translation					0,422	
40. Use of Internet/technology (in English)		0,529		0,306		

Table 19

Item-by-item Analysis for the EAP Part of the Student Questionnaire

The EAP Item in the Main Questionnaire	The main factor it loaded on in MA	The factor it partially loaded on in MA	The 3 rd factor it loaded on in MA	The Category it Belongs to in the ESP Skills Model	Explanation
1. Listening	0,634 LISTENING	-----	-----	MAIN LANG. SKILLS-COMPONENTS	Listening is categorized under the main language skills in the ESP skills model and under Listening, there are several related Listening sub-skills together which Listening loaded on the same component. Thus, it can be said that despite not being a complete match, there is still harmony between the MA and ESP Skills Model.

2.Speaking	0,501 SPEAKING	0,481 MAIN LANG. SKILLS- COMPONENTS	0,356 LISTENING	MAIN LANG. SKILLS- COMPONENT S	Similar to Listening, Speaking is mainly loaded on the component where sub-skills are categorized under Speaking in the Model loaded, which shows a partial match with the Model. Furthermore, it partly loaded on the Main Language Skills and Components category, and this shows a full match with the Model. However, different from the Model, it is observed on the Listening Component as well with a lower factor loading. This may be because there are a number of sub-skills that are common to both Speaking and Listening.
3.Reading	0,535 READING	0,470 MAIN LANG. SKILLS- COMPONENTS		MAIN LANG. SKILLS- COMPONENT S	Similar to Speaking and Listening, Reading also loaded on the same component together with its sub-skills. It further partly loaded on the Main Language Skills and Components Factor. Both loadings are in congruence with the ESP Skills Model.
4.Writing	0,675 MAIN LANG SKILLS- COMPONE NTS	0,364 READING STRATEGIES	-----	MAIN LANG. SKILLS- COMPONENT S	Writing mainly loaded on the factor Main Language Skills and Components, which shows harmony with the ESP Skills Model. Having partly loaded on the Reading Strategies factor may be because of the

					relationship between the Writing and Reading Strategies sub-skills such as Reading and Note-taking, Summarizing, etc.
5. Grammar	0,750 MAIN LANG SKILLS-COMPONENTS	-----	-----	MAIN LANG. SKILLS-COMPONENTS	Complete match between the MA and the ESP Skills Model
6. Vocabulary	0,643 MAIN LANG SKILLS-COMPONENTS	-----	-----	MAIN LANG. SKILLS-COMPONENTS	Complete match between the MA and the ESP Skills Model
7. Listening to and understanding lectures	0,738 LISTENING	0,311 READING	-----	LISTENING	Complete match between the MA and the ESP Skills Model
8. Listening to and understanding presentations or discussions in meetings/ seminars /conferences/talks etc.	0,675 LISTENING	0,309 SPEAKING	-----	LISTENING	The main loading of this item on the Listening component shows a complete match with ESP Skills Model. It further partly loaded on the Speaking Component with a lower factor loading, which may be because <i>Listening to and Understanding Presentations or discussions in meetings/seminars, etc.</i> may require speaking as well e.g., asking questions.

9. Understanding and following instructions in fieldwork/laboratory	0,607 LISTENING	-----	-----	LISTENING	Complete match between the MA and the ESP Skills Model
10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations	0,616 LISTENING	-----	-----	LISTENING	Complete match between the MA and the ESP Skills Model
11. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)	0,533 SPEAKING		-----	LISTENING	This item is supposed to be categorized under the Listening skill, but it did not load on the Listening factor. Students may have categorized it under Speaking skill as it includes the <i>accent</i> as well.
12. Listening and note-taking (in lectures/seminars/ tutorials/ discussions/supervisions)	0,454 LISTENING	0,434 WRITING	0,320 READING	LISTENING & WRITING	The main loading on the Listening and partly on the Writing Skills shows a complete match with the ESP Skills Model. The loading on Reading as a third factor may be due to the integration of Reading skill in lectures, seminars, tutorials, etc.
13. Asking and answering questions (in	0,450 SPEAKING	0,414 LISTENING	0,307 READING	LISTENING & SPEAKING	The main loading on the Speaking and partly on the Listening Skills shows a complete match with the

the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)					ESP Skills Model. The loading on Reading as a third factor may be due to the integration of Reading skill in the class, seminars, talks, lectures, etc.
14. Participate/follow/engage in in-class discussions	0,515 SPEAKING	0,373 LISTENING	0,306 READING	LISTENING & SPEAKING	Similar to item 13, the main loading on the Speaking and partly on the Listening Skills shows a complete match with the ESP Skills Model. The loading on Reading as a third factor may be due to the integration of Reading skill in in-class discussions. For example, in order to be able to participate in or follow the in-class discussion, learners may be required to do topic-related reading beforehand.
15. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)	0,765 SPEAKING	0,305 LISTENING	-----	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model.
16. Making phone calls	0,838 SPEAKING	0,352 LISTENING	-----	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model.

17. Participating in communications in formal social interactions	0,726 SPEAKING			LISTENING & SPEAKING	While this item is categorized under Listening & Speaking in the Model, it is loaded only on Speaking. It may be because the learners perceive it only as a sub-skill of Speaking.
18. Participating in communications in informal interactions	0,749 SPEAKING			LISTENING & SPEAKING	Similar to item 17, this item is also categorized under Listening & Speaking in the Model, but it loaded only on Speaking. It may be because the learners perceive it only as a sub-skill of Speaking.
19. Making oral presentations	0,503 SPEAKING	0,381 WRITING	0,314 READING	SPEAKING	Making Presentation is categorized under the Speaking skill in the Model, and it mainly loaded on the Speaking, which shows harmony with the Model. However, different from the Model it also partially loaded on Writing and Reading. Scrutinizing this skill, it can be said that the preparation process for Oral Presentation requires Writing and Reading skills as well. Thus, it can be said that it is a multi-dimensional skill and can be categorized under Speaking-Reading and Writing.
20. Reading academic/scientific	0,619 READING	0,379 WRITING	-----	READING	It mainly loaded on Reading, which shows a match with the Model. It also partially loaded on Writing, which may be due to the integration of Reading and

journals/publications, papers, articles, texts					Writing skills for academic/scientific papers, articles, etc.
21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites	0,614 READING	0,371 WRITING	-----	READING	Similar to Item 20, this sub-skill may require the integration of Reading and Writing.
22. Reading instructions for assignments/ exams/projects/exercises/ labs	0,608 READING			READING	Complete match between the MA and the ESP Skills Model
23. Reading (online) study notes and texts, handouts	0,674 READING			READING	Complete match between the MA and the ESP Skills Model
24. Reading efficiently: comprehension and speed	0,602 READING	0,353 READING STRATEGIES		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
25. Skimming and scanning skills	0,565 READING	0,337 READING STRATEGIES		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model

26. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.	0,526 READING STRATEGIES	0,511 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
27. Reading and note taking	0,625 READING STRATEGIES	0,451 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
28. Summarizing	0,675 READING STRATEGIES	0,370 WRITING		READING & WRITING	Match between the MA and the ESP Skills Model. Different from the Model, it did not load under Reading but under Reading Strategies which is a sub-category of Reading.
29. Paraphrasing	0,700 READING STRATEGIES	0,401 WRITING		READING & WRITING	Match between the MA and the ESP Skills Model. Similar to item 28.
30. Reading and writing business letters, e-mails, faxes	0,422 WRITING	0,402 READING		READING & WRITING	Having loaded on both the Writing and Reading show match with the Model.
31. Occupational writing: lab reports, business	0,509 WRITING	0,411 READING STRATEGIES	-----	WRITING	It mainly loaded on writing, which shows a complete match. However, it partially loaded on

reports, field trip reports, (and abstracts for projects)					Reading Strategies as well, which shows partial disharmony.
32. Writing a CV/ Cover letter	0,608 WRITING		0,314 READING STRATEGI ES	WRITING	It mainly loaded on Writing, which shows great harmony with the Model. However, it also loaded on Speaking and Reading Strategies. Students may need some reading strategies before writing.
33. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.	0,563 WRITING	0,498 READING STRATEGIES	-----	READING & WRITING	Complete match between the MA and the ESP Skills Model
34. Writing assignment/homework	0,656 READING	-----	-----	READING & WRITING	It belongs to the Reading & Writing in the Model, but it loaded on the Reading only, which shows a partial match.
35. Writing essays: Planning, drafting, revising, editing	0,672 READING	0,312 WRITING	-----	READING & WRITING	Complete match between the MA and the ESP Skills Model
36. Academic vocabulary	0,599 WRITING	0,379 READING	-----	OTHER	Academic vocabulary can be included in all four skills. The results show that learners relate it mainly with Writing and Reading skills.

37.Field-specific/ technical vocabulary/terminologies	0,600 WRITING	0,472 READING	-----	OTHER	Field-specific/technical vocabulary/terminologies can be included in all four skills. The results show that learners relate it mainly with Writing and Reading skills.
38.Job interviews (application skills)	0,666 WRITING	0,370 SPEAKING	-----	OTHER	Job interviews can be categorized under several skills such as speaking, listening, writing, etc. and it is observed that learners mainly relate it with Writing and Speaking.
39. Translation	0,422 WRITING	-----	-----	OTHER	Translation requires the integration of multiple skills, but it is observed that ESP learners related it with Writing skill.
40. Use of Internet/technology (in English)	0,529 READING	0,306 LISTENING	-----	OTHER	Use of English on the internet/technology may require one or more English language skills. It is observed that ESP learners mainly related it to Reading and Listening skills.

3.3.2.2.9.2 The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EOP Part

Table 20

The Factor Analysis of the Student ESP Needs Analysis Questionnaire: EOP Part

Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
1.Listening		0,421				0,609
2.Speaking		0,509		0,304		0,512
3.Reading					0,445	0,542
4.Writing	0,400					0,628
5.Grammar	0,326					0,698
6.Vocabulary		0,338				0,597
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.		0,572	0,372		0,311	0,304
8. Understanding and following instructions in fieldwork/laboratory		0,482	0,307		0,439	
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations	0,303	0,528			0,352	
10. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)		0,434				
11.Listening and note-taking (in lectures/seminars/tutorials/ discussions/supervisions		0,619	0,302			
12. Asking and answering questions (in seminars, talks, lectures, field work, lab, discussions, after presentations, etc.)	0,363	0,606				
13. Participate/follow/engage in discussions		0,615		0,409		
14. Making video calls (Video-conferencing, skype/Whatsapp calls, etc.)		0,307	0,305	0,706		
15. Making phone calls				0,814		
16. Participating in communications in formal social interactions		0,411		0,613		
17. Participating in communications in informal interactions		0,372		0,604		
18. Making oral presentations		0,442	0,301	0,373		
19. Reading academic/scientific journals/publications, papers, articles, texts					0,690	
20. Field-related reading: articles, manuals, reports of projects, documents, blogs, and websites			0,314		0,636	

21. Reading instructions for projects//labs etc.			0,363	0,673	
22. Reading efficiently: comprehension and speed	0,474			0,434	
23. Skimming and scanning skills	0,534			0,371	
24. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.	0,565			0,390	
25. Reading and note taking	0,628			0,324	
26. Summarizing	0,770				
27. Paraphrasing	0,769				
28. Reading and writing business letters, e-mails, faxes			0,572	0,351	
29. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)	0,434		0,523	0,373	
30. Writing a CV/ Cover letter	0,334		0,571		
31. Writing essays: Planning, drafting, revising, editing	0,627			0,302	
32. Academic vocabulary	0,487		0,448		
33. Field specific/technical vocabulary/terminologies			0,622	0,373	
34. Job interviews (application skills)			0,671	0,325	
35. Translation	0,515		0,468		
36. Use of Internet/technology (in English)			0,582	0,335	

The table above shows that all 36 items in the EOP part of the questionnaire loaded on 6 factors in total. As in the EAP part, most components show harmony between the ESP Skills Model and the EOP part of the main administration. The components and each item of the EOP part of the main administration will be explained one by one in terms of the compatibility between the ESP Skills Model in Table 21.

Table 21

Item-by-item Analysis for the EOP Part of the Student Questionnaire

The EOP Item in the Main Questionnaire	The main factor it loaded on in MA	The factor it partially loaded on in MA	The 3 rd factor it loaded on in MA	The Category it Belongs to in the ESP Skills Model	Explanation
1.Listening	0,609 MAIN LANG. SKILLS- COMP.	0,421 LISTENING	-----	MAIN LANG. SKILLS- COMPONENTS	Match between the MA and the ESP Skills Model
2.Speaking	0,512 MAIN LANG. SKILLS- COMP	0,509 LISTENING	0,304 SPEAKING	MAIN LANG. SKILLS- COMPONENTS	Mainly loaded on Main Lang and Comp. factor. Furthermore, the third factor it loaded on is Speaking. They both show a match with the Model. However, the second factor it loaded on is Listening. It may be because there are a lot of sub-skills common to Listening and Speaking.
3.Reading	0,542 MAIN LANG. SKILLS- COMP	0,445 READING	-----	MAIN LANG. SKILLS- COMPONENTS	Complete match between the MA and the ESP Skills Model
4.Writing	0,628 MAIN LANG. SKILLS- COMP	0,400 READING & WRITING	-----	MAIN LANG. SKILLS- COMPONENTS	The main factor it loaded on is Main Lang Skills and Component, which shows a match with the Model. It further partly loaded in Reading & Writing as there are

					several sub-skills common to both. Thus, there is harmony.
5. Grammar	0,698 MAIN LANG. SKILLS- COMP	0,326 READING & READING STR.	-----	MAIN LANG. SKILLS- COMPONENTS	It mainly loaded on Main Lang. Skills and Components, which is in congruence with the Model. It further loaded on Reading & Reading Strategies, which may be because the learners relate Grammar to Reading skill in occupational context.
6. Vocabulary	0,597 MAIN LANG. SKILLS- COMP	0,338 LISTENING	-----	MAIN LANG. SKILLS- COMPONENTS	It mainly loaded on Main Lang. Skills and Components, which shows a match with the Model. It also partly loaded on Listening, which may be because students relate Vocabulary with Listening in an occupational context.
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.	0,572 LISTENING	0,372 READING & WRITING	0,311 READING	LISTENING	The main load of this item on the Listening component shows a match with ESP Skills Model. It further partly loaded on the Reading & Writing and also Reading components with lower factor loadings, which may be because <i>Listening to and Understanding Presentations or</i>

					<i>discussions in meetings/seminars, etc.</i> may require the integration of Reading and Writing skills in an occupational context.
8. Understanding and following instructions in fieldwork/laboratory	0,482 LISTENING	0,439 READING		LISTENING	Similar to item 7, the main load of this item on the Listening component shows a match with ESP Skills Model. It further partly loaded on the Reading with a lower factor loading, which may be because <i>Understanding and following instructions in fieldwork/laboratory</i> skills may require the integration of Reading skills as well, e.g., <i>Reading and Understanding instructions</i> .
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations	0,528 LISTENING	0,352 READING	0,303 READING STR.	LISTENING	It mainly loaded on the Listening component, which shows a strong match with the Model. These sub-skills may require Reading and the use of some Reading Strategies in some context e.g., reading the presentations while listening to them. Thus, there is no incongruence.

10. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)	0,434 LISTENING			LISTENING	Complete match between the MA and the ESP Skills Model
11. Listening and note-taking (in lectures/seminars/tutorials/discussions/supervisions)	0,619 LISTENING	0,302 WRITING		LISTENING & WRITING	Complete match between the MA and the ESP Skills Model
12. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)	0,606 LISTENING	0,363 SPEAKING	.	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model with the 1 st and 2 nd component loadings.
13. Participate/follow/engage in discussions	0,615 LISTENING	0,409 SPEAKING		LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model
14. Making video calls (Video-conferencing, skype/Whatsapp calls, etc.)	0,706 LISTENING & SPEAKING	0,307 LISTENING	0,305 READING & WRITING	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model
15. Making phone calls	0,814 LISTENING & SPEAKING	-----	-----	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model
16. Participating in communications in formal social interactions	0,613 LISTENING & SPEAKING	0,411 LISTENING	-----	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model
17. Participating in communications in informal interactions	0,604 LISTENING & SPEAKING	0,372 LISTENING	-----	LISTENING & SPEAKING	Complete match between the MA and the ESP Skills Model
18. Making oral presentations	0,373 LISTENING & SPEAKING	0,442 LISTENING	0,301 READING & WRITING	SPEAKING	It is expected this sub-skill to have loaded mainly on Speaking skills; but as stated before, the preparation process for Oral

					Presentation requires Writing and Reading skills as well. Thus, it can be said that it is a multi-dimensional skill and can be categorized under Speaking-Reading and Writing. Despite not being a complete match, there is still a strong congruence for this item.
19. Reading academic/scientific journals/publications, papers, articles, texts	0,690 READING	-----		READING	Complete match between the MA and the ESP Skills Model
20. Field-related reading: articles, manuals, reports of projects, documents, blogs, and websites	0,636 READING	0,314 READING & WRITING		READING	Strong match between the MA and the ESP Skills Model as it mainly loaded on Reading. On some occasions, field-related reading may be integrated with writing as well, which also shows harmony.
21. Reading instructions for projects/labs etc.	0,673 READING	0,363 READING & WRITING		READING	Similar to item 21, strong match between the MA and the ESP Skills Model as it mainly loaded on Reading. On some occasions, this sub-skill may be integrated with writing as well, which also shows harmony.

22. Reading efficiently: comprehension and speed	0,474 READING STR.	0,434 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
23. Skimming and scanning skills	0,534 READING STR.	0,371 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
24. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.	0,565 READING STR.	0,390 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
25. Reading and note taking	0,628 READING STR.	0,324 READING		READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
26. Summarizing	0,770 READING STR.	-----	-----	READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
27. Paraphrasing	0,769 READING STR.	-----	-----	READING; Reading Strategies	Complete match between the MA and the ESP Skills Model
28. Reading and writing business letters, e-mails, faxes	0,572 WRITING	0,351 READING		READING & WRITING	Complete match between the MA and the ESP Skills Model
29. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)	0,523 WRITING	0,373 READING		WRITING	Strong match as it mainly loaded on Writing. The partly loading on Reading does not show any incongruence either as this sub-skill may require reading in the writing process.

30. Writing a CV/ Cover letter	0,571 WRITING	0,334 READING STR.		WRITING	Strong match between the MA and the Model since it mainly loaded on Writing. However, it's partly loading on the Reading Strategies may be need of Reading Strategies while writing.
31. Writing essays: Planning, drafting, revising, editing	0,627 READING STR.	0,302 READING	-----	READING & WRITING	It's partly loading on Reading value shows a match, but not a strong one. Further, it's mainly loading on Reading Strategies but not on Writing shows incongruence with the Model.
32. Academic vocabulary	0,487 READING STR	0,448 WRITING	-----	OTHER	Academic vocabulary can be included in all four skills. The results show that learners relate it mainly with Writing and Reading skills.
33. Field-specific/technical vocabulary/terminologies	0,622 WRITING	0,373 READING	-----	OTHER	Field-specific/technical vocabulary/terminologies can be included in all four skills. The results show that learners relate it mainly with Writing and Reading skills.
34. Job interviews (application skills)	0,671 WRITING	0,325 SPEAKING	-----	OTHER	Job interviews can be categorized under several skills such as speaking, listening,

					writing, etc. and it is observed that learners mainly relate it with Writing and Speaking.
35. Translation	0,515 READING STR.	0,468 WRITING	-----	OTHER	Translation requires the integration of multiple skills, and it is observed that ESP learners related it with both Reading Strategies and Writing skill.
36. Use of Internet/technology (in English)	0,582 WRITING	0,335 READING	-----	OTHER	Use of English on the internet/technology may require one or more English language skills. It is observed that ESP learners mainly related it to Reading and Writing skills in occupational contexts.

3.3.3 Qualitative Instruments: Semi-structured Interviews and Graphic Elicitation Tasks

In order to collect data on the common ESP needs of learners from two other groups of stakeholders, namely ESP teachers and employees, semi-structured interviews and graphic elicitation tasks were used as instruments. Rubin and Rubin (2012) state that semi-structured individual interviews enable "depth to be reached" by giving the interviewer the chance to consider and expand on the interviewee's responses (p.88). Additionally, according to Bagnoli (2009), graphic elicitation tasks provide people the ability to think in ways other than verbally, which improves the incorporation of a lot more experience that verbal thinking could overlook (p.565-66). Concerning the graphic elicitation tasks in this study, participants were asked to create a visual representation, such as a drawing, graph, or symbol that depicted ESP learners' academic and occupational needs. After creating the visual representation, participants provided an explanation of the visual representation. Different interview protocols were developed for each group (Appendix I). For the development of the interview questions, the following sources and factors were taken into consideration:

- The needs analysis framework used for this study,
- The ESP sub-skills, techniques, and tasks taxonomy has been developed based on the extensive relevant literature review,
- The findings of the focus group and individual interviews.

3.3.3.1 Piloting the Interview Items and Graphic Elicitation Tasks

The semi-structured interviews were pre-piloted with three ESP teachers and three employees before the main administration. After the piloting stage, the questions were revised; some were omitted, and others were added. For instance, all three employees stated that they

could not remember their needs in academic settings or the ESP courses they took during their academic lives. Thus, questions related to this issue were omitted, and the interviews with the employees focused on their occupational language needs. Furthermore, after the piloted interviews with the ESP teachers, it was observed by the interviewer that the interviewees felt uncomfortable when they were asked, “*Have you had any training or expertise to teach subject-specific courses (occupational or academic English)?*” in a direct way, which affected the course of the interview negatively. Thus, it was decided to elicit this information with more indirect questions according to the interview flow.

3.3.3.2 Main Administration of the Interviews and Graphic Elicitation Tasks

Upon the necessary modifications were done after the piloting stage, the questions of the semi-structured interviews were made ready for the main conduction. The interviews were conducted in three ways: face-to-face, through online video-conferencing platforms, and phone callings, according to the availability and the preference of the participants.

During the interviews, bracketing was used to mitigate biases and preconceptions of the researcher. The adoption of this method and its help to overcome my own beliefs and assumptions was reflected in analytic memos in the first interviews, which facilitated my following interview processes. The objective of writing an analytic memo is “to document and reflect on your coding processes and code choices; how the process of inquiry is taking shape; and the emergent patterns, categories and sub-categories, themes, and concepts in your data – all possibly leading toward theory.” (Saldana, 2013, p.41). Thus, analytic memos were mainly used in the data collection phase of this study.

3.3.3.3 Confidentiality and Anonymity

Before the interviews, either written or oral consent from the participants was received. It provided the participants with an explanation of the research and its purpose. They were also granted confidentiality and anonymity. The first letters of pseudo-names were used in order to ensure anonymity. Additionally, the participants were ensured that the data collected through the interviews would not be shared with any person or institution and would be kept confidential.

3.3.3.4 Member checking

All of the interviews were recorded with the permission of the participants. Afterward, they were transcribed. After the interviews, participants were asked to do graphic elicitation tasks which were interpreted by the participants. The interpretations were also transcribed, and the transcriptions were integrated into the data collected through interviews. The member-checking method was adopted before the data analysis of both interviews and graphic elicitation tasks, contributing to the data's trustworthiness.

3.3.4 Qualitative Data Analysis: Coding and Analysis of the Interviews

Content analysis and initial coding methods were used to analyze the qualitative data collected from ESP teachers and workplace people. Initial Coding is breaking down qualitative data into discrete parts, closely examining them, and comparing them for similarities and differences (Strauss & Corbin, 1998, p. 102 as cited in Saldana 2013, p.100). According to Downe-Wambolt (1992, p.134), “Content analysis is a research method that provides a systematic and objective means to make valid inferences from verbal, visual, or written data in order to describe and quantify specific phenomena.” The first step of the content analysis was reading all the data thoroughly so as to get the gist of the data. Later on, the data was re-read and coded. Then, a codebook was created with the purpose of getting a better understanding of the

categorization. The codebook consisted of the names of the codes, their definitions, inclusion and exclusion criteria, and data examples. Table 22 shows the preliminary codebook of the data collected through the interviews and graphic elicitation tasks. The creation of the codebook paved the way for categorizing the codes under main themes.

Table 22

A part of the codebook developed for the present study

Code	Definition	Inclusion/Exclusion Criteria	Example from the Text
Making video calls	It refers to the need of ESP learners in their academic lives	Includes the practice and the needs in ESP class, and excludes the needs for an occupational setting	p.80 <i>For example, videoconferencing was used before the pandemic as well. Let's say it wasn't widely used, but it was used. It has become a necessity during the pandemic. It just accelerated the transition process for the use of it, and now it doesn't matter whether the pandemic is over or not, it has become a part of academic life now.</i>
Understanding different varieties of English	It refers to understanding the World Englishes in the occupational context	Includes the needs for the occupational setting Excludes the practice and the needs in ESP class and	p.36 <i>There will be various nationalities. I think they will be from very different countries. Especially today, we are in a period where we are already globalized. Therefore, they will be in contact with different people from many different countries and they will need to understand their accents.</i>
Field-related reading	It refers to the need of reading in an occupational context such as reading job-related documents, manuals, etc.	Includes the needs for the occupational setting Excludes in-class practice and needs	p.66 <i>While looking at how the operational processes can be, I don't have a source in Turkish. Because there may not be such companies working in Turkish, or let's say there may be less. Very little has been written about it. There is a Personal Data Protection Board for example. It has a sample guide, it is very limited, I mean not comprehensive, so at that point I prefer to look at the samples in Europe</i>

3.3.4.1 Reliability of Qualitative Data Analysis

A reflexivity journal was kept in the coding process, contributing to the reliability of the analysis process. The journal included the way I coded my data, the reason why I chose that way to code my data, and the outcomes of that coding. At the end of the analysis, the reflexivity journal helped me reflect on the coding process. More specifically, it allowed me to see if the analysis process was reliable and if the codes I obtained and the themes that emerged based on those codes supported my findings.

Furthermore, for the emerging themes' reliability, the transcriptions were coded by two raters for inter-coder reliability (ICR). With ICR, it could be seen how much the two raters were obtaining the same coding results. Percent agreement was used as a measurement for inter-rater reliability, and the percent agreement level was calculated as 76,51 %, which showed a satisfactory level of reliability.

4. RESULTS

This chapter presents the results of data analyses. The results of the ELT objectives of different levels are presented concerning the first research question. Next, the common EAP and EOP needs are analyzed from the perspective of different stakeholders. Then, the common core language is identified based on the common objectives across different ELT levels, and common ESP needs across different disciplines from the perspectives of different stakeholders. Afterwards, the English language objectives are suggested to be taught at different educational levels. Finally, the EGP threshold before the ESP instruction is identified based on the opinions of the different ESP stakeholders.

4.1 The Similarities and Differences of ELT Learning Objectives across High Schools, Preparatory Programs, and ESP Programs

The aim of the first research question of this study was to identify the common ELT learning objectives across three instructional levels: high schools, tertiary preparatory programs, and tertiary ESP programs. The following tables present the findings of the data collected for this research question.

4.1.1 Common Objectives Across Different ELT Levels

Table 23 demonstrates the common ELT objectives across high schools, preparatory programs, and ESP programs. As can be seen, the Listening part has four common objectives across the three levels. These objectives are to *Listen and Note-taking*, *Identify the main ideas while listening to a conversation and/or an academic lecture*, *Listen and identify details*, and *Make inferences*. In the Speaking part, five common objectives can be seen. These objectives are to *Participate in discussions/debates*, *Ask and answer questions*, *express themselves efficiently*,

participate in dialogues/conversations about various topics, and speak, interact, and express themselves orally with acceptable fluency, accuracy, and confidence. The Reading part has nine common ELT objectives across the three levels: *Read and Comprehension, Identify (stated and/or implied) main idea(s) in a text, Identify specific information/reading for specific information, Make inferences, Use reading strategies such as skimming and scanning, and Guess/ Infer the words in a text they do not know from context, Summarize, Paraphrase, and Reading and note-taking.* Lastly, in the Writing part, four common objectives are observed. These are to *Write formal types of letters, Write different types of e-mails, Write paragraphs, and Write essays.*

Table 23

Common Objectives Across 3 Levels: ESP, Prep, High Schools (The Core Language Features)

LISTENING	1. Listen and Note-taking
	2. Identify the main ideas while listening to a conversation and/or an academic lecture
	3. Listen and identify details
	4. Listen and make inferences
SPEAKING	5. Participate in discussions/debates
	6. Ask and answer questions
	7. Express themselves efficiently
	8. Take part in dialogues/conversations about various topics
	9. Speak, interact, and express themselves orally with acceptable fluency, accuracy, and confidence
READING	10. Reading and Comprehension,
	11. Identify (stated and/or implied) main idea(s) in a text
	12. Identify specific information/reading for specific information
	13. Make inferences
	14. Use reading strategies such as Skimming and Scanning
	15. Guess/infer the words in a text they do not know from context
	16. Summarize
	17. Paraphrase
	18. Read and note-taking
WRITING	19. Write formal types of letters
	20. Write different types of e-mails
	21. Write paragraphs
	22. Write essays.

After analyzing the common objectives across three ELT educational levels, the commonalities between the two levels, ESP programs and preparatory programs, are identified. As can be seen in Table 24, there are three common objectives between the ESP and preparatory programs: *Speak at an academic/professional level*, *Listen and follow at academic and occupational levels*, and *Synthesize*. These objectives do not exist in High Schools but are common to ESP and preparatory programs.

Table 24

Common Objectives Across ESP and Preparatory Programs

1. Speak at an academic/professional level
2. Listen and follow at academic and occupational levels
3. Synthesize

The next step was the identification of the common objectives between the two other levels: ESP programs and High schools. As can be observed from Table 25, there is one common ELT objective between ESP programs and high schools. This objective is to *Making phone calls*.

Table 25

Common Objectives Across ESP Programs and High Schools

1. Make phone calls

Table 26 shows the common ELT objectives between the preparatory programs and high schools. As can be observed from the table, the commonality between these two levels is quite higher in comparison with the commonality between the ESP programs and high schools.

Table 26*Common Objectives Across Prep Programs and High Schools*

LISTENING	1. Detect/identify/list frequently used or familiar words/phrases/expressions about different kinds of topics in a recorded text or video
	2. Do tasks/activities and respond to the questions while and/or after listening to a recorded text/video, to give descriptions on a variety of topics
	3. Listen to short and simple monologues and dialogues to understand short and simple instructions and directions and to get the basic personal information and descriptions.
	4. Identify the speaker's mood, tones, and purposes in a recorded text/video.
SPEAKING	5. <i>Introduce themselves and others such as their family members</i>
	6. Convey messages orally by producing intelligible English sounds, stress, and intonation features/correct and legible pronunciation of words
	7. Communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters.
	8. Convey their ideas clearly and coherently
READING	9. Analyze a text
	10. Ask and answer questions about a text.
WRITING	11. Write descriptions about everyday aspects of their environment and personal experiences
VOCABULARY	12. Acquire a growing vocabulary for both receptive and productive language use /choose precisely the words for discourse
	13. GE vocabulary: Students can understand, vocabulary phrases and expressions related to areas of most immediate priority (e.g., very basic personal and family information, shopping, local geography, employment) provided speech is clearly and slowly articulated.

After identifying the common objectives between the two levels, the objectives exclusive to each level were listed. Table 27 shows the ELT objectives that are included in ESP programs but not in the preparatory programs and high schools.

Table 27

Objectives Exclusive to ESP

1. Apply critical listening skills effectively
2. Express themselves in English on related topics in academic and/or occupational settings
3. Improve reading and comprehension skills in academic, technical, and job-related topics
4. Do field-related reading
5. Make (critical) textual analysis
6. Academic writing: academic tasks, papers, scientific and technical writing
7. Professional/job-related writing: e.g., technical writing
8. Write a project: Plan, conduct, and finalize
9. Fill out and write different types of reports: academic, business, and job-related
10. Write CV and cover letters
11. Learn, understand, and use academic, scientific vocabulary-terminology
12. Learn, understand, and use job-related, technical vocabulary-terminology
13. Translation skills
14. Conceptual knowledge: Learn, know, discuss, analyze, and use major-related concepts
15. Learn, improve, and use language concisely and precisely

The ELT objectives exclusive to the preparatory programs are introduced in the following table. These objectives are offered only in the preparatory programs, not high schools or ESP programs.

Table 28*Objectives Exclusive to Preparatory Programs*

1. Recognize the sequential information in a lecture
2. Decide what certain pronouns/determiners/ etc. refer to in a text/ identify reference words

Lastly, the ELT objectives that are exclusive to high schools but not offered in preparatory and ESP programs are listed in Table 29.

Table 29*Objectives Exclusive to High Schools*

1. Diagrammatize a text on various topics.
2. Evaluate a text.

4.1.2 Common Objectives Across Skills

After the categorization of the common ELT objectives across the levels, the same objectives were classified in terms of commonalities across main language skills: Listening, Speaking, Reading, and Writing. Table 30 shows the list of the objectives that are common across these four main language skills.

Table 30*Common objectives across all language skills*

1. Ask and answer questions (about a written/recorded text or video)
2. Acquire a growing vocabulary for both receptive and productive language use /choose precisely the words for discourse
3. Make effective English presentations: planning, researching, collecting info, organizing, and presenting by using appropriate body language, voice, and visuals
4. Students can understand, vocabulary phrases and expressions related to areas of most immediate priority
5. Learn, understand, and use academic, scientific vocabulary-terminology
6. Learn, understand, and use job-related, technical vocabulary-terminology
7. Translation skills
8. Conceptual knowledge: Learn, know, discuss, analyze, and use major-related concepts
9. Learn, improve, and use language concisely and precisely
10. Do a task while listening to a recorded text/video: complete, list, classify, and organize, etc.
11. Synthesis skills
12. Summarizing
13. Paraphrasing
14. Learn, improve, and use language concisely and precisely
15. Acquire conceptual knowledge
16. Learn research techniques

Afterward, common ELT objectives were analyzed across three language skills: Reading, Listening, and Speaking. As seen in the table below, the common objective across these language skills is to *Use strategies: Listening, Reading, and Speaking*.

Table 31*Common objectives across Reading, Listening, and Speaking*

1. Use strategies: Listening, Reading, and Speaking

The common ELT objective across another categorization of language skills, Reading, Writing, and Speaking, was found *to evaluate a text*.

Table 32

Common Objectives Across Reading, Writing, and Speaking

1. Students will be able to evaluate a text.
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Next, the common ELT objectives between Reading and Listening are introduced in Table 33.

Table 33

Common objectives across two skills: Reading and Listening

1. Reading/Listening and Note-taking
2. Identify (stated and/or implied) main point and ideas(s)
3. Identify specific information
4. Identify details
5. Make inferences/ Listen and/or read between lines
6. Make predictions
7. Comprehension skills: Listen and understand, read and understand.
8. Critical listening and reading
9. Guess/ infer meanings of unfamiliar words/lexis/jargon from a (recorded or written) text and/or video.
10. Identify the speaker's mood, tones, and purposes in a recorded text/video
11. Students will be able to respond to the questions related to the topic of a recorded text/video.
12. Detect/identify/list frequently used or familiar words/phrases/expressions about different kinds of topics in a recorded text or video
13. Do tasks/activities and respond to the questions while and/or after listening to a recorded text/video, to give descriptions on a variety of topics
14. Identify the speaker's mood, tones, purposes
15. GE vocabulary: Students can understand vocabulary phrases and expressions related to areas of most immediate priority (e.g. very basic personal and family information, shopping, local geography, employment) provided speech is clearly and slowly articulated.
16. Critical textual analysis (listening/reading)
17. Recognize the sequential information in a lecture
18. Decide what certain pronouns/determiners/ etc. refer to in a text/ identify reference words

The common objectives between Speaking and Listening are presented in Table 34.

Table 34

Common objectives across two levels: Speaking and Listening

1. Participate in discussions/debates
2. Asking and answering questions about familiar topics; job-related and/or academic settings
3. Take part in conversations
4. Effective communication skills: speak and interact with acceptable fluency, accuracy, and confidence
5. Making phone calls
6. Perform well in a job interview
7. Communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters.

Table 35 shows the common ELT objectives between Reading and Writing.

Table 35

Common objectives across two levels: Reading and Writing

1. Read and write e-mails, letters, etc.
2. Write a project: Plan, conduct, and finalize
3. Writing formal types of letters
4. Fill out and write different types of reports: academic, business, and job-related
5. Students will be able to diagrammatize a text on various topics.
6. Academic writing: academic tasks, papers, scientific and technical writing
7. Professional/job-related writing: e.g. technical writing
8. Write a project: Plan, conduct, and finalize
9. Fill out and write different types of reports: academic, business, and job-related.

No skill common to Reading and Speaking is identified. Finally, the ELT objectives exclusive to each main language skill were listed. In Table 36, the ones that are exclusive to Listening skill are presented.

Table 36

Objectives Exclusive to Listening

1. Recognize the sequential information in a lecture,
2. Recognize the rhetorical cues in a lecture
3. To listen and follow at academic and occupational levels
4. Listen to short and simple monologues and dialogues to understand short and simple instructions and directions and to get the basic personal information and descriptions.

The ELT objectives exclusive to Speaking skill are given in Table 37.

Table 37

Objectives Exclusive to Speaking

1. Express themselves in English on related topics in academic and/or occupational settings
2. Develop job-related and academic speaking skills: express, define, and describe academic and/or job-related topics
3. Talk in detail on a wide range of topics: experiences, feelings, reactions, movies, books, surveys, and other topics which are familiar or of personal interest.
4. Convey messages orally by producing intelligible English sounds, stress, and intonation features/correct and legible pronunciation of words
5. Convey their ideas clearly and coherently
6. Introduce themselves and others such as their family members
7. To speak at an academic/professional level
8. Expressing themselves efficiently

Below are the ELT objectives exclusive to Reading.

Table 38

Objectives Exclusive to Reading

1. Follow, read, understand, and interpret scientific and/or major-related literature
2. Do field-related reading
3. Analyze a text
4. Using reading strategies such as Skimming and Scanning

The four ELT objectives that are exclusive to Writing are identified as the following:

Table 39

Objectives Exclusive to Writing

1. Write paragraphs and essays
2. Write texts in job-related contexts
3. Write technical and scientific writings
4. Write CV and cover letters
5. Write descriptions about everyday aspects of their environment and personal experiences

4.2 Common ESP Needs Across Three Macro Disciplines

The purpose of the second research question of the present study is to identify the common ESP needs of learners in different academic disciplines and employees working in different professional areas. For this purpose, a questionnaire was developed to collect data from tertiary-level students in different disciplines. In the analysis of the common needs across different disciplines, chi-square analysis was used in order to determine the critical value for the

minimum number of frequencies that would make it different or similar. For the macro discipline Technology, the critical value was calculated as 118,805; for the Physical Sciences, it was calculated as 77,08; for the Social Sciences, it was calculated as 96,58. Thus, the items with a frequency above these values for each discipline were considered a common skill.

Furthermore, semi-structured qualitative interviews and graphic elicitation tasks were used to collect data from two other stakeholders, namely ESP instructors and employees. The following sections will present the results of the questionnaire administered to students and the findings of the qualitative interviews conducted with ESP instructors and employees.

4.2.1 Common EAP Needs

4.2.1.1 Common EAP Needs from the Perspectives of Students

The first main part of the ESP needs analysis questionnaire aimed to analyze students' EAP needs. The chi-square results of the EAP parts for three macro disciplines are given in the table below:

Table 40

Frequency of the Answers to the Options Sufficiently and A Lot by Students from Three Macro Disciplines to the EAP Part

	TECHNOLOG Y		PHYSICAL SCI.		SOCIAL SCI.	
	Critical Value: 118,805		Critical Value: 77,08		Critical Value: 96,58	
	Suff.	A lot	Suff.	A lot	Suff.	A lot
1. Listening	162	164	92	106	113	143
2. Speaking	139	116	78	57	105	102
3. Reading	138	191	75	128	94	170
4. Writing	158	114	99	71	106	124
5. Grammar	166	54	94	48	130	67
6. Vocabulary	170	143	102	83	123	117
7. Listening to and understanding lectures	129	208	85	117	104	157
8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.	135	190	82	109	111	135
9. Understanding and following instructions in fieldwork/laboratory.	142	179	79	107	118	106
10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations	162	158	90	101	128	111
11. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, and Chinese, etc.)	135	91	78	65	117	63

12. Listening and note taking (in lectures/ seminars/tutorials/ discussions/supervisions.	166	120	95	87	140	96
13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)	148	128	93	82	132	88
14. Participate/follow/engage in in-class discussions	160	107	101	62	138	84
15. Making video calls (Video-conferencing, skype/WhatsApp calls, etc.)	142	104	78	52	106	83
16. Making phone calls	134	79	64	41	84	66
17. Participating in communications in formal social interactions	142	109	88	64	138	76
18. Participating in communications in informal interactions	135	86	91	46	130	58
19. Making oral presentations	135	129	88	73	104	109
20. Reading academic/scientific journals/publications, papers, articles, texts	143	179	74	118	101	145
21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites	135	179	76	113	116	124
22. Reading instructions for assignments/exams/projects/exercises/labs	142	169	92	104	126	116
23. Reading (online) study notes and texts, handouts	147	152	98	94	140	99
24. Reading efficiently: comprehension and speed	167	126	101	77	128	102
25. Skimming and scanning skills	181	119	96	74	138	94

26. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.	176	118	107	78	138	101
27. Reading and note-taking	169	123	104	84	139	105
28. Summarizing	172	110	105	77	147	93
29. Paraphrasing	161	106	92	73	123	92
30. Reading and writing business letters, e-mails, faxes	144	134	84	80	118	102
31. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)	139	155	76	99	114	95
32. Writing a CV/ Cover letter	143	141	86	83	129	88
33. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.	126	167	65	115	108	112
34. Writing assignment/homework	167	135	111	79	128	116
35. Writing essays: Planning, drafting, revising, editing	148	127	84	91	118	109
36. Academic vocabulary	140	162	85	108	111	120
37. Field-specific/technical vocabulary/terminologies	132	176	85	107	113	117
38. Job interviews (application skills)	139	147	86	87	112	107
39. Translation	166	116	89	71	119	96
40. Use of Internet/technology (in English)	124	204	77	115	118	123

As can be seen in Table 40, the items that can be considered to be common from the perspectives of the students from macro disciplines Technology, Physical Sciences and Social Sciences are: *Listening, Speaking, Reading, Writing, Grammar, Vocabulary, Listening to and understanding lectures, Listening to and understanding presentations or discussions in*

meetings/seminars/ conferences/talks etc., Understanding and following instructions in fieldwork/laboratory, Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations, Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.), Listening and note-taking (in lectures/seminars/tutorials/ discussions/supervisions, Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.), Participate/follow/engage in in-class discussions, Making video calls (Videoconferencing, skype/WhatsApp calls, etc.), Participating in communications in formal social interactions, Participating in communications in informal interactions, Making oral presentations, Reading academic/scientific journals/publications, papers, articles, texts, Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites, Reading instructions for assignments/exams/projects/exercises/labs, Reading (online) study notes and texts, handouts, Reading efficiently: comprehension and speed, Skimming and scanning skills, Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc., Reading and note-taking, Summarizing, Paraphrasing, Reading and writing business letters, e-mails, faxes, Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects), Writing a CV/ Cover letter, Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc., Writing assignment/homework, Writing essays: Planning, drafting, revising, editing, Academic vocabulary, Field-specific/technical vocabulary/terminologies, Job interviews (application skills), Translation, and Use of Internet/technology (in English).

Based on the results of the Chi-square analysis above, tables of common EAP needs from the perspective of students from three different academic skills are listed in a table (Appendix J).

4.2.1.2 Common EAP Needs from the Perspective of ESP Teachers

In line with the purpose of the second research question, the perspectives of ESP teachers on the EAP needs of students from three different macro disciplines were asked through semi-structured interviews and graphic elicitation tasks. The data were analyzed, coded, and later categorized under sub-themes and themes. Based on the analyzed data collected from the ESP teachers about the academic needs of students from different disciplines, four themes were obtained: *The common EAP needs*, *EGP level*, *Discipline-specific knowledge of ESP teachers*, and *ESP Course Design*. These themes will be scrutinized below.

4.2.1.2.1 The Common EAP needs

Main language skills and elements

One of the themes created from the data collected from ESP teachers teaching learners from three disciplines is ESP learners' EAP needs. *Main language skills and elements* is a sub-theme that falls under this theme. The codes categorized under this sub-theme are *Listening*, *Speaking*, *Reading*, *Writing*, *Grammar*, and *Vocabulary*. All of the ESP teachers who participated in the interviews stated that the learners studying in three different disciplines needed Listening, Speaking, Reading, and Writing skills for their studies at the undergraduate level. Concerning these codes, an ESP teacher teaching Sociology students indicated, "*It (the ESP course) includes all of the exercises covering all four skills, reading, listening, writing, speaking, and vocabulary exercises*". Furthermore, another ESP teacher teaching Business students stated, "*...but of course, there are still problems in the use of English, both in grammar and in professional use. We understand it a lot when we come face to face with students*".

Listening-related sub-skills

Another sub-theme that was categorized under the *Common EAP needs* was *Listening-related sub-skills*. The codes analyzed under this sub-theme were *Listening to and understanding lectures*, *Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks, etc.*, *Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations*, and *Understanding different varieties/accents of English*, and *Listening and note-taking*. With respect to the code *Understanding different varieties/accents of English*, an ESP teacher teaching both Computer and Electric-Electronic Engineering students stated that

“They need to understand different accents because this is an international university, there are many students, and there are Nigerian students among them. There are also international students coming from Poland. There are already students from Romania coming from France”.

Moreover, with reference to code *Listening and note-taking*, another ESP teacher teaching Sociology students emphasized that *“...they will take notes of what they listen to, and then they will write a piece of it. We practice this, and they listen to it in the lessons. When they listen, they take notes”.*

Listening-Speaking-related sub-skills

Listening and Speaking-related sub-skills is another sub-theme categorized under the *Common EAP needs* theme. The codes that fall under this category are *Asking and answering questions*, *Participating/following/engaging in in-class discussions*, *Making video calls*, and *Participating in communications in formal social interactions*. Most ESP teachers interviewed

mentioned the importance of these sub-skills for students' studies. About the code Making video calls, an ESP teacher teaching students from Maths, Chemistry, and Physics majors expressed his opinion through a graphic elicitation task and explained what he meant as follows:

"For example, video-conferencing was used before the pandemic as well. Let's say it wasn't widely used, but it was used. It has become a necessity during the pandemic. It just accelerated the transition process for the use of it, and now it doesn't matter whether the pandemic is over or not; it has become a part of academic life now."

With regard to the code *Asking and answering questions*, an ESP teacher teaching Sociology students pointed out the following:

"...of course, they will learn how to ask questions through life experience. However, they need to ask and answer in the class as well. So, we're teaching them the technique of asking questions here".

Oral presentation skills

Oral presentation skill is another theme that emerged from the codes. The codes under this theme are *Preparing a presentation* and *Presentation-delivering skills*. Almost all the ESP teachers interviewed on the EAP needs of the learners from different disciplines highlighted the importance of oral presentation skills for the English academic needs of the learners. Concerning the code, an ESP teacher teaching the students from the Electrical-Electronics and Mechanical Engineering majors said the following:

"...They will need to make presentations not only for their academic lives but also for their business lives. While delivering the presentation, it is not only the phrases to use correctly but also body language, eye contact, etc. "

Furthermore, in the graphic elicitation task, an ESP teacher teaching students from International Relations drew a student making a presentation in the class, and she explained that

“Presentation is a must for them. We make small presentations whenever we have the opportunity. They also learn how to prepare it.”

Reading-related sub-skills

A further theme that emerged from the data analyzed was *Reading-related EAP sub-skills*. The codes categorized under this theme are *Academic and Scientific Reading; Major-related Reading; Reading instructions for assignments/exams/ projects/exercises /labs; Reading (online) study notes and texts, handouts, Reading efficiently: comprehension and speed, Skimming and scanning skills, Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc. and Reading and note-taking*. Most ESP teachers pointed out the importance of the reading-related sub-skills for the English academic studies of students from different disciplines. Among them, an ESP teacher teaching International Relations students said, *“They are (skimming and scanning) very important reading skills, so we try to reinforce them with related questions in the exams.”* Another ESP teacher teaching Business students affirmed the following:

“...of course, there are very long texts, for example....so let's say it's very long, let's say a report with 304 or with a 100-page report, for example. Sometimes I try to make certain parts of it to be read. There, for example, they need to use reading strategies in order to use time more effectively.”

Writing-related sub-skills

Writing and reading e-mails, Occupational writing, Writing assignments/homework, and Writing essays are the codes that formed the sub-theme *Writing-related EAP sub-skills*. ESP teachers expressed how the writing-related sub-skills were essential for their students' academic studies. Concerning the code *Writing and Reading e-mails*, an ESP teacher teaching students at Economics pointed out the following:

“...in other words, even e-mail correspondence is important on its own. You know, there are different rules there, too. That is, the proficiency of the language used in the English addressing there. The length of the text, things like the closing sentence.”

Another ESP teacher teaching Business department students expressed the following statements concerning the code *Occupational Writing*: *“...For example, writing a report as I think that they will need to do reporting a lot. Thus, we include activities for writing reports a lot in our course.”*

Additionally, concerning code *Writing essays*, an ESP teacher teaching Computer and Electric-Electronic Engineering students pointed out the following:

“What they need, academically is that they need to know how to write an academic paragraph. But they learn it in prep school. However, they later forget them, but they should at least write an article to support their own ideas. They need to know how to write articles. While doing this, they need to know why thesis statement and supporting details are important, in terms of academic rules.”

Job-application skills

Job application skills is another sub-theme created based on the codes. *Job interviews* and *Writing a CV and/or cover letter* are the codes categorized under this theme. Concerning the code *Writing a CV and/or cover letter*, another ESP teacher teaching Business students stated the following:

“...so we make students prepare cover letters as well. As I just said, these things are all based on impression. In other words, you want to make a good impression on the employer before you go to the interview. One of the ways to achieve this as a candidate is the cover letter we mentioned. In the cover letter, for example, it is very important for them to express themselves.”

Besides, another ESP teacher teaching Sociology students said the following statements with reference to the code *Job interviews*: “...of course, we inform our students about what they should do during the interview, what kind of behaviors they should do, body language gestures, etc.”

Vocabulary use in EAP

Vocabulary use in EAP is another sub-theme categorized under the theme of *the Common EAP needs*. The codes categorized under this sub-theme are *Academic Vocabulary* and *Field-specific vocabulary*. Most ESP teachers mentioned that *academic and field-specific/technical vocabulary* is crucial for academic studies. Concerning the code *Academic Vocabulary*, an ESP teacher teaching Business students pointed out the following:

“Because you know, you can’t always open the dictionary and look at the meaning of every word or use the translation...so it is important to know those academic words.

Another ESP teacher stated the knowledge of field-specific words for her students, “*Apart from this, I try to teach the terminology related to Economics as I think they are very crucial for their future jobs.*”

EGP Level

The EGP level is another theme that emerged from the analyzed data. The codes grouped under this theme are the *Insufficient EGP level of ESP students* and *the threshold to take ESP courses*. Many ESP teachers indicated that students taking ESP courses did not have a sufficient general English level, so they had to meet that lack of students on the one hand and teach ESP on the other. Concerning the code *insufficient EGP level of ESP students*, an ESP teacher teaching students from Maths, Physics, and Chemistry expressed the following:

“While trying to establish the terminology, I also try to support the grammar. Otherwise, their English level is not sufficient. We definitely need to support their general English...In other words, we also do grammar exercises as well.”

Besides, concerning the other code under this theme, *the threshold to take an ESP course*, most ESP teachers stated that students' EGP level should be at least B1. Regarding this issue, an ESP teacher teaching students in Economics expressed her opinions through a graphic elicitation task and explained that “It is really difficult to cover an advanced ESP class with students who

have very low language proficiency, so I think they need at least a B1 to take this course, but a real B1”.

Discipline-specific Knowledge

Discipline-specific knowledge is another theme obtained from the codes extracted from the data of the interviews with ESP teachers. The codes that fall under this theme are *ESP teachers as language teachers* and *ESP teachers as not language teachers*. The former refers to the language teachers, mostly from Foreign Language School departments of the university teaching ESP to a specific discipline or a variety of disciplines; he or she may or may not have discipline-specific knowledge. On the other hand, the latter refers to an ESP teacher from the department or faculty who has discipline-specific knowledge but needs to gain pedagogical knowledge of language teaching. Among the ESP teachers interviewed for the common needs of ESP learners, most of them were language teachers with the pedagogical formation of language teaching. However, most of these language teachers were not experts in very specific discipline knowledge.

The number of ESP teachers as not language teachers interviewed for this study was lower than the language teachers. Unlike the teachers with language-teaching backgrounds, they had very specific discipline knowledge as they were already working as lecturers in their departments. However, the ESP course they were teaching was mostly based on translating discipline-related texts or teaching the terminology specific to that discipline. In addition to not having any knowledge of language teaching approach or methodology, they mainly believed that it should be the job of departmental lecturers to teach ESP courses to students in their disciplines as a language teacher from the School of Foreign Languages cannot be experts in their disciplines. Concerning this, an ESP teacher who was also a lecturer in the Department of Business Administration said the following:

“Once there was a debate concerning this issue. There were instructors from the School of Foreign Languages who wanted to teach ESP courses in our department and it surprised me a lot. Because it seems difficult to me to teach ESP without knowing our discipline. For example, I cannot teach this course to students studying Economics as I don’t have a good command of the terminology of that discipline.”

ESP Course Design

ESP course design is the last theme that emerged from the first part of the interviews conducted with ESP teachers from different disciplines. The codes under this theme are the *Conduction of the Needs Analysis* and *Selection/Development of Materials*. It was inferred from the data that most of the ESP teachers did not conduct a Needs Analysis for the ESP course design. Some designed the course by consulting it with the departmental lecturers. Some others took the course over from another ESP teacher and continued accordingly. Concerning this, an ESP instructor teaching Physical Sciences students stated, *"I took this course over from another ESP teacher and continued it in the way she did"*.

Furthermore, most materials developed or selected for the ESP course were not based on needs analysis. Only the few ESP instructors who conducted an ESP needs analysis either developed the material or adapted the ESP book according to the needs of their students. The materials they used mainly belonged to a specific publishing house that publishes ESP books specific to various majors. Concerning the materials used, an ESP teacher teaching Computer Engineering students stated, *"I use an ESP book specific to Computer Engineering from... Publishing House"*.

To sum up, four themes were obtained from the PSA part of the ESP instructor interviews. One of the themes consisted of related sub-themes, and each sub-theme included related codes. The other three themes entailed relevant codes. The summary of the themes, sub-themes, and codes obtained from this section is listed in a table (Appendix K).

4.2.1.3 The Common EAP Needs from the Perspective of Two Stakeholders: Students and ESP Teachers

The students' answers from three macro disciplines were analyzed, and the common EAP needs of these three disciplines, namely Technology, Physical Sciences, and Social Sciences, were listed in the previous section. Furthermore, the above section analyzed and listed the common EAP needs from the perspective of ESP teachers teaching students from those three macro disciplines. As a third step to identify the common EAP needs, the common answers according to these two different groups of stakeholders were crosschecked, and the commonalities between them were identified. Accordingly, from the perspective of students and ESP teachers, 32 common EAP skills students were studying in three different macro disciplines needed for their academic studies. These common EAP skills are presented in the following table:

Table 41

Common EAP Needs from the Perspective of Students and ESP Teachers

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary

7. Listening to and understanding lectures
8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
10. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)
11. Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.
12. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)
13. Participate/follow/engage in in-class discussions
14. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
15. Participating in communications in formal social interactions
16. Making oral presentations
17. Reading academic/scientific journals/publications, papers, articles, texts
18. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
19. Reading instructions for assignments/exams/projects/exercises/labs
20. Reading (online) study notes and texts, handouts
21. Reading efficiently: comprehension and speed
22. Skimming and scanning skills
23. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
24. Reading and note-taking
25. Reading and writing business letters, e-mails, faxes
26. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
27. Writing a CV/ Cover letter
28. Writing assignment/homework
29. Writing essays: Planning, drafting, revising, editing
30. Academic vocabulary
31. Field-specific/technical vocabulary/terminologies
32. Job interviews (application skills)

4.2.1.4 Common EAP Needs Between Two Disciplines and EAP Needs Exclusive to Each Discipline

The commonalities between the two disciplines, namely the Technology and Physical Sciences, were analyzed upon identifying the common needs across the three disciplines. However, no needs were found to be common only to these two disciplines but not to the other disciplines. Next, the common needs between Technology and Social Sciences were examined. As can be observed in the table below, one common need was identified between these two disciplines: *Making phone calls*.

Table 42

Common EAP Needs Between Two Disciplines: Technology and Social Sciences

1. Making phone calls

Afterward, the analysis of common needs between the two disciplines, the Social Sciences and Physical Sciences, were examined, and it was found that there were no common needs only to these disciplines but not to the other discipline. Lastly, the EAP needs exclusive to each discipline were examined, and it was identified that there were no needs specific to the Technology discipline. Similarly, no EAP needs were found to be specific only to the Physical Sciences or Social Sciences discipline.

4.2.2 Common EOP Needs

4.2.2.1 Common EOP Needs from the Perspective of Students

The second main part of the ESP needs analysis questionnaire consists of the items to analyze students' EOP needs. The chi-square results of the EOP parts for three macro disciplines are given in Table 43:

Table 43

Frequency of the Answers to the Options Sufficiently and A Lot by Students from Three Macro Disciplines to the EOP Part

	TECHNOLOGY		PHYSICAL SCI.		SOCIAL SCI.	
	Critical Value: 118,805		Critical Value: 77,08		Critical Value: 96,58	
	Suff.	A lot	Sufficiently	A lot	Sufficiently	A lot
1. Listening	95	250	50	159	80	198
2. Speaking	81	265	52	161	62	209
3. Reading	113	232	54	152	86	185
4. Writing	109	207	65	131	81	179
5. Grammar	167	122	90	93	126	117
6. Vocabulary	133	219	61	148	90	180
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.	115	231	55	155	81	193
8. Understanding and following instructions in fieldwork/laboratory	122	223	59	149	86	172
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations	132	205	69	135	98	170
10. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)	136	176	67	120	92	156
11. Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.	151	183	70	130	99	167
12. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)	133	201	65	140	84	182
13. Participate/follow/engage in discussions	127	206	71	134	91	170
14. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)	137	192	64	125	84	172

15. Making phone calls	126	180	66	122	81	165
16. Participating in communications in formal social interactions	135	198	71	134	92	167
17. Participating in communications in informal interactions	146	170	69	122	102	149
18. Making oral presentations	136	190	63	136	74	176
19. Reading academic/scientific journals/publications, papers, articles, texts	122	212	62	141	90	169
20. Field-related reading: articles, manuals, reports of projects, documents, blogs, and websites	131	213	63	139	84	178
21. Reading instructions for projects//labs etc.	141	193	74	130	92	151
22. Reading efficiently: comprehension and speed	139	184	83	115	98	162
23. Skimming and scanning skills	151	174	87	110	99	161
24. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.	130	199	73	128	104	161
25. Reading and note taking	142	173	72	126	102	159
26. Summarizing	142	165	68	126	101	156
27. Paraphrasing	137	154	80	110	107	148
28. Reading and writing business letters, e-mails, faxes	111	220	68	137	72	192
29. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)	123	205	49	148	94	168
30. Writing a CV/ Cover letter	125	206	58	143	94	168
31. Writing essays: Planning, drafting, revising, editing	131	177	68	127	88	154
32. Academic vocabulary	120	205	65	136	86	168
33. Field-specific/technical vocabulary/terminologies	110	231	60	145	76	181
34. Job interviews (application skills)	110	221	62	143	88	171
35. Translation	125	170	84	107	95	147
36. Use of Internet/technology (in English)	107	238	56	149	77	185

As seen in the table above, the frequencies of answers, either *Sufficiently* or *A lot*, by the students from the macro discipline Technology are all above the critical value of 118,805, which shows that all the items are important for the students from Technology. Similarly, the frequencies of answers by the students from the macro discipline Physical Sciences are also above the critical value of 77,08. It demonstrates that, like the students from the Technology, the ones from the Physical Sciences see those items as necessary for their majors. Lastly, the frequencies of all answers by the students from the macro discipline of Social Sciences are above the critical value of 96,58. It shows that, like the other two macro disciplines, students from the Social Sciences see all these items as important. Thus, it can be said that all the following EOP skills and sub-skills are common to three different macro disciplines: Technology, Physical Sciences, and Social Sciences. Thus the common EOP needs are *Listening; Speaking; Reading; Writing; Grammar; Vocabulary; Listening to and understanding presentations or discussions in meetings/seminars/ conferences/talks, etc.; Understanding and following instructions in fieldwork/laboratory; Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations; Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.); Listening and note taking (in lectures/seminars/tutorials/ discussions/supervisions; Asking and answering questions (in the seminars, talks, fieldwork, lab, discussions, after presentations, etc.); Participating/follow/engaging in discussions; Making video calls (Video-conferencing, skype/WhatsApp calls, etc.); Making phone calls; Participating in communications in formal social interactions; Participating in communications in informal interactions; Making oral presentations; Reading academic/scientific journals/publications, papers, articles, texts; Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites; Reading instructions for projects/exercises/labs; Reading efficiently: comprehension and speed; Skimming and scanning*

skills; Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.; Reading and note taking; Summarizing; Paraphrasing; Reading and writing business letters, e-mails, faxes; Occupational writing: lab reports, business reports, field trip reports (and abstracts for projects); Writing a CV/ Cover letter; Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.; Writing essays: Planning, drafting, revising, editing; Academic vocabulary; Field-specific/technical vocabulary/terminologies; Job interviews (application skills); Translation; and Use of internet/technology (in English).

After identifying common EAP needs across the three disciplines, the same track was followed for the EOP needs of the students from the Technology, Physical Sciences, and Social Sciences. In the ESP needs analysis questionnaire, the students were presented with 36 EOP needs and were asked to rank the importance of each need for their future occupational needs. The results showed that there are 36 common EOP needs of students from these three disciplines, which shows that the students from these three disciplines consider all these 36 EOP needs important for their future careers (Appendix L). Thus, it can be said that no needs are exclusive to any of the two disciplines or any one discipline among them.

4.2.2.2 Common EOP Needs from the Perspective of ESP Teachers

ESP teachers was another stakeholder whose opinion was asked on the future EOP needs of students from different macro disciplines. Semi-structured interviews and graphic elicitation tasks were used to get the ESP teachers' perspectives on ESP learners' future occupational needs. The collected data were coded and categorized under sub-themes and themes. The themes that emerged in this section are *Common occupational skills*, the *Importance of vocabulary in*

occupational English, and *Teachers' knowledge concerning ESP classes*. These themes will be explained in detail in the following sections:

Common Occupational Skills

Main language skills and elements

One of the sub-themes categorized under the theme of *Common Occupational Skills* is the *main language skills and elements*. Like the EAP needs, almost all the ESP teachers interviewed stated that four language skills and two main elements are crucial for their learners' future occupational needs. The codes under this sub-theme are *Listening, Speaking, Reading, Writing, Grammar, and Vocabulary*. Concerning the four language skills, an ESP teacher teaching Sociology students asserted the following:

“...because in addition to the question, they need to understand the answer to their questions as well, so both speaking, understanding, and listening, in other words, four skills need to be developed at once.”

Besides, concerning Grammar, an ESP teacher teaching Mechanical and Electrical – Electronics Engineering students expressed that *“I can't say that they will particularly need Grammar, but of course, it is part of the language, so they will need to use it.”* Furthermore, regarding the importance of Vocabulary as a common need of learners for their future occupational lives, a teacher teaching Economics students pointed out that *“They need to improve their vocabulary knowledge as it will play a crucial role for communication, both written and oral in their professions”*.

Listening-related Occupational Skills

Another sub-theme categorized under the Common Occupational Skills theme is *Listening-related Occupational Skills*. The codes that are grouped under this sub-theme are *Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks, etc.*; *Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations*; *Understanding different varieties of English* and *Listening and note-taking*. Most teachers think their students will use these listening-related sub-skills for occupational purposes. Among these sub-skills, concerning the code *Understanding different varieties of English*, an ESP teacher teaching International Relations students stated how the students will be exposed to English spoken by different nationalities:

“There will be various nationalities. I think they will be from very different countries. Especially today, we are in a period where we are already globalized. Therefore, they will be in contact with different people from many different countries and they will need to understand their accents.”

Regarding the same code, another ESP teacher teaching Business students said, *"You will always be in contact with the Chinese for your jobs, so you have to master a lot of different accents."* Concerning another code, *Listening and note-taking*, an ESP teacher teaching International Relations students stated, *"Apart from that, of course, it's like taking notes. When they go to a conference or a meeting, they must have these skills, so we are also teaching these skills"*.

Listening and Speaking-related Occupational Skills

Like *Listening-related sub-skills*, *Listening and Speaking-related sub-skills* were also mentioned as crucial for learners' future career lives by the ESP teachers from different disciplines. The codes categorized under this sub-theme are *Asking and answering questions (in seminars, talks, fieldwork, lab, discussions, after presentations, etc.)*; *Participating/following/engaging in discussions*; *Making video calls (Videoconferencing, Skype/ WhatsApp calls, etc.)* and *Participating in communications in formal social interactions*.

Regarding the code *Making Video Calls*, an ESP teacher teaching Business students said, "It has also become very common on the online platform, especially after the pandemic. There will be online meetings". Another ESP teacher teaching students from Chemistry and Physics emphasized the importance of formal interaction in the occupational setting and said, "They will need formal speaking during the meetings while speaking with their managers and during the job application process as well."

Reading-related Occupational Skills

Reading-related Occupational Skills is another sub-theme that ESP teachers categorize under the *Common Occupational Skills*. Most ESP teachers mentioned that besides Reading, the sub-skills related to Reading will be an essential need for their students in their future professional lives. The codes that fall under this sub-theme are *Reading academic/scientific journals/publications, papers, articles, and texts*; *Field-related Reading*; *Reading instructions for /projects/exercises/labs*; *Reading efficiently: comprehension and speed*; *Skimming and scanning skills*; *Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples*; *Inference and guessing...etc.* and *Reading and note-taking*. Regarding the code *Field-*

related reading, an ESP teacher teaching students from disciplines of Maths, Physics, and Chemistry said, "*They will need to read occupational documents such as reports, manuals, and projects maybe.*" Regarding another code, *Skimming and scanning skills*, an ESP teacher teaching Mechanical Engineering students stated, "*There may be very long texts to read in a very short time, so they will need to use Skimming or Scanning skills, and we are practicing them a lot in the class as well.*" Furthermore, an ESP teacher teaching students from International Relations touched upon code Reading and note-taking and stated the following:

"...in other words, when there is international correspondence, they may need to take notes about it. For example, if a long contract comes, they may need to take notes about it in English."

Writing-related Occupational Skills

A further sub-theme regarding the common EOP needs of learners is *Writing-related occupational skills*. Two codes are categorized under this sub-theme: *Writing and reading business letters and e-mails* and *Occupational writing*. Most ESP teachers mentioned the importance of these two skills for their students' future careers. Regarding code *Writing and reading business letters and e-mails*, an ESP teacher who has taught both Technology and Physical Sciences disciplines stated, "*While writing an e-mail, they will need to consider many factors such as the formal language, appropriate openings, endings, etc.*"

Regarding code *Occupational writing*, an ESP teacher teaching Business students said, "*Report writing will have a very important place for their jobs*".

Job-application skills

Job application skills is another sub-theme that emerged from the data. The codes under this theme are *Job interviews (application skills)* and *Writing a CV/ Cover letter*. They were mentioned frequently by most of the ESP teachers as a common need of their students for their professional lives. Regarding the code *Writing a CV/ Cover letter*, an ESP teacher teaching Engineering students pointed out the following:

“And writing a sample CV ...such as what do they need to pay attention to or what needs to be highlighted in a CV or resume? They need to improve this skill a lot, as it will be an important need to apply for a job.”

Oral presentations

Lastly, making *oral presentations* is one of the sub-themes categorized under the theme of *Common Occupational Needs*. Almost all ESP teachers mentioned that their students will need and use this skill professionally. The codes that fall under this sub-theme are *Preparing an Oral Presentation* and *Delivering an Oral Presentation*. Preparing an Oral Presentation refers to all the processes before delivering the presentation, and it includes the necessary research on the topic of the presentation, writing the content to be included, and transferring the content to the slides. Regarding this, the ESP teacher teaching Sociology students said that:

“It is not just making the presentation but also preparing it, so they have to read and then write about the topic they will present. Some of our students even do not know how to write them on the slides, but they will need them for their jobs in the future”.

The code *Delivering an Oral Presentation* includes speaking skills, listening skills for the question-answer part, and gestures, among others. An ESP teacher teaching Computer Engineering students said the following:

“It is not only speaking or correct pronunciation, but they will need to understand the questions following the presentation...also the appropriate gestures, body language”.

The Importance of Vocabulary in Occupational English

Most ESP teachers frequently mentioned the importance of field-related terminologies for their students' future careers. The codes that fall under this theme are *the importance of Field/Major-related terminology* and *Field/major-related terminology as the most crucial aspect*. While the former refers to the teachers' statement on the importance of the field/major-related terminology as well as other language elements or skills in English for their occupational lives, the latter refers to the thinking of some ESP teachers that the terminology being the most crucial aspect for future professional lives of their students. Concerning the former, an ESP teacher teaching in the International Relations discipline said, *"They will need to know specific vocabulary related to the profession, especially if they are going to work in an international company."* For the latter, an ESP teacher teaching Mechanical Engineering students said, *"...without the knowledge of terminology, it is very unlikely for them to succeed in their jobs, so they have to learn them before they start working".*

Teachers' Knowledge Concerning ESP Classes

The last theme that emerged based on the interviews conducted with ESP teachers on the future occupational needs of their students was *Teachers' Knowledge Concerning ESP* classes. The codes grouped under this theme are *Knowledge of the needs* and *Knowledge of the field-specific language*. Similar to the case of EAP needs, only a few ESP teachers conducted a needs analysis on their students' future occupational needs. Concerning this, an ESP teacher teaching students in Electrical Electronics and Computer Engineering students said, "*I haven't conducted a Needs Analysis. I am following the books published from.... that are prepared for the majors of my students*". Regarding the *knowledge of the field-specific needs*, it was found that only the ESP teachers from the department have high knowledge of the field, but the rest do not. With respect to this, an ESP teacher teaching both Economics and Business students stated, "*I am giving ESP courses to two different majors, and these are very broad fields. I am a language teacher; I can't have a lot of knowledge of these fields*".

To conclude, the TSA section of the ESP instructor interviews yielded three distinct themes. One of these themes had several related sub-themes, with each sub-theme consisting of related codes. The other two themes contained relevant codes. The summary of the themes, sub-themes, and codes obtained from this section are presented in a table for easy reference (Appendix M).

4.2.2.3 Common EOP Needs from the Perspective of the Workplace Experts

The third stakeholder whose opinions on the EOP needs were asked were employees working in different fields. Three themes emerged from the data analyzed: *Common EOP skills*, *the Importance of the experience and EGP level*, and *No clear-cut across the disciplines*. These

themes, together with the sub-themes, codes, and examples from the interviews, will be covered in the following section.

Common EOP Skills

One of the themes obtained from the codes and sub-themes is *the Common EOP Skills*. The sub-themes that fall under this theme are *Main language skills and elements*, *Listening-related occupational skills*, *Speaking-related occupational skills*, *Reading-related occupational skills*, *Occupational Writing*, *Job-Application skills*, *Oral presentations*, *terminology needs*, and *Common occupational needs requiring all skills*. Below, these sub-themes will be presented together with their codes in detail:

Main language skills and elements

Like the ESP teachers, workplace experts also mentioned that the four language skills and *Grammar* and *Vocabulary* are among their English language needs for occupational purposes. The codes categorized under this sub-theme are *Listening*, *Speaking*, *Reading*, *Writing*, *Grammar*, and *Vocabulary*. An employee, T, who studied Physics and works as a Project Engineer in an international fund programs department, pointed out how she needs to use four language skills:

“We are responsible for the establishment of consortia and the execution of the project. That's why I use it (English) in 3 ways, both as writing and speaking, you know, writing e-mails, speaking and text writing...Sure, while speaking I need to listen and understand as well. Also, reading is as important as writing.”

Another employee, Z, working as a Sociologist at an NGO, stated how he was having problems with grammar and how he needs it for his professional interaction: *“Well, when I speak sometimes, I can’t form correct sentences, I have difficulty with grammar. So, I need it to be able to speak more fluently.”*

Listening-related occupational skills

Listening-related occupational skills is another sub-theme grouped under the theme Common EOP Skills. The codes categorized under this sub-theme are *Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks, etc.*; *Understanding and following instructions in fieldwork/laboratory*; *Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations*, *Understanding different varieties of English*, and *Listening and note-taking*. In the graphic elicitation task regarding code *Understanding and following instructions in fieldwork/laboratory*, an Electric and Electronic Engineer at a factory drew a machine and wrote instructions in English stating the importance of comprehending machine instructions in their department. Concerning it, he stated the following:

“As the machines are bought from abroad, all the manuals and instructions are in English. That’s why someone who works in maintenance has to understand the instructions in English so that production can continue.”

A Machine Engineer, M, who worked at a company, highlighted the importance of Listening to and understanding field-related videos and said, *“You can watch English videos on YouTube and get information about a machine at work.”* Another employee working as an

Economist at an insurance company expressed the need for note-taking she used for her job and stated:

“... we need to listen and take notes on important points. Because we already use those fields for the supervision, So I take notes and integrate them with the supervision”.

Lastly, another Economist highlighted the importance of understanding world Englishes said the following:

“Well, I can say that I’ve almost never needed to communicate with native speakers for my job. The people who I need to speak English are mostly non-native speakers speaking English as a foreign language, like me”.

Listening and Speaking-related occupational skills

Speaking-related skills are also emphasized to be common important needs for occupational settings by workplace experts. The codes classified under this sub-theme are *Asking and answering questions*, *Participating/following/engaging in discussions*, *Making video calls*, *Making phone calls*, *Participating in communications in formal social interactions*, and *Participating in communications in informal interactions*. A computer engineer, A, working at an international company, pointed out how he had difficulty understanding the question and the importance of this skill as a need. He used the statements below:

“For example, once, I made a presentation there, actually, the whole company understood the framework. You know, during the presentation, questions are asked. The answer is given somehow, but it is sometimes difficult for me to understand the questions and it becomes a big problem.”

Concerning another code, *Participate/follow/engage in discussions*, an employee working as a Chemist talked about how they participated in discussions in English to overcome a problem in their workplace. She stated the following:

“So, you can think of it like this, there is a problem. A team comes together to solve the problem and we have discussions to solve this problem. These discussions are in English.”

Almost all the participants indicated that they needed the code *Making video calls* for their professional lives, and it has become a must after the pandemic. Concerning it, G, working as a data governance manager, said the following:

“I mean, of course, lately, all of these have turned to online meetings. Especially with the pandemic, but as I said in the past also, we had online meetings. On the phone, online, and face-to-face meetings.”

Reading-related occupational skills

The skills related to Reading were also frequently mentioned as a common need in the interviews of employees from different fields. The codes categorized under the sub-theme *Reading-related occupational skills* are *Reading academic/scientific journals/publications, papers, articles, and texts; Field-related reading; Reading instructions for projects//labs, etc.; Reading efficiently: comprehension and speed; Skimming and scanning skills; Reading strategies: Identifying (understanding) main ideas, supporting ideas, and examples; Inference and guessing, etc., Reading and writing e-mails and Reading and note-taking*. Regarding the code

Field-related reading, an employee, G, working as an economist touched upon the lack of sources in Turkish for her profession and pointed out the following:

“While looking at how the operational processes can be, I don’t have a source in Turkish. Because there may not be such companies working in Turkish, or let’s say there may be less. Very little has been written about it. There is a Personal Data Protection Board for example. It has a sample guide, it is very limited, I mean not comprehensive. So at that point, I prefer to look at the samples in Europe.”

About *Reading efficiently*, S, a computer engineer, stated how crucial it was for them to comprehend the texts in English related to their professions. He stated the following:

“...in this case, let’s say you face a problem while you are coding and you are creating a code....all the tutorials are in English. Because of this, we have to understand all those texts, setup files, tutorials, and some explanations on codebases, methods, etc. Thus, at least we need to understand what we are reading.”

Another employee who graduated from Maths but is working at a Maritime insurance company as an insurance broker touched upon the need for *Skimming and Scanning* while reading for occupational purposes. She expressed the statements below:

“...because we cannot read every article in depth. Sometimes ...we just need to look at the technical parts and read, and we may need to act fast. So, I just glance at important

points and finish reading. But I sometimes need to read the whole text very quickly as well.”

Lastly, *Reading and note-taking* also emerged as common *Reading-related needs* from the employees' perspective. B, who graduated from Economy and working as a process and internal check consultant at an international company, told how she used *Reading and note-taking* for her job *"I do it especially for main points. I check what I need from the reading, and I take notes accordingly"*.

Occupational writing

Report writing, Project writing, and Procedure writing are the codes that constitute the sub-theme of *Occupational writing*. The majority of the employees from different fields mentioned it. Concerning report writing, an insurance broker, M, told the following:

“I mean I usually do report to abroad, to Dubai. I do it on my monthly work. I tell them I did this and that in the last month. It can be about meetings or some other activities. I do it like a summary of my activities”.

On the need for *Procedure writing*, a Process and Internal Check Consultant B said, *“We write procedures, prepare training documents, write reports.”*

Job-application skills

Another sub-theme that emerged from the codes of the data is *Job-application skill*. The codes under this sub-theme are *Writing a CV/ Cover letter* and *Job interviews*. A, a Computer

Engineer at an international company, pointed out how CV and cover letter writing is important in the job application process. Regarding it, he utters the following statements:

“Apart from that, I need English for preparing a CV. For example, I need it in job application processes. At the same time, we are preparing a cover letter for it; and like in reference letters, we try to use more formal language for them.”

Furthermore, T, working for a company, mentioned how she needed to improve her job interview skills for the job application process. Concerning it, she said the following:

“I bought another book for job interviews. I'll even show you. Look! A book called Business communication strategies. There were also job interviews in a part of it. I read it before entering because self-explanatory is not something we do a lot. In case they would ask questions like my strengths and weaknesses ...I thought about them before the job interview.”

Oral Presentations

The last theme obtained from the data of the interviews with the employees is Oral Presentations. The codes categorized under this theme are *Preparation of the Presentations* and *the Delivering of the Presentations*. The employees working in different fields frequently mentioned both of them as a need. Related to the code *Preparation of the Presentations*, an employee who graduated from Business and worked at an international company expressed herself through a graphic elicitation task and explained, *“Making the presentation is not my responsibility, the more experienced employees do it. But I am expected to prepare those*

presentations in English". Besides, another employee working as an International Relations consultant said the following for the *Delivering of the Presentations*:

"We have to know the tips for a good presentation. Of course, our English level is very important, but we should also be careful about the tone of voice... and body language is also very important."

The terminology need

Field-specific/technical vocabulary/terminologies and *Plaza Language* are the codes that constitute the sub-theme *the terminology need*. A mechanical engineer, S, highlighted the terminologies that her working area requires. Concerning this issue, she stated the following:

"I mean in our work, there are some terminologies we use a lot. The things we use frequently are smoke residue for example, because we do fire and restoration works. We also use the terms of insurance a lot."

Another code categorized under this sub-theme is *the Plaza language*, which was mentioned by several interviewees from different disciplines. It refers to a form or jargon of Turkish which includes vocabulary and calque from English. White-collar employees usually use it. Concerning it, an employee who graduated from Business and was working at an international company stated how they used field-specific or technical words in English while speaking in Turkish.

"...so now it's mixed, now when we are talking among ourselves, there is such a half English half Turkish speech that they call that plaza language, or white collars but all the

English words in that conversation are actually technical English. Because when you are speaking Turkish, you say the English of the word related to your work instead of translating it into Turkish ... For example, I do not say “veri yönetişimi” in Turkish, instead, I say data governance, for example.”

Common occupational needs requiring all skills

The codes under this sub-theme are *Translation*, *Use of the Internet/technology*, and *Vocational Training*. These skills are mentioned to be common needs of employees from different fields. Employees from Engineering mostly used *translation*, but the employees from Physical Sciences and Social Sciences used it less in comparison with the engineers. Concerning it, M, the maritime insurance broker, said the following:

“Translation happens a lot because we can publish some articles on Maritime and maritime insurance, especially in some business magazines. We also do these in Turkish, but as I said before, most of the resources are in English, and Turkish resources may not be very sufficient. That's why we need to translate.”

The use of the internet and technology in English was expressed to be a need by most of the Physical Sciences and Technology employees. While the Social Sciences did not mention that frequently, almost half of the participants interviewed stated that they used it for their occupations. Regarding this, D, a chemist, said, *"Most of the programs we use are in English."* Lastly, a need that did not emerge in the interviews of the ESP teachers but did in employees is the *Vocational Training and Exam*. Several employees from three fields pointed out that while working, they needed to receive training related to their jobs, and training was in written and oral

English. They needed to watch some videos and read some sources in English during the training. After the training was completed, they were supposed to do an exam in English. Concerning this need, M, a mechanical engineer, expressed the statements below:

“For my job, I am going to take an exam. I took fire and restoration training. I'm reading about it. So, I'm studying for it. I am taking the training from England. I usually do readings on it.”

The Importance of Experience and EGP Level

A second theme that emerged from the interviews of the employees working in different fields is *the Importance of Experience and EGP level*. The codes under this theme are *Learning the field-specific terminology while working* and *EGP level threshold*. Several employees stated that they needed to learn some terminologies related to their occupations, but they did this after starting work; they did not learn them while studying, which did not pose any problems for them. Concerning it, an Economist, B, working at a bank, said the following:

“To tell the truth, I didn't learn while I was studying, I learned it (terminology) while I was working...I can say that I learned with my work experience there. Because we were working with a lot of foreigners. It developed that way, but since I worked there in Turkey, there were already many people to ask.”

Furthermore, an Electrical-Electronics engineer stated that not only the English equivalents but there were also some terms that he did not know their meanings in his first language, Turkish, either. Concerning it, he said the following:

“I'm just starting to learn technical words, especially the mechanical parts. Such as screws... I am also searching the internet for them. I mean I don't know their meanings. Actually, I don't know what they mean in Turkish either. Now I'm learning them in English.”

Moreover, A, an employee who graduated from Maths and working at the internal check department expressed the following statements:

“Actually, I learned the terminology after I started working in this workplace. I didn't have a good knowledge of terminology. I learned it with work experience. One can learn them when they become experienced in the work and later you even do not remember them in Turkish, you always use them in English.”

Lastly, regarding the *EGP level threshold*, most of the workplace experts expressed how a *EGP level threshold* was important for the positions they worked in. Concerning this code, an employee who graduated from Business and is working at an international company said the following:

“One of the most important things is to have a very good level of English, without good English you can't perform efficiently. Other job-related words can be learned easily while working.”

No clear cut across the disciplines

The third theme that emerged from the data of the employees is *No clear-cut across the disciplines*. *Variety of sub-branches of the profession* and *Change of Discipline* are the codes categorized under this theme. With a *Variety of sub-branches*, the interviewees referred to the different sub-branches of a discipline in an occupational context. Regarding it, G, who studied Maths at university and works at an international insurance company, said the following:

“Let me put it this way, now in Turkey, I am a graduate of mathematics. Some of our graduates became software developers. Some became financiers, and some of us are working at very different jobs. Of course, it doesn’t seem possible to put an occupational English course that completely meets the requirements of that field.”

Another code extracted from the workplace expert interviews was *Change of Discipline*. Some participants pointed out that they were working in a field different from the discipline they studied. With respect to this, Z, who studied Physics but working at a research company, said the following:

“I studied Physics at the university, but it is really difficult to find a job in Physics. Some of my university friends are working as physics teachers in private courses, but I didn’t want to do this. I have been working at a research company and it’s not related to what I studied at university. What we are doing is closer to the Social Sciences.”

Another employee who graduated from Sociology but is working as a marketing researcher said the following:

“A lot of people who graduated from Sociology are unemployed. Some others are working in different fields. I think what I am doing is related to my university degree, but I have colleagues who are doing the same job but studied at different departments at the university.”

The themes, sub-themes, and codes obtained from the interviews with the employees were listed in a table (Appendix N).

4.2.2.4 Common EOP Needs from the Perspective of Three Stakeholders: Students, ESP Teachers, and Employees

In order to identify the common EOP needs, the opinions of three stakeholders were asked: students, ESP teachers, and employees. Thus, three different lists of EOP needs were obtained based on the analyses. In order to find the common needs based on the answers of three stakeholders, each group's answers were cross-checked, and a common list of needs was obtained, presented in the following table.

Table 44

Common EOP Needs from the Perspective of Three Stakeholders: Students, ESP Teachers, and Employees

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary

7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
8. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
9. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
10. Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.
11. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)
12. Participate/follow/engage in discussions
13. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
14. Participating in communications in formal social interactions
15. Making oral presentations
16. Reading academic/scientific journals/publications, papers, articles, texts
17. Field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
18. Reading instructions for projects//labs etc.
19. Reading efficiently: comprehension and speed
20. Skimming and scanning skills
21. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
22. Reading and note-taking
23. Reading and writing business letters, e-mails, faxes
24. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
25. Writing a CV/ Cover letter
26. Field-specific/technical vocabulary/terminologies
27. Job interviews (application skills)

4.2.2.5 Common ESP Needs Based on the Common EAP and EOP Needs

In order to identify the common ESP needs, the common EAP and EOP needs were cross-checked. Below is the table of common ESP needs.

Table 45*Common ESP Needs Based on the Common EAP and EOP Needs*

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
8. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
9. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
10. Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.
11. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)
12. Participate/follow/engage in discussions
13. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
14. Participating in communications in formal social interactions
15. Making oral presentations
16. Reading academic/scientific journals/publications, papers, articles, texts
17. Field/major-related reading: articles, manuals, reports of projects, documents, blogs, and websites
18. Reading efficiently: comprehension and speed
19. Skimming and scanning skills
20. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
21. Reading and note-taking
22. Reading and writing business letters, e-mails, faxes
23. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
24. Writing a CV/ Cover letter
25. Field-specific/technical vocabulary/terminologies
26. Job interviews (application skills)

4.3 Common Core Language (Needs/Objectives)

In the last step of the Results section, the commonalities between the common objectives across different ELT levels and common ESP needs was analyzed to identify the common core language. The list of the common core language based on the common ELT objectives and ESP needs is given in the following table.

Table 46

Common Core Language Based on the Common Objectives across Different ELT Levels and Common ESP Needs across Different Disciplines

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary
7. Listening to and understanding presentations, conversations, and discussions
8. Listening and note taking
9. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)
10. Participate/follow/engage in discussions
11. Participating in communications in social interactions
12. Reading efficiently: comprehension and speed
13. Skimming and scanning skills
14. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
15. Reading and note taking
16. Reading and writing business letters, e-mails, faxes

4.4 Suggestion of Objectives for Educational Levels Based on the Objective and Needs

Analysis

The above ten lists were obtained based on the analysis of similar and different objectives of the ELT educational levels and common ESP needs analysis. These lists will be used to suggest the skills and sub-skills offered at different ELT instructional levels, academic disciplines, and occupational areas. The suggestions are as follows:

4.4.1 High Schools

The list of skills and sub-skills suggested to be taught at the high school level consists of several categorizations of the findings of this study. The first categorization is the *Objectives Exclusive to High Schools*. As the objectives under this categorization are exclusive to high schools, they should be taught at the same level. *Common Objectives between Prep Programs and High Schools* are also suggested to be set at the high school level as it precedes the preparatory programs. Furthermore, *Common Objectives across High Schools, Preparatory Programs, and ESP programs* is the common core language across those three levels; it is also suggested to be offered at the first level of GE, which is High School in this context. Lastly, the categorization of Common Core language is identified based on the common needs or objectives across all parameters, and it is also suggested to be taught at the High School level. Those skills and sub-skills are the common needs independent of the level of instruction and discipline, which would be suggested to be taught at the first level of GE, which is high school.

Table 47*ELT Objectives Suggested for the High School Level*

LISTENING	1. Detecting/identifying/listing frequently used or familiar words/phrases/expressions about different kinds of topics in a recorded text or video.
	2. Doing tasks/activities and responding to the questions while and/or after listening to a recorded text/video,
	3. Identifying the main ideas while listening to a conversation and/or an academic lecture
	4. Listening and identifying details
	5. Listening and making inferences
	6. Listening and note taking
	7. Listening to and understanding presentations, conversations, and discussions
	8. Identifying the speaker's mood, tones, and purposes in a recorded text/video.
LISTENING & SPEAKING	9. Taking part in dialogues/conversations about various topics
	10. Asking and answering questions
	11. Participating in discussions/debates
	12. Expressing themselves efficiently
	13. Conveying their ideas clearly and coherently
	14. Conveying messages orally by producing intelligible English sounds, stress, and intonation features/correct and legible pronunciation of words
	15. Speaking, interacting, and expressing themselves orally with acceptable fluency, accuracy, and confidence
READING	16. Diagrammatizing a text on various topics.
	17. Guessing/inferring the words in a text they do not know from context
	18. Asking and answering questions about a text.
	19. Analyzing a text
	20. Students will be able to evaluate a text.
	21. Reading efficiently: comprehension and speed
	22. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
	23. Reading and note-taking
	24. Skimming and scanning skills
	25. Summarizing
WRITING	26. Paraphrasing
	27. Reading and writing business letters, e-mails, faxes
	28. Writing descriptions about everyday aspects of their environment and personal experiences
	29. Writing paragraphs
VOCABULARY	30. Writing essays
	31. Acquiring a growing vocabulary for both receptive and productive language use /choose precisely the words for discourse
	32. GE vocabulary: Understanding vocabulary phrases and expressions related to areas of most immediate priority (e.g., very basic personal and family information, shopping, local geography, employment) provided speech is clearly and slowly articulated.
GRAMMAR	

4.4.2 Preparatory Programs

Based on the categorization of the study findings, the objectives suggested to be offered at the preparatory programs are the *Objectives Exclusive to Preparatory Programs* and *Common Objectives Across ESP and Preparatory Programs*. These are the objectives that do not exist at the high school level and are the common core objectives between the preparatory and ESP programs. The skills and sub-skills offered at the preparatory level would serve as complementary objectives to the objectives offered at the high school level which is the preceding EGP level.

Table 48

ELT Objectives Suggested for the Preparatory Programs

LISTENING	1. Recognizing the sequential information in a lecture
	2. Listening and following at academic and occupational levels
	3. Speaking at an academic/professional level
READING	4. Deciding what certain pronouns/determiners/ etc. refer to in a text/ identify reference words
	5. Synthesizing

4.4.3 EAP Programs

After the EGP level, EAP classes are offered to students at the tertiary level in Turkey. For the EAP level, the categorizations *Common EAP needs Across Three Macro Disciplines: Technology, Physical Sciences, and Social Sciences*. These lists are supposed to complement the objectives of the previous two levels.

Table 49*ELT Objectives for the EAP Programs*

LISTENING	1. Listening to and understanding lectures
	2. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
	3. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
LISTENING & SPEAKING	4. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
	5. Participating in communications in formal social interactions
	6. Making oral presentations
READING	7. Reading academic/scientific journals/publications, papers, articles, texts
	8. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
	9. Reading instructions for assignments/exams/projects/exercises/labs
	10. Reading (online) study notes and texts, handouts
WRITING	11. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
	12. Writing a CV/ Cover letter
	13. Writing assignment/homework
	14. Writing essays: Planning, drafting, revising, editing
	15. Academic writing: academic tasks, papers, scientific and technical writing
VOCABULARY	16. Academic vocabulary
	17. Field-specific/technical vocabulary/terminologies
OTHER	18. Job interviews (application skills)

4.4.4 EOP Programs

The objectives categorized under the *Objectives Exclusive to ESP* and *Common EOP Needs Across Different Disciplines* are suggested to be taught at the EOP level, the last level of ELT education at the tertiary level.

Table 50

ELT Objectives for the EOP Programs

LISTENING	1. Apply critical listening skills effectively
SPEAKING	2. Express themselves in English on related topics in academic and/or occupational settings
READING	3. Improve reading and comprehension skills in academic, technical, and job-related topics
	4. Make a critical textual analysis
WRITING	5. Professional/job-related writing: e.g., technical writing
	6. Writing a project: Plan, conduct, and finalize
READING & WRITING	7. Translation skills
OTHER	8. Conceptual knowledge: Learn, know, discuss, analyze, and use major-related concepts
	9. Learn, improve, and use language concisely and precisely
VOCABULARY	
GRAMMAR	

5 CONCLUSION

5.1 Overview of the Study

The present study addressed four controversial and related issues in ESP: ESP course design perspectives; ESP course content; the relationship between ESP and EGP and the EGP level threshold for ESP courses. Concerning these issues, this study attempted to answer three research questions: (1) What are the similarities and differences between the ELT learning objectives in high schools, preparatory programs, and ESP programs? (2) What are the common needs of ESP learners across different academic disciplines and the ones across different fields of occupation? (3) What would be the most appropriate level of language ability in EGP that would enable ESP students to continue their ESP instruction from the perspectives of various stakeholders?

To shed some light on those controversial issues, a data-driven study that did not restrict itself to a particular discipline or professional field, but a variety of disciplines and occupational fields was carried out. An ESP needs analysis questionnaire was developed to identify the common ESP needs of learners from different disciplines. It further collected data from the ESP instructors and employees working in different occupational fields through qualitative instruments. Therefore, the opinions of three different stakeholders were asked. Moreover, not only the academic needs of the learners but also the professional needs of the workplace experts were analyzed. Besides, the common ELT objectives across three levels, namely high schools, university preparatory programs, and ESP programs, enabled us to determine the similarities and

differences across these three levels. Lastly, the appropriate level for the transition from EGP to ESP programs from the perspectives of ESP learners, teachers and employees was identified.

Concerning the first research question, the results of ELT objective analysis across different levels showed that there was a significant set of objectives across those different levels. The common objectives presented the evidence of the common core language between the EGP and ESP programs, so a strong relationship between EGP and ESP (Bernard & Zemach, 2003; e Haq et al., 2012 Karimkhanliu, 2005). With respect to the second research question, the findings of the questionnaire, semi-structured interviews, and graphic elicitation tasks showed that there was a significant set of common ESP needs across different academic disciplines and occupational fields, which indicated the common core language across those disciplines (Coxhead & Nation, 2001; Farhady, 2008; Wood, 2001). It further demonstrated that the ESP courses should be designed with a wide-angled perspective (Anthony, 2011; Dovey, 2006). Lastly, in an attempt to answer the third research question, it was found that from the perspective of three stakeholders, namely ESP learners, ESP teachers, and employees, there is a need for at least B1+ EGP level threshold for learners to start ESP instruction (Hutchinson & Waters, 1987; Gaffas, 2018; Stojković, 2020).

Below a schematic representation of the issues this study addressed and the findings it obtained is presented.

Table 51

The Issues the Present Study Focused on and the Findings Obtained in This Study

Controversial Issues in ESP			Findings of the Present Study
1.ESP Course Design	1st View	2nd View	
	Narrow-angled	Wide-angled	A significant set of common ESP needs across different academic disciplines and occupational fields
2.ESP Course Content	Highly discipline-specific content	Common core language across different disciplines	Common core ESP needs across different academic disciplines and occupational fields
3.Relationship between EGP and ESP	Focus on differences	Focus on commonalities	A significant set of common ELT objectives across different levels of instruction
4.EGP Level Threshold before ESP Instruction	Start at a beginner level	Requirement of an EGP proficiency level before ESP instruction	At least B1+

5.2 Discussion

The analyses of ELT objectives across different instructional levels and common ESP needs across different academic disciplines in order to answer the research questions of the present study enabled us to categorize those objectives and needs based on the commonalities and differences. The lists are presented in the table below.

Table 52

Lists of Commonalities of the ELT Objectives Across Educational Levels and ESP Needs Across Macro Disciplines

1. Common Objectives Across 3 Levels: ESP, Prep, High Schools
2. Common Objectives Across ESP and Preparatory Programs
3. Common Objectives Across Prep Programs and High Schools
4. Objectives Exclusive to ESP
5. Objectives Exclusive to Preparatory Programs
6. Objectives Exclusive to High Schools
7. Common EAP Needs Across Three Disciplines
8. Common EOP Needs Across Different Disciplines:
9. Common ESP Needs Based on the Common EAP and EOP Needs
10. Common core language (Common needs or objectives across all parameters)

The lists presented in Table 52, will serve as an important source of ELT skills and sub-skills that can be taught at different ELT instructional levels, academic disciplines, and occupational areas.

To begin with, at the High School level which is considered to be the first level of GE among those levels of instruction, the skills and sub-skills suggested to be taught are the objectives or needs that are listed under four categories: *Objectives Exclusive to High Schools; Common Objectives Across Prep Programs and High Schools; Common Objectives Across 3 Levels, namely high schools, preparatory programs, and ESP programs; and Common Needs and Objectives across all Parameters*. Based on this list, 32 ELT objectives are identified to be offered for the high school level. To implement more effective ELT courses at different levels, first teaching the common objectives and then including the exclusive ones would be more

effective (Farhady, 2008). Thus, considering the time allowance that high schools have, it would be more beneficial for high school students to be offered those common objectives.

Furthermore, having covered the common core objectives at the high school level, the objectives that would be offered at the subsequent instructional level, namely preparatory programs, would be *Common Objectives across ESP and Preparatory Programs* and *Objectives Exclusive to Preparatory Programs*. There are five objectives that fall under these two categorizations. Put in other words, if the common core objectives suggested for the high school level are achieved, very few objectives will remain for the preparatory programs. This finding strongly indicates the presence of problems associated with the high school and preparatory program levels. It is evident that preparatory programs have no distinct goals of their own, as they merely rehash the objectives already taught in high schools. Therefore, participating in these programs would not provide any added value or skills that cannot be acquired through the regular high school curriculum. Moreover, the allocation of time for the duplication of the objectives of the previous level is a significant loss of time for the educational system. Not only does this waste time, but it also results in unnecessary financial loss. It further shows that high schools are not achieving their intended objectives, as evidenced by the repetition of those objectives in preparatory programs. Previous studies also support this notion. For example, a report by the British Council and The Economic Policy Research Foundation of Turkey (TEPAV) found that in Turkey, the majority of students undertake the preparatory year, and only 5 to 25 percent of students are exempted from it (West, Güven, & Parry; et al. 2015). This suggests that between 75 and 95 percent of students are not proficient enough to study in an EAP program. West, Güven, and Parry (2015) also discovered that students' levels upon entering the preparatory school were estimated to be at levels A1-A1+ on the Common European Framework of Reference (CEFR)

scale (p.70). This implies that high schools often fail to fulfill the ELT objectives determined by MoNE. There could be several reasons for this, including teacher education, teacher knowledge, student demotivation, methodology, content, and materials, which could be investigated in further studies.

It is clear that the current ELT education system in high schools needs significant revisions as there are existing problems that hinder its effectiveness. If high schools cannot achieve their objectives within the allocated time, they may need to reduce the number of objectives. However, the question is how to achieve this and what steps and principles to follow in order to cut down on objectives. The analysis conducted in this study provides categories that can answer this need as an essential resource. Covering the most common objectives at the high school level would offer several advantages, such as economizing the ELT education system and presenting a more practical ELT system regarding time and energy. Additionally, achieving the common core language in a limited period is more likely.

Moreover, preparatory programs are burdened with trying to achieve what 4-year high school programs could not in only one year, which poses significant challenges to the ELT program. As previously mentioned, if the common core language is taught to students at the first level of GE, namely high schools, only five ELT objectives would remain to be covered at the preparatory program level. This would reduce the burden of preparatory programs and pave the way for the completion of EGP education before starting the ESP classes. Furthermore, by covering the common core objectives at the high school level, the five ELT objectives that remain in the preparatory programs can be integrated into the EAP programs. This way, the ELT education at the tertiary level can focus on the EAP and EOP objectives rather than allocating a year to the repetition of the high school objectives. Thus, teaching the common core language

efficiently at the high school level would enable a more qualified ELT education at the tertiary level, and better prepare students for the EAP and EOP courses. Moreover, studies show that there is a rapid increase in EMI at the tertiary level in Turkey. However, students graduating from high school can enroll in EMI programs with an appropriate ranking on the national university exam regardless of their English language proficiency. To address this issue, a test that measures the achievement of those ELT objectives can be included in the national university exam. Students who want to study in EMI programs may be required to pass this English exam as well as other subjects such as Maths and History, upon covering those suggested objectives for high schools.

The next ELT level is ESP, namely EAP, and EOP programs, at tertiary institutions in Turkey. To complement the objectives of the previous two levels, the objectives suggested to be instructed at the EAP level are the categorization of *Common EAP Needs Across Three Macro Disciplines: Technology, Physical Sciences, and Social Sciences*. Lastly, a set of objectives is suggested to be taught at the EOP level based on the findings of this study: *Common EOP Needs Across Different Disciplines* and *Objectives Exclusive to ESP*. As the preparatory programs take the burden of high schools, they cannot move towards EAP instruction. Besides, it is found that even EAP and EOP programs take the burden of high schools. Therefore, it is necessary to ensure that common core language skills are taught at the high school level, which would facilitate the teaching of the remaining language objectives in ESP programs, as these are designed to be offered in a minimal amount of time. According to Braud et al. (2017 as cited in Cedric, 2021), learners in an ESP instructional context often have limited time for language learning, so ESP practitioners need to be careful with what they select to teach in that limited time. Concerning this, the findings of this study show that upon covering the common core language at the GE

level, there will be a limited set of language objectives left to the ESP level to be offered, which is in congruence with the selective characteristic of ESP teaching. (Basturkmen, 2006; Braud et al., 2017 as cited in Cedric, 2021; Mangiante & Parpette, 2004 as cited in Lesiak-Bielawska, 2018).

Moreover, the focus of high schools and preparatory programs is EGP; ESP programs, on the other hand, are claimed to offer English instruction with either an academic or an occupational focus. However, a comprehensive analysis of the objectives across various levels reveals that there are common objectives between EGP and ESP programs. It is important to highlight that this finding supports the argument that there is no clear difference between EGP and ESP programs (Barnard and Zemach, 2003). In addition, the results of the present study suggest that the ELT objectives, along with lexis, grammatical structures, or needs (Clapham, 2001; Coxhead & Nation, 2001; Farhady, 2008; Haq et al., 2012; Karimkhanliu, 2005; Salmani-Nodoushan, 2020), can also be considered as the common core language.

The suggested categorization of skills and sub-skills for the EAP and EOP levels would complement the previous two ELT levels. As we have discussed earlier, it highlights the existence of a common core language between the EGP and ESP levels. Similarly, the categorizations of common EAP and EOP levels indicate the presence of common core language across different academic disciplines and occupational areas. Thus, the results of this study are consistent with the wide-angled ESP course perspective, and they can be used to design an ESP course for learners from those three macro disciplines that were subject to this study (Anthony, 2011; Basturkmen, 2003; Dovey, 2006; Farhady, 2008). To develop ESP materials, material developers should first cover the common structures, and then the exclusive ones (Farhady et al., 2018). This approach would help them to incorporate common skills in the ESP materials for

various disciplines and then teach the skills that are specific to each of those disciplines (Farhady et al., 2018).

Additionally, the results of the ESP needs analysis survey reveal differences in the perception of students and teachers regarding the ESP needs of students. While students from various disciplines identified some essential skills, these needs were not acknowledged by the ESP teachers. For instance, students highlighted the need to participate in informal communication, which was not recognized by the teachers. Some teachers believed that their students already used informal English, and hence they needed to learn formal communication. However, it is essential to consider the perceptions of both teachers and students for effective EAP course design, material development, and selection, especially when a group of stakeholders may not be fully aware of the needs (Farhady, 2008).

During the interviews of ESP teachers regarding their students' PSA, further themes surfaced. One of the themes was the discipline-specific knowledge of ESP teachers. Some of the ESP teachers were lecturers in their respective departments and not language teachers. They taught ESP as a course specific to their field of expertise to students from their own disciplines. However, the problem was that these teachers lacked pedagogical knowledge of teaching language and mostly relied on traditional methods like Grammar-Translation. On the other hand, most of the ESP teachers who were interviewed were language teachers who had pedagogical knowledge of language teaching. However, very few had discipline-specific knowledge of their teaching majors. Teaching highly subject-specific conventions for language teachers is challenging, as per Anthony (2011), who criticizes the narrow-angled perspective. Moreover, the expectation of highly subject-specific instruction by narrow-angled thinking leads lecturers to teach ESP courses without having language teaching pedagogical knowledge (Anthony, 2009;

Anthony, 2011; Howell, 2009). The findings of this study demonstrated that due to the demand for highly specialized content knowledge from ESP teachers, some faculties or academic departments prefer lecturers from the department who possess discipline-specific knowledge but do not have language teaching pedagogical knowledge.

ESP course design was another theme that emerged from the data from ESP teacher interviews. The ESP teachers were asked how they designed the course, and it was found that most of them did not conduct a needs analysis nor benefited from any needs analysis. In addition, the few teachers who conducted a needs analysis were all language teachers. However, needs analysis is considered the cornerstone of ESP, and it is crucial to conduct it in the ESP course design (Basturkmen, 2015; Hyland, 2012; Richards, 2017). The underlying reasons for the lack of needs analysis conduction may vary. The teaching burden of the teachers and lack of knowledge in ESP course design may be among the possible reasons that need to be scrutinized in further studies. Besides, regarding the selection/development of materials, it was found that only a few teachers conducted needs analysis for the ESP course design, so a few of them selected, developed, or adapted the available materials according to the needs of their students. Concerning this, available materials would be a good guide for novice ESP teachers, but experienced teachers could benefit from their EOP students who are highly aware of their needs with the help of the needs analysis (Rodriguez, 2006). However, the present study illustrates that ESP practitioners do not cooperate with their students or take their needs as a basis for material development; instead, many ESP teachers mentioned that they used books from a specific publishing house that published ESP books specific to every different major. This is also an effect of the narrow-angled course design perspective. Nevertheless, Basturkmen (2003) suggests that a common course including the needs of learners from different groups can be developed rather than designing courses for every group as it would be more economical to develop materials for every group

with common needs. Both the questionnaire and the interviews aimed to analyze the future occupational needs of the learners as well. The findings of the questionnaire and the qualitative instruments showed that 27 EOP needs were common to different professional fields. In other words, there is a significant number of common occupational needs from the perspective of students, ESP teachers, and employees. As in the common EAP needs of the students from different disciplines, the ones common to different occupational fields also show compatibility with the wide-angled perspective. Using the needs analysis results and findings as the base, a common EOP course can be designed for mixed groups of learners (Basturkmen, 2003; Farhady, 2008). Despite having a considerable number of common EOP needs, designing discipline/field-specific courses would not be economical or practical (Spack, 1988; Basturkmen, 2003). Furthermore, as Farhady (2008) suggests, in a context where time and resources are limited, priority should be given to the instruction of this set of common needs. Such a course would also be learner-centered (Rodrigues, 2006) as the opinions of three critical resources are taken into consideration.

During the EOP needs analysis, it was noted that there were differences of opinion among three groups: students, instructors, and employees. For example, *Summarizing*, *Paraphrasing*, *Essay Writing*, and *Academic Vocabulary* were considered necessary occupational skills by the students, but neither the ESP teachers nor the employees mentioned them as such. It was also discovered that students may not be fully aware of their needs in target situations. However, a surprising finding was that students and employees showed more commonality than the ESP teachers regarding the common EOP needs. A few common needs were mentioned by both the students and professionals, but the teachers did not mention them as occupational needs for their students due to the lack of needs analysis conduction. Thus, ESP instructors should benefit from

the learners' knowledge and develop the course design tasks accordingly (Rodrigues, 2006).

Lastly, two common occupational needs that were only mentioned by the employees were the use of plaza language and vocational training, indicating their higher awareness of occupational needs in comparison with the ESP teachers and students.

The study also found that employees typically learned field-specific terminology while or after starting to work. This means that not knowing those highly technical words did not cause any issues for them as they had the opportunity to learn them while working in the field. This supports the idea of common core language, which suggests that while 80% of English vocabulary consists of highly frequent words, technical vocabulary only makes up 5%. In other words, the study shows that while the knowledge of common core vocabulary would help them understand any technical texts, not knowing technical words would not be a problem for learners (Clapham, 2001; Nation, 2001).

Additionally, during employee interviews, various sub-branches of a profession and changes in the work field emerged as important topics. The interviewees mentioned that there were various sub-branches of their profession related to the discipline they studied. For instance, one who studied Economics at the tertiary level could work in different jobs and positions that required different field-specific knowledge. Besides, some employees changed their field of work voluntarily or compulsorily, which meant that a highly specific EOP course would not cater to their occupational requirements. These findings support Dovey's (2006) suggestions that in wide-angled ESP classes, learners can share experiences and knowledge. They can also learn how to acquire knowledge instead of just knowledge itself, which will enable them to adapt to the "new knowledge economy" (Dovey, 2006, p.390). Furthermore, concerning this result, Basturkmen (2003) said, "If, however, course content comprises largely surface-level linguistic items, such as

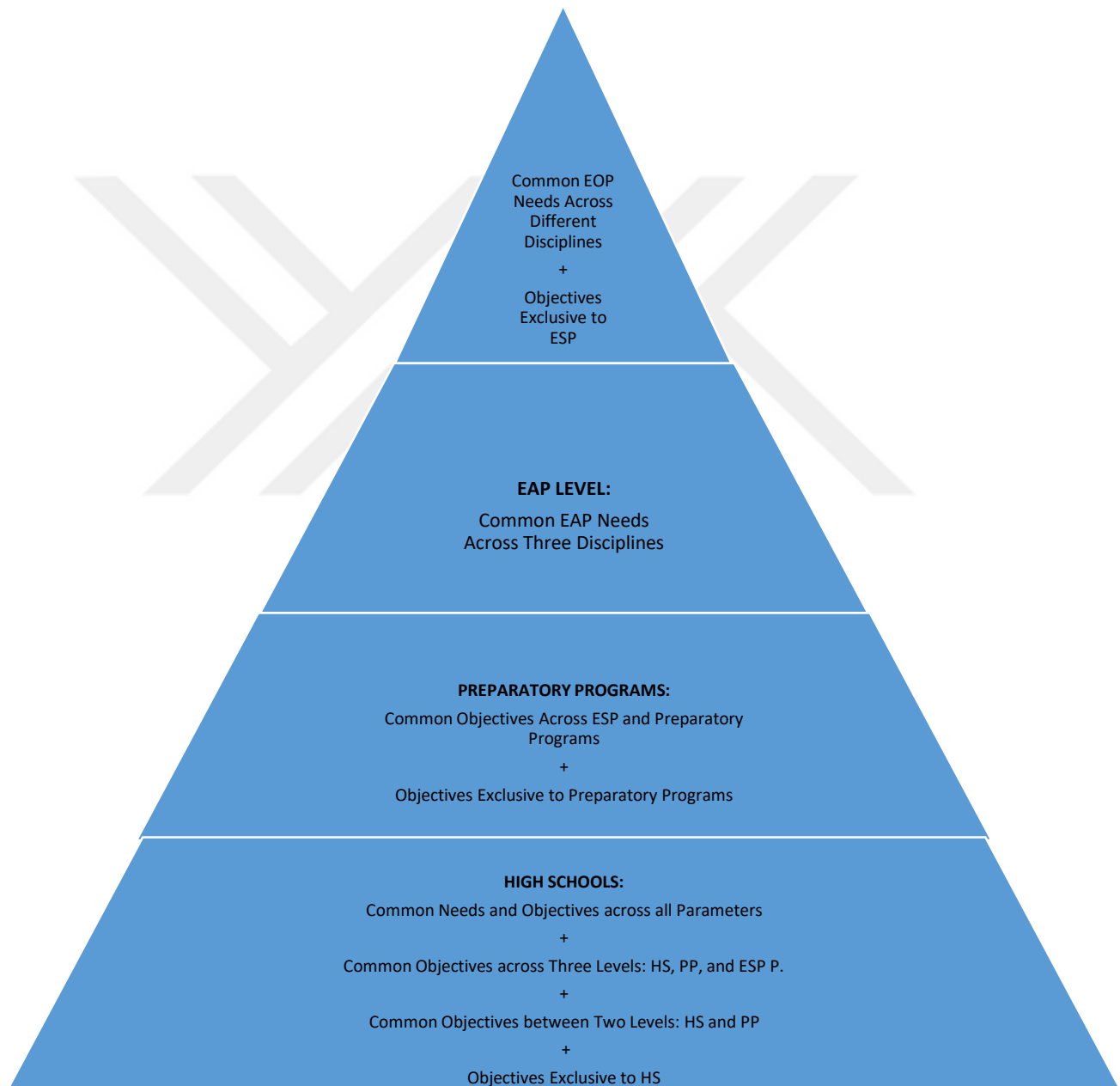
expressions for language functions X or Y or models of genres for doing X or Y, and if the students do not in fact later need to do X or Y, the ESP course content is of dubious value.” (p. 57). Unlike the opinions of the narrow-angled perspective supporters, a highly specific course can affect the motivation of the students negatively (Basturkmen, 2003).

Finally, this study attempted to identify whether there was a EGP threshold for ESP instruction and the best level of EGP proficiency to study ESP. In order to find an answer to this question, the students' opinions were taken through the NA questionnaire and of the ESP instructors and employees through qualitative interviews. According to most students from different disciplines, the lowest English proficiency level for the transition from EGP to ESP should be B2. The answer to this question by most of the ESP teachers was B1, and by the employees was B1+. Thus, it can be concluded that unlike the arguments that learners at the beginning level can be taught EOP (Dudley-Evans & St John, 1998; Mangiante, 2017, as cited in Cedric, 2021; Tarnopolsky, 2013) there should be an EGP threshold before the instruction of the ESP (Hutchinson & Waters, 1987; Stojković, 2020) according to the three resources of information, namely ESP learners, ESP teachers and employees. This EGP threshold should be at least B1+.

Overall, this study proposes a four-level pyramid for setting objectives in ELT and offers a roadmap for efficient objective setting at different ELT levels.

Figure 1.

The Hierarchical Pyramid for the Objectives to be Set at Four Successive ELT Levels



According to the pyramid above, objectives that are common to all levels and exclusive to high schools will be given at the high school level which is considered to be the first EFP level in the context of this study. At the next level, which is preparatory programs, the objectives specific to that level and the common objectives of the rest of the three levels, so the common core language of those levels, will be taught. Following this, the objectives not included in the previous two levels and those common to three different macro disciplines will be set for the EAP level. Thus, on the one hand, upon teaching common core objectives to the previous levels, the ones that are exclusive to EAP, and on the other hand, objectives that are common to three macro disciplines will be set for the EAP level. At the EOP level, the objectives at the last stage of the pyramid will be set. Those objectives consist of the ones that are exclusive to EOP and also the objectives that are common to three different macro disciplines.

5.3 Implications

This study has important theoretical and methodological implications. Theoretically, the present study made important contributions to the wide-angled and narrow-angled discussions in ESP syllabus design, the notion of the common core language in ESP and EGP, and lastly the debates on the EGP threshold for ESP. The line between EGP and ESP has been an ongoing discussion in the ESP literature (Bernard & Zemach, 2003; Basturkmen, 2006; Boston, 2016). While some scholars and researchers drew a clear line between these two branches of ELT, others focused on the similarities between EGP and ESP. The ELT objective analysis of different instructional levels in this study showed great commonality between EGP, based on the objectives of high schools and preparatory programs, and ESP, based on the objectives of EAP and EOP programs at the tertiary level. These results build on the discussions that there is not a

clear line between EGP and ESP and there is a close relationship between the two (e Haq et al., 2012; 012; Karimkhanliu, 2005; Popescu, 2010; Salmani-Nodoushan, 2020).

The study's findings further contributed to the debates on the common core language in ESP and EGP literature. First of all, the commonality between the ELT objectives across EGP and ESP programs showed that there is a common core language between EGP and ESP. Next, the common ESP needs analysis across ten majors belonging to three different macro academic disciplines showed that there is a significant number of common ESP skills across those different macro disciplines. These results carry critical theoretical implications regarding the common core language across different academic disciplines and professional areas (Basturkmen, 2014; Coxhead & Nation, 2001; Farhady, 2008).

The common ESP needs across different macro disciplines and professional areas also support the wide-angled ESP course design discussions. While the advocators of the narrow-angled ESP course design suggest the ESP courses be designed in a highly specialized way for a group of learners with homogenous needs (Belcher, 2006; Hyland, 2003; Li & Huo, 2014; Paltridge, 2009), the proponents of the wide-angled perspective assert the ESP courses to be designed for heterogeneous groups with common ESP needs (Anthony, 2011; Dovey, 2006; Farhady, 2008; Farhady et al., 2018). The findings of the present study show a significant number of common ESP needs across different academic disciplines and professional areas. Thus, it suggests and supports the wide-angled ESP course design for those heterogeneous groups.

The last theoretical contribution of this study is to the issue of whether there is a need for an EGP level threshold for ESP classes (Dudley-Evans, 1998; Mangiante, 2017 as cited in Cedric, 2021; Stojković, 2020; Tarnopolsky, 2013). The answers of the ESP students to the questionnaire and the answers of the ESP teachers and professionals in the semi-structured

interviews showed that an EGP level is a prerequisite for ESP classes, and this level should be B1+ according to CEFR.

Additionally, this study has significant methodological implications. First, a comprehensive quantitative scale was developed to analyze the common ESP needs of students from different disciplines. The development process involved extensive literature exploration, focus group discussions, and semi-structured interviews. Based on these three sources, a taxonomy of skills was created, and a common needs analysis questionnaire was developed. The questionnaire items were reviewed and revised multiple times after the pre-piloting and piloting stages. Besides, a factor analysis was conducted after the piloting stage, which built on the improvement of the taxonomy created based on the relevant literature, focus groups, and semi-structured interviews. Furthermore, a Model of ESP Skills was created based on the results of the factor analysis, and it can be regarded as a valuable product of the questionnaire development process. Finally, the common ESP Needs Analysis Questionnaire took its final form based on the Model. All these processes show that the comprehensive scale can be used for future studies with larger groups of participants. Moreover, the semi-structured interviews and graphic elicitations used to collect data from ESP teachers and professionals can be considered important data resources for the common ESP needs analysis. Public records and document analysis were also used for the English Language Teaching (ELT) objective analysis to identify commonalities across different educational levels. Adopting all these data collection methods and analysis processes provided better insights into the issue.

5.4 Applications

The findings of this study can be a beneficial resource for several institutions and stakeholders.

The ELT institutions and curriculum developers are among those stakeholders. First, ELT curriculum developers at the high school level can draw on the findings of this study. A list of common core language objectives was obtained based on a multi-dimensional analysis. That common core language could be set as the ELT objectives at the first level of EGP, which is the high school in Turkey's context. Considering the results of this study, the curriculum developers at the high school level could offer a more economical, time-saving, and effective curriculum. They would further lessen the burden of the following EGP level which is the English preparatory programs. Thus, the preparatory programs with a reduced burden could focus on the ELT objectives that were not taught at the high school level, which would also enable the preparatory programs to offer a more efficacious ELT program in a limited period and prepare it for the following ELT levels which are ESP programs.

Moreover, the ESP course designers and curriculum developers would be the beneficiaries of the findings of this study. Considering the objectives covered in the previous two ELT levels, the curriculum developers and course designers would be able to design ESP courses based on the objectives suggested for EAP and EOP levels. Additionally, with the common ESP needs identified based on the results of this study, they would be able to design courses for heterogeneous groups of learners rather than homogenous learners, which would be more practical and economical. In this respect, the findings of the study will also help the administrators of faculties for the recruitment or assignment of ESP teachers who do not need to be knowledgeable in the highly specialized content of the discipline they are teaching. Similarly,

the study would lighten ESP teachers' burden of possessing discipline-specific knowledge which is imposed by a narrow-angled ESP perspective. Teaching ESP learners from different disciplines with common needs would not require discipline-specific knowledge. Thus, they would use their energy and time on ways to teach those common ESP needs more effectively. The findings would be further helpful for them to adapt the ready-made materials for their classes.

Suggestions on the ELT objectives for different levels and disciplines would be an excellent guide for the material developers. Regardless of being a material developer or a teacher, one can use the findings of this study to develop or adapt suitable ELT materials for different levels and disciplines.

Lastly, it would be definitely the learners, both EGP and ESP, who would be the great beneficiaries of the findings of the present study. Being aware of their needs at each ELT level would motivate and also guide learners to be better language learners. Based on the objectives suggested for each level, the learners would be able to reach the ELT level they want without losing their motivation in their long and unending language-learning lives.

5.5 Limitations

It's important to note that this study has some limitations. Firstly, the results are only based on three macro disciplines, ten micro disciplines, and ten majors. If a larger number of disciplines had been included, the results would have been more generalizable. Additionally, the study was limited by the number of ESP teachers and employees who participated. A more significant number of instructors and employees would enable the administration of the common needs analysis questionnaires along with the qualitative instruments. Finally, the study was not

able to analyze why several faculties have stopped including EOP courses in their curriculum in recent years.

5.6 Suggestions for Further Research

Considering the limitations of this study, it can be replicated among students of all tertiary-level disciplines in Turkey. Doing so would provide us with more comprehensive results, which could be used to improve the country's education system. It would also be beneficial to administer the common ESP needs analysis questionnaire to ESP instructors and employees and compare the quantitative results with those obtained in this study.

While this study acquired the opinions of tertiary-level students from different years of study regarding their ESP needs, it did not analyze the differences among them. Therefore, future research could focus on analyzing the similarities and differences in the perspectives of students from different years of study and examining the correlation between their grades and their awareness of their ESP needs.

Moreover, conducting an in-depth study with faculty administrators on their preferences for ESP teacher recruitment and their opinions on ESP teachers as language teachers and faculty members could provide valuable insights. Additionally, researching the reasons why faculties have recently abandoned EOP courses could be a subject for future investigation.

Furthermore, analyzing the self-attitudes of ESP practitioners as language and non-language teachers, and their opinions on the need for subject-specific knowledge, could be explored in further studies. Lastly, the necessity of conducting needs analysis could be studied thoroughly by examining the practices and opinions of ESP practitioners. To complement the

findings of this study, a corpus-based analysis of the materials used by the academic disciplines could also be conducted. This would involve analyzing common language structures, skills, and lexicology.

Finally, this study can be replicated in other countries by adapting or adopting the common ESP needs analysis questionnaire developed in this study.



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APPENDICES

Appendix A : The taxonomy ESP skills, sub-skills/study skills/strategies based on the Literature

Skill/ Component	Sub-skill/Sub-component
Listening	Listening and understanding presentations and discussions in meetings, seminars, talks, conferences
	Receiving spoken instructions/explanations/advice/tutorials
	Listening to presentations, explanations and instructions in the class
	Listening to and comprehending lectures
	Listening and understanding videos, podcasts, multimedia presentations
	Understanding and following instructions in practical/field work/laboratory.
	Understanding directions for classroom activities, homework assignments, exams, procedures
	Listening and understanding English media
Listening and Writing	Comprehending and Note taking (lectures/seminars/tutorials/ discussions/supervisions)

Skill/ Component	Sub-skill/Sub-component
Speaking	Oral (academic) presentations
	Formal speaking
	Pronunciation skills
	Informal in-class presentations (rather than prepared presentations)
	Speaking With(out) notes
	Asking questions in practical/field work/laboratory.

Skill/ Component	Sub-skill/Sub-component
Listening & Speaking	Asking questions in seminars, talks, discussions
	Maintaining one-to-one interactions such as telephone conversations
	Multi-person spoken interactions such as turn-taking.
	Communicating with native speakers, speaking with foreigners
	Participating in academic lectures
	Ask and answer questions in the class
	Participate/follow/engage in class discussions
	Understand and answer questions in oral exams

	Answering questions (after having done presentations (L)
	Participating in communications in informal social interactions
	Small group discussions
	Interacting with each other With specialists/teachers
	Meeting skills
	Job interviews

Skill/ Component	Sub-skill/Sub-component
Reading	Reading major-related articles, manuals, reports of projects and documents
	Reading e-mails, reports, memos
	Reading scientific texts
	Reading academic journals/publications, reading office documents, and reading textbooks (reference books)
	Reading comprehension
	Skimming and scanning skills,
	Reading efficiently: comprehension and speed
	Understanding and analysing data (graphs, diagrams, charts, tables, etc.)
	Summarizing and paraphrasing
	Inference and guessing
	Identifying main ideas, supporting ideas and examples;
	Reading study notes and texts
	Interpreting writer's point of view
	Understanding writer's attitude and purpose
	Reading electronic/online study notes and texts
	Reading instructions for assignments/exams/projects

	Reading instructions for labs
	Reading course handouts
	Understanding main ideas

Skill/ Component	Sub-skill/Sub-component
Reading & Writing	Reading and note taking
	Understand and answer questions in written exams
	Reading and writing e-mails

Skill/ Component	Sub-skill/Sub-component
Writing	Writing basic personal information, emails, resumes, and business letters
	Writing in occupational context: writing lab reports, business reports, field trip reports, writing answers in tests/exams and abstracts for projects
	Academic writing: conference abstracts, research paper, essays, theses, dissertations, proposals etc.
	Planning, drafting, writing
	Writing a CV
	Writing projects and assignments
	Writing tasks

Skill/ Component	Sub-skill/Study skill/Task-type
Vocabulary	Technical vocabulary
	Field-specific vocabulary/terminologies
	Key lexical items related to subject/topic (listening)
	Limited vocabulary
	Academic words

Skill/ Component	Sub-skill/Sub-component
Research Skills	Library use
	Conducting/Designing/ Undertaking questionnaires/interviews etc.
Skill/ Component	Sub-skill/Sub-component
Other	Translation
	Use of internet/technology (in English)
	Using dictionaries

Appendix B : Categorization of the Findings of the Focus Group Interviews

Skill	EAP Needs (Teachers)	EOP Needs (Teachers)	EAP Needs (Students)	EOP Needs (Students)	EAP Needs (Employee)	EOP Needs (Employee)
L	Listening to and comprehending lectures Listening to and understanding media in English Listening and comprehension Listening to and understanding the radio Listening to different varieties	Listening to and understanding lectures Listening and note-taking Listening to and understanding English media		Understanding videos Understanding different varieties of English		Listening and comprehending to different varieties of English Listening and comprehension Understanding different varieties
S	Stress Pronunciation skills	Speaking practice Making oral presentations	Asking and answering questions	Oral presentations	Making presentations Online presentations Answering questions Self-confidence while speaking	Oral presentation Answering questions Pronunciation Skills Understanding instructions

						Fluent speaking
L & S	Group discussion in the class Oral presentations Asking and answering questions in oral exams	Making phone conversation Job interviews Conversation skills Formal interaction Informal interaction	Class discussions Group discussions	Formal interaction Informal interaction Skype call Job interviews Communication with foreigners Asking and answering questions (after presentations, meetings etc.) Effective communication skills	Video calls: Skype, go-to meeting, whatsapp Phone call Oral communication skills Interaction with the experts Formal interaction Informal interaction Job interviews	Formal interaction Informal int skills Phone calls Interaction w/ experts Interaction in meetings, Video-conference (skype etc.)
R	Skimming and scanning Reading strategies Reading comprehension Reading major-related articles Doing major-related reading	Reading and understanding major-related instructions Reading and interpreting graphics Reading major-related articles Reading and interpreting reports	Critical reading Reading about different topics	Reading journals Reading online sources Reading and understanding projects Efficient reading: comprehension and speed	Skimming and scanning Reading: - instructions -job-related sites, blogs etc. -reports -job-related documents -job agreements	Reading job description, Reading field-related blogs, websites etc.

		Technical reading Reading field-specific texts, articles etc.				
W	Writing essays: opinion/cause-effect etc. Critical writing	Process writing Writing essays: opinion/cause-effect etc. Critical writing	E-mail writing Essay writing e.g. opinion, agree, disagree Survey reports writing CV writing	E-mail writing CV writing Essay writing Proposal writing Dissertation writing Project writing	Preparing presentations Summarizing Writing: Reports Business letters E-mails Documenting information Conducting formal written communication	Essay writing Instant writing
O	Academic Vocabulary Vocab: part of speech Grammar	Academic Vocabulary Technical-field specific vocabulary General English Taking international exams		Major-related vocabulary Marketing skills Research skills Problem-solving skills Technology use in English Translation Following latest trends e.g. publications, videos etc. Job application skills	Using computer programs in English Data analysis Translation Field-related vocabulary/terminology Technology-related vocabulary Internet search Job application skills	Field-specific terminology Job interview skills Spelling, Job description Problem-solving skills General vocabulary

Appendix C: Categorization of the Findings of the Individual Interviews

S.	EAP Needs (Teachers)	EOP Needs (Teachers)	EAP Needs (Students)	EOP Needs (Students)	EAP Needs (Employee)	EOP Needs (Employee)
L	Listening comprehension Listening to and understanding lectures Critical listening Note-taking, Listening to and comprehending presentations or discussions in meetings/seminars/conferences/talks etc. Understanding and following instructions in field work/laboratory	Listening and comprehension Listening and note-taking Listening to and comprehending presentations and discussions in meetings/seminars/conferences/talks etc. Understanding and following instructions in field work/laboratory	Understanding different varieties Listening to and understanding lectures Watching major-related videos on internet such as YouTube etc. Listening and note-taking Understanding and following instructions in field work/lab Listening to and comprehending talks, discussions, conferences, meetings	Understanding different varieties Watching Major-related videos (media) Listening to and understanding lectures Listening and note-taking Listening and understand the meetings, presentations, discussions, conferences etc. Understanding and following instructions in the field work etc.	Listening to and comprehending lectures Listening to and comprehending presentations or discussions in meetings/seminars/conferences/talks etc. Listening and note-taking	Understanding different varieties of English Listening and comprehension Listening to and comprehending presentations and discussions in meetings/seminars/conferences/talks etc. Understanding and following instructions in field work/laboratory Listening and understanding videos, media etc.

S	Oral present. Giving short formal talks Self-confidence while speaking	Oral present. Use of body language while speaking Informal speaking Formal speaking Speaking fluently Present a product Self-confidence Oral Communicative skills	Making oral presentations Expressing oneself Using gestures, body language while speaking: learning intercultural gestures, body language Pronunciation skills	Making oral presentations	Making presentations Online presentations Self-confidence while speaking	Making presentations Self-confidence Online presentations Answering questions Fluent speaking
L & S	Group discussion Class discussions In-class presentation Interaction with each other Interaction with teachers Asking-answering questions Formal interaction Informal interaction Phone conversation	Seminars Meetings Job interviews Group discussions class discussions verbal/oral communication phone calls Video-conf. (skype) Ask and answering questions Interacting w/ experts	Answering questions (after presentations) Interaction with experts Comm. w/foreigners Job interviews Group discussions Debates In-class discussions Informal interactions Formal interactions Asking answering questions in seminars etc. Phone calling	Interacting to experts in the field Formal interaction Informal interaction Interacting with workplace people Listening and speaking in meetings Job interview skills Communicating with foreigners Teleconferencing (skype etc) Phone-calling	Video-call (Skype calls) Phone call Instant writing Oral communication Interaction with the experts Formal interaction Informal interaction Meetings Job interviews Asking and answering questions	Video-conf (Skype call, go-to-meeting call) Phone call Interaction with the customers Instant writing Meetings Formal interaction Informal interaction Job interviews Asking and answering questions (in seminars, talks, discussions)

		Formal interactions Informal	Video calling (Skype etc.)	Asking and answering questions in meetings, seminars etc.		
R	Skimming and scanning Reading comprehension and speed Reading about different topics Critical reading Guessing meaning from the context Finding referral words Paraphrasing R. academic journals R. scientific texts Reading and note-taking	Critical reading Field-related reading: books, articles, journals, websites and other resources Efficient reading Skim-Scan Academic journals Job-related reports, manuals etc.	Reading major-related textbooks etc. Reading major – related articles Reading academic journals Reading scientific texts Reading major related manuals, reports, documents Skimming and scanning Reading comprehension Critical reading Reading and writing e-mails Paraphrasing Reading and note-taking Summarizing and paraphrasing	Field specific/job-related reading Skimming and scanning Scanning Reading job-related websites Reading job-related textbook Reading efficiently: speed and comprehension Reading comprehension Reading academic journals Reading scientific texts Reading major-related manuals, etc Critical reading	Skimming and scanning Reading: - instructions -job-related sites, blogs etc. -reports -job-related documents -job agreements Efficient reading Reading textbooks Reading major-related manuals, reports, documents Reading academic journals	Reading comprehension Efficient reading Skimming and scanning Job-related documents

			Synthesizing Reading and writing business letters	Reading and note- taking Reading and writing e-mails	Reading and note- taking	
W	Paragraph writing, Opinion essay Summarizing Synthesizing Chart reports E-mails Cover letters Reports Journals Assignments CV writing Citation Survey report Paraphrasing Projects Business letters Occupational writing: lab reports, business reports Essay writing (cause-effect, opinion etc.) Proposals-theses	Survey reports Cover letters-CV Business letters Emails Proposals-theses Research-paper writing, Essay writing Occupational writing (rep.) chart reports Using business jargon Summarizing and paraphrasing	Answering questions in exams Writing essays Taking international exams Writing thesis Writing lab reports Writing projects Occupation. writing Writing homework Writing chart reports Summarizing, Synthesizing, Paraphrasing Cover letter writing Writing survey reports Chart reports Research papers Writing proposals, thesis	Correspondence in workplace Answering written exams Writing homework Writing reports (lab etc.) Summarizing Essay writing Project writing Cover letter writing Survey reports Chart reports Reading and writing e-mails Reading and writing business letters Occupational writing Summarizing and paraphrasing Synthesizing	Preparing presentations Summarizing Writing: Reports Business letters E-mails Documenting information Formal written communication Occupational writing	Writing: -E-mails -Reports -Business letters Preparing presentations Summarizing and paraphrasing
O	Critical thinking Vocabulary Problem-solving skills	Field- related/technical Academic vocab Research skills	Research skills Academic vocabulary	Using internet/technology in English	Using computer programs in English Data analysis Translation	Field-related terminology Academic vocabulary

	Academic vocabulary Internet research Field-specific vocab	Critical skills (thinking) Problem-solving skills Using the Internet/technology in English (computer programs, applications etc.)	Problem-solving skills Using the internet/technology in English (computer programs, applications etc. terminology Critical thinking skills	(computer programs, applications etc. Field-specific/Technical terminology Academic Vocab Critical thinking skills Problem-solving skills	Technology-related vocabulary Internet search Job application skills Field-specific/Technical terminology	Technology-related vocabulary Translation skills Internet search Job application skills Problem-solving skills Authentic English Using computer programs in English
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Appendix D : The Chi-square analysis of three sources: Literature, Individual Interviews and Focus Group Interviews

	ESP SKILLS	Literature		Ind. Interviews		Foc. Gr. Interviews	
		Freq.	Chi2 result	Freq.	Chi2 Result	Freq.	Chi2 Result
	1. Listening to and comprehending lectures	28	67.05	15	0.83	2	0.11
	2. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after the presentation. etc.)	27	63.44	26	16.89	6	4.66
	3. Listening and note-taking (lectures/seminars/tutorials/discussions/supervisions	25	51.53	19	4.31	1	0.009
	4. Reading and writing e-mails			34	41.40	4	0.82
	5. Making video calls (Video-conferencing, skype/WhatsApp calls etc.)			32	34.26	8	11.64
	6. Making oral presentations	21	31.42	37	53.51	5	2.35
	7. Reading academic/scientific (technical or field/major related etc.) journals/publications, papers, articles, texts	19	22.29	16	1.45	1	0.009
	8. Participating in communications in informal social interactions			27	19.36	6	4.66
	9. Participate/follow/engage in-class discussions	18	18.81	8	1.25	2	0.11
	10. Listening to and understanding presentations and discussions in meetings, seminars, talks, conf.	17	15.61	23	10.49		

	11. Writing in occupational context: lab reports, business reports, field trip reports, (and abstracts for projects)	16	12.72	14	0.38		
	12. Field specific/technical vocabulary/terminologies	16	12.72	12	0.00	5	2.35
	13. Reading and writing business letters,(e-mails) faxes	16	12.72				
	14. Job interview/application skills			21	7.06	9	16.31
	15. Making phone calls			21	7.06	4	0.82
	16. Participating in communications in formal interactions			21	7.06	4	0.82
	17. Reading and writing business letters			20	5.60		
	18. Skimming and scanning skills	13	5.81	25	14.59	2	0.11
	19. Major/field-related reading: articles, manuals, reports of projects and documents, blogs, and websites			18	3.19	8	11.64
	20. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations(video-conferencing, listening to internet audio, watching video over the Internet etc.)	7	0.00	14	0.38	6	4.66
	21. Reading efficiently: comprehension and speed	12	4.10	13	0.11	3	0.07
	22. Writing a CV/ Cover letter			18	3.19	2	0.11
	23.						

	24. Academic writing: conf. abstracts, research papers, essays, theses, dissertations, proposals etc.	11	2.69			3	0.07
	25. Translation	11	2.69			3	0.07
	26. Summarizing	11	2.69				
	27. Reading and synthesizing			15	0.83		
	28. Critical thinking skills			15	0.83		
	29. Reading textbooks	10	1.57				
	30. Pronunciation skills	10	1.57				
	31. Listening to presentations, explanations and instructions in the class(Receiving spoken instructions/explanations/advice/tutorials)	10	1.57				
	32. Listening to and understanding (major/field-related) multimedia presentations, videos, podcasts						
	33. Reading major/field-related articles, manuals, reports of projects and documents	9	0.75				
	34. Writing CV, resume, cover letter	9	0.75				
	35. Participating in communications in informal (daily) social interactions	8	0.23				
	36. Understanding and following instructions in practical/field work/laboratory.	7	0.00	14	0.38		
	37. Reading and note taking	7	0.00	14	0.38		
	38. Reading instructions for assignments/exams/projects/exercises/labs	7	0.00				
	39. Planning, drafting, revising, editing	6	0.08				
	40. Participating in (small) group discussions/interactions (in the class etc.)	6	0.08				
	41. Reading (online) study notes and texts, handouts	6	0.08				

	42. Use of internet/technology (in English)	5	0.44				
	43. Writing projects	5	0.44				
	44. Writing assignments	4	1.11				
	45. Paraphrasing	3	2.07				
	46. Academic vocab.	3	2.07	2	8.18		
	47. Understanding and analyzing data (graphs, diagrams, charts, tables, etc.)	3	2.07				
	48. Making phone calls	3	2.07				
	49. Distinguishing between factual and non-factual information	1	4.88				
	50. Transferring or using the information while or after reading	1	4.88				
	51. Problem-solving skills			14	0.38	1	0.009
	52. Research skills			12	0.00		
	53. Writing survey reports			11	0.06	1	0.009
	54. Academic writing: conference abstracts, research paper, theses, dissertations, proposals, etc.			10	0.28		
	55. Understanding and answering questions in written exams			3	6.60		
	56. Inference and guessing			1	9.93		
	57. Communicating with experts					2	0.11
	58. Reading strategies					2	0.11
	59. Reading job description					1	0.009

Appendix E The Factor Analysis of the Piloted Student ESP Needs Analysis Questionnaire: EAP Part

	Component						
	1	2	3	4	5	6	7
1.Listening					0,75		
2. Speaking		0,42			0,66		
3.Reading				0,36	0,55		
4. Writing			0,46		0,68		
5.Grammar					0,66		
6. Vocabulary				0,31	0,63		
7. Listening to and understanding lectures						0,39	
8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.		0,42					
9. Understanding and following instructions in fieldwork/laboratory.		0,71					
10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.		0,62					
11. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)		0,69					
12. Listening and note taking (in lectures/seminars/tutorials/discussions/supervisions.		0,57					
13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)						0,67	
14. Participate/follow/engage in in-class discussions						0,79	
15. Making video calls (Videoconferencing, Skype/Whatsapp calls, etc.)			0,79				

16. Making phone calls			0,81				
17. Job interviews (application skills)			0,74				
18. Participating in communications in formal social interactions		0,37	0,59				
19. Participating in communications in informal interactions			0,72				
20. Making oral presentations							0,58
21. Reading academic/scientific journals/publications, papers, articles, texts						0,75	
22. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites				0,63			
23. Reading instructions for assignments/exams/projects/exercises/labs				0,64			
24. Reading (online) study notes and texts, handouts						0,48	
25. Reading efficiently: comprehension and speed	0,57						
26. Skimming and scanning skills	0,58						
27. Reading strategies	0,61						
28. Identifying (understanding) main ideas, supporting ideas, and examples	0,47						
29. Inference and guessing	0,54						
30. Reading and writing business letters, e-mails, faxes			0,59				
31. Reading and note taking	0,58						
32. Summarizing	0,55						
33. Paraphrasing	0,71						
34. Translation			0,37				

35. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)			0,70				
36. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.						0,50	
37. Writing assignment/homework						0,51	
38. Writing a CV/ Cover letter			0,60				
39. Writing essays						0,72	
40. Planning, drafting, revising, editing						0,52	
41. Use of Internet/technology (in English)							0,49
42. Academic vocabulary				0,70			
43. Field-specific/technical vocabulary/terminologies				0,65			

Appendix F The Factor Analysis of the Piloted Student ESP Needs Analysis Questionnaire: EOP Part

	Component						7
	1	2	3	4	3	6	
1.Listening	0,70						
2.Speaking	0,78						
3. Reading	0,72					0,39	
4.Writing	0,61	0,47					
5.Grammar	0,51						
6.Vocabulary	0,70	0,39					
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.					0,64		
8. Understanding and following instructions in fieldwork/laboratory.					0,50		
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.					0,55		
10. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)	0,67						
11. Listening and note taking (in seminars/tutorials/discussions/supervisions.			0,65		0,41		
12. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)	0,56			0,59			
13. Participate/follow/engage in discussions				0,48	0,66		
14. Making video calls (Video-conferencing, skype/WhatsApp calls, etc.)				0,76			
15. Making phone calls				0,81			
16. Job interviews (application skills)				0,76			

17. Participating in communications in formal social interactions			0,68			
18. Participating in communications in informal interactions			0,65			
19. Making oral presentations	0,53					
20. Reading academic/scientific journals/publications, papers, articles, texts					0,68	
21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites					0,56	
22. Reading instructions for projects/labs					0,75	
23. Reading efficiently: comprehension and speed		0,56				
24. Skimming and scanning skills		0,67				
25. Reading strategies		0,66				
26. Identifying (understanding) main ideas, supporting ideas, and examples		0,69,				
27. Inference and guessing		0,72				
28. Reading and writing business letters, e-mails, faxes			0,62			
29. Reading and note taking		0,60				
30. Summarizing		0,66				
31. Paraphrasing		0,61				
32. Translation					0,82	
33. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)			0,61	0,33		
34. Writing projects			0,76			
35. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.			0,79			
36. Writing a CV/ Cover letter			0,55			
37. Writing essays			0,55			
38. Planning, drafting, revising, editing			0,77			

39. Use of Internet/technology (in English)							0,51
40. Academic vocabulary		0,47	0,57				
41. Field-specific/technical vocabulary/terminologies		0,40	0,44				



Appendix G Categorization of EAP/EOP skills and sub-skills based on the relevant literature, qualitative interviews, and the factor analysis results of the piloted questionnaire

General Categorization of Skills and Sub-skills

Listening	1. Listening to and understanding lectures
	2. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
	3. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.
	4. Understanding and following instructions in fieldwork/laboratory.
	5. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
Listening and Writing	6. Listening and note taking (in lectures/ seminars/tutorials/ discussions/supervisions.
Listening and Speaking	7. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)
	8. Participate/follow/engage in in-class discussions
	9. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
	10. Making phone calls
	11. Participating in communications in formal social interactions
	12. Participating in communications in informal interactions
Speaking	13. Making oral presentations
Reading	14. Reading academic/scientific journals/publications, papers, articles, texts
	15. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
	16. Reading instructions for assignments/exams/projects/exercises/labs
	17. Reading (online) study notes and texts, handouts
	18. Reading efficiently: comprehension and speed
	19. Skimming and scanning skills
	20. Identifying (understanding) main ideas, supporting ideas, and examples
	21. Inference and guessing

Reading and Writing	22. Reading and writing business letters, e-mails, faxes
	23. Reading and note taking
	24. Summarizing
	25. Paraphrasing
Writing	26. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
	27. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.
	28. Writing assignment/homework
	29. Writing a CV/ Cover letter
	30. Writing essays: Planning, drafting, revising, editing
Vocabulary	31. Academic vocabulary
	32. Field-specific/technical vocabulary/terminologies
Other Skills	33. Translation
	34. Job Interview Skills
	35. Use of Internet/technology (in English)

Categorization of Academic Skills into Sub-skills

Listening	1. Listening to and understanding lectures
	2. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
	3. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.
	4. Understanding and following instructions in fieldwork/laboratory.
	5. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
Listening and Writing	6. Listening and note taking (in lectures/ seminars/tutorials/ discussions/supervisions.
Listening and Speaking	7. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)
	8. Participate/follow/engage in in-class discussions
	9. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
	10. Making phone calls
	11. Participating in communications in formal social interactions

	12. Participating in communications in informal interactions
Speaking	13. Making oral presentations
Reading	14. Reading academic/scientific journals/publications, papers, articles, texts
	15. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
	16. Reading instructions for assignments/exams/projects/exercises/labs
	17. Reading (online) study notes and texts, handouts
	18. Reading efficiently: comprehension and speed
	19. Skimming and scanning skills
	20. Identifying (understanding) main ideas, supporting ideas, and examples
	21. Inference and guessing
Reading and Writing	22. Reading and writing business letters, e-mails, faxes
	23. Reading and note taking
	24. Summarizing
	25. Paraphrasing
Writing	26. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
	27. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.
	28. Writing assignment/homework
	29. Writing a CV/ Cover letter
	30. Writing essays: Planning, drafting, revising, editing
Vocabulary	31. Academic vocabulary
	32. Field-specific/technical vocabulary/terminologies
Other Skills	33. Translation
	34. Job Interview Skills
	35. Use of Internet/technology (in English)

Categorization of Occupational Skills into Sub-skills

	1. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
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	2. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.
	3. Understanding and following instructions in fieldwork/laboratory.
	4. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
Listening and Writing	5. Listening and note-taking (seminars/tutorials/ discussions).
Listening and Speaking	6. Asking and answering questions (seminars, talks, fieldwork, lab, discussions, presentations, etc.)
	7. Participate/follow/engage in discussions
	8. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
	9. Making phone calls
	10. Participating in communications in formal social interactions
	11. Participating in communications in informal interactions
Speaking	12. Making oral presentations
Reading	13. Reading academic/scientific journals/publications, papers, articles, texts
	14. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
	15. Reading efficiently: comprehension and speed
	16. Skimming and scanning skills
	17. Identifying (understanding) main ideas, supporting ideas, and examples
	18. Inference and guessing
Reading and Writing	19. Reading and writing business letters, e-mails, faxes
	20. Reading and note taking
	21. Summarizing
	22. Paraphrasing
Writing	23. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
	24. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.
	25. Writing a CV/ Cover letter
	26. Writing essays: Planning, drafting, revising, editing

Vocabulary	27. Academic vocabulary
	28. Field-specific/technical vocabulary/terminologies
Other Skills	29. Translation
	30. Job Interview Skills
	31. Use of Internet/technology (in English)

The sub-categorization of sub-skills

Reading Strategies for Efficient Reading	1	Reading efficiently: comprehension and speed
	2	Identifying (understanding) main ideas, supporting ideas, and examples.
	3	Inference and guessing
	4	Skimming and Scanning
	5	Summarizing
	6	Paraphrasing
	7	Reading and note-taking

The categorization of other skills

Integration of Several Skills	Use of Internet/technology (in English)
	Translation
	Job interview skills

Appendix H The Student Common Needs Analysis Questionnaire

Dear Participant,

The purpose of this questionnaire is to collect information on your English language needs. You are kindly asked to read the questions below carefully and respond to them. Thank you for your collaboration. (Correspondence: Suna Altun, Yeditepe University)

Biodata

Age:	Gender:
Department:	First Language:
University:	Year of Study:

English Language Usage Background

What is the language of instruction in your department?
How many hours of English class do you have per week?
Do you think that these hours are enough for your academic needs? Yes () No ()
What was the English proficiency level that you left the English Prep School(B1, B2, C1) and started to study in your department?
Do you think this level is enough for you to be successful while studying in your department? Yes () No ()
If not, what do you think the appropriate English proficiency level is?
How much English do you use in your daily life? ____hours ____minutes
If you are employed, do you think you need English at your workplace? Yes ()No () I am not employed ()
If you aren't employed, do you think you will need English in your future workplace? Yes () No ()
Do you think your English classes will be enough for your occupational (job) needs in the future?

1) English Language Skills

Choose your suitable level in the following language skills and areas.

	A1	A2	B1	B2	C1	C2
Listening						
Speaking						
Reading						
Writing						
Grammar						
Vocabulary						
Others(Please Specify)						

2) English for Academic Purposes Needs

Please indicate the extent to which the following English language skills and sub-skills are important for your academic life. Please put a checkmark in the appropriate box.

1. Very Little 2. Little 3. Sufficiently 4. A lot

Language Skills	1	2	3	4
1. Listening				
2. Speaking				
3. Reading				
4. Writing				
5. Grammar				
6. Vocabulary				

L	Sub-skills				
	7. Listening to and understanding lectures				
	8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.				
	9. Listening to and understanding (major/field-related) videos, podcasts, multimedia presentations .				
	10. Understanding and following instructions in field work/laboratory.				
	11. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese etc.)				
L & W	12. Listening and note taking (in lectures/seminars/tutorials/ discussions/supervisions.				
L & S	13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)				
	14. Participate/follow/engage in in-class discussions				
	15. Participating in communications in formal social interactions				
	16. Making video calls (Video-conferencing, skype/WhatsApp calls, etc.)				
	17. Making phone calls				
	18. Participating in communications in informal interactions				
S	19. Making oral presentations				
R	20. Reading academic/scientific journals/publications, papers, articles, texts				
	21. Major/field-related reading: articles, manuals, reports of projects, documents, blogs and websites				
	22. Reading instructions for assignments/exams/projects/exercises/labs				
	23. Reading (online) study notes and texts, handouts				
	24. Reading efficiently: comprehension and speed				
	25. Skimming and scanning skills				
	26. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.				
R& W	27. Reading and note taking				
	28. Summarizing				

	29.Paraphrasing				
	30.Reading and writing business letters, e-mails, faxes				
	31.Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)				
	32. Writing a CV/ Cover letter				
	33.Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals etc.				
	34.Writing assignment/homework				
	35.Writing essays: Planning, drafting, revising, editing				
Vocab.	36.Academic vocabulary				
	37.Field specific/technical vocabulary/terminologies				
	38.Job interviews (application skills)				
	39.Translation				
	40. Use of internet/technology (in English)				
	Others (please specify)				

3) Learning Needs in the (Future) Career Life

Please indicate the extent to which the following English language skills and sub-skills you think you will need for your (future) career life. Please put a checkmark in the appropriate box.

1. Very Little 2. Little 3. Sufficiently 4. A lot

Language Skills	1	2	3	4
1. Listening				
2. Speaking				
3. Reading				
4. Writing				
5.Grammar				
6.Vocabulary				

	Sub-skills				
	7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.				
	8. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations.				
	9. Understanding and following instructions in fieldwork/laboratory.				
	10. Understanding different varieties/accents of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)				
L & W	11. Listening and note taking (in seminars/tutorials/discussions/supervisions.				
L & S	12. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations, etc.)				
	13. Participate/follow/engage in discussions				
	14. Participating in communications in formal social interactions				
	15. Making video calls (Video-conferencing, skype/WhatsApp calls, etc.)				
	16. Making phone calls				
	17. Participating in communications in informal interactions				
S	18 Making oral presentations				
R	19. Reading academic/scientific journals/publications, papers, articles, texts				
	20. Field-related reading: articles, manuals, reports of projects, documents, blogs and websites				
	21. Reading instructions for projects/labs				
	22. Reading efficiently: comprehension and speed				
	23. Skimming and scanning skills				
	24. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; inference and guessing ...etc.				
R& W	25. Reading and note taking				
	26. Summarizing				
	27. Paraphrasing				

	28. Reading and writing business letters, e-mails, faxes				
	29. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)				
	30. Writing a CV/ Cover letter				
	31. Writing essays: Planning, drafting, revising, editing				
Vocab.	32. Academic vocabulary				
	33. Field specific/technical vocabulary/terminologies				
	34. Job interviews (application skills)				
	35. Translation				
	36. Use of internet/technology (in English)				
	Others (please specify)				

If you have additional comments, please write them here.

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Thank you!

Appendix İ: Interview Protocols

Informed Consent Forms

Dear Participant,

I am a PhD student at Yeditepe University, majoring in English Language Teaching, and I am conducting a study on English for Specific Purposes (ESP). The research aims to analyze the common ESP needs of students studying in different academic disciplines. Thank you for volunteering to respond to the survey questions.

The findings of this study will be useful for several stakeholders, including ELT curriculum developers, ESP course designers, material developers, practitioners, and learners. The survey will take approximately 10 minutes, and it's completely voluntary. All your responses will be kept confidential and used solely for this study. Additionally, your identity will remain anonymous.

You can participate in this survey either through a paper-based questionnaire or a web-based questionnaire. If you have any problems accessing the web-based questionnaire or would like to share your feedback on the survey, please feel free to contact me through my email address.

Thank you for your cooperation and participation in this study.

Suna Altun,

Ph.D. Student at Yeditepe University

English Language Teaching Department

Sayın Katılımcı,

Yeditepe Üniversitesinde doktora öğrencisiyim ve Özel Amaçlar için İngilizce alanında bir çalışma yürütüyorum. Araştırma, farklı akademik disiplinlerde öğrenim gören öğrencilerin ortak ESP ihtiyaçlarını analiz etmeyi amaçlamaktadır. Bu araştırma kapsamında hazırladığım ankete katkı sunmanızı rica ediyorum. Ankete katılımınız tamamen gönüllülük esasına dayalıdır.

Bu çalışmanın bulguları, ELT müfredat geliştiricileri, ESP dersi tasarımcıları, materyal geliştiricileri, öğretmenler ve öğrenciler gibi birçok kurum ve paydaş için faydalı olacaktır. Anket yaklaşık 10 dakika sürecektir. Bu ankete verdiğiniz cevapları sadece bu çalışma için kullanacağım ve kimlik bilgilerinizi hiçbir kişi ya da kurumla paylaşmayacağım.

Bu ankete ister kağıt üzerinden isterseniz web tabanlı araçlar üzerinden katılabilirsiniz. Web tabanlı ankete erişimde herhangi bir sorun yaşarsanız veya anketle ilgili görüşlerinizi paylaşmak isterseniz, lütfen e-posta adresimden benimle iletişime geçmekten çekinmeyin.

Katılımınız ve işbirliğiniz için çok teşekkür ederim.

Suna Altun

Yeditepe Üniversitesi, İngiliz Dili Eğitimi Bölümü

Doktora Öğrencisi

Informed Consent Form for Questionnaire

I (participant's name and surname) agree to answer the questions of a survey that analyzed the common ESP needs of learners studying in different academic disciplines. I have been given general information about this study. I have also been informed that my identity will be anonymous.

I agree with the terms and hereby consent to participate in the study.

Signature.....

Date:.....

Contacts of the Researcher:

Suna Altun

Yeditepe University, English Language Teaching Department

Istanbul, Turkey

Protocol for the Interviews

Suna Altun

Yeditepe University

English Language Teaching Department

Ph.D. Program

Ph.D. Dissertation Study

Research Questions

1. What are the similarities and differences between the ELT learning objectives in high schools, in preparatory programs, and in ESP programs?
2. What are the common needs of ESP learners across different academic disciplines and the ones across different fields of occupation?
3. What would be the most appropriate level of language ability in GE that would enable ESP students to continue their ESP instruction from the perspective of various stakeholders?

Interview Protocol

Dear Participant;

Thank you for your participation in this interview. I am Suna Altun, a Ph.D. student at Yeditepe University in English Language Teaching Department. I am currently conducting a study for my Ph.D. dissertation. The research is about the common ESP needs analysis of students studying in different academic disciplines and professionals working in different occupational areas.

Your participation will be completely voluntary. The interview will take about 40 minutes and will include several questions concerning your experiences and feelings. I would like to get your permission to tape-record the interview, which will allow me to document the information you give accurately.

Please feel free to ask if you would like to stop the use of the recorder or the interview itself at any time during the interview. I would also like to state that all of your responses are confidential and they will be only used for this study.

I would also like to get your permission for publishing the findings of this interview and also using some direct quotes from the interview. However, your identity will be anonymous, so your name will not be used in the study.

Before we begin, I would like to remind you about the consent you gave to participate in this study. As the responsible investigator, I have specified your participation in the research project, which we have both signed and dated. We have each received a copy of the consent form to keep for our records.

Please know that you are free to stop or take a break at any time during the interview if you feel the need to do so. You are also able to withdraw your participation from the study at any time without any consequences.

If you have any questions or concerns, please feel free to let me know before we proceed. Otherwise, with your permission, we can begin the interview.

The details of this study were explained to me by:

Investigator Name: _____

Date: _____

I have read the above project description. I agree with the terms and hereby consent to participate in the study.

Participant Signature: _____

Participant Name (please print): _____

☐ I certify that I am over 18 years of age.

Date: _____



Questions: ESP Teachers

1. How many years is it that you have been teaching ESP?
2. Are you teaching ESP as a common course or a discipline-specific course?
3. What disciplines are you teaching in?
4. Are you a faculty member or language teacher?
5. Do you have discipline-specific knowledge?
6. How do you design your course?
7. Have you conducted a needs analysis?
8. What materials do you use for your course?
9. What content do you include?
10. What is the English proficiency level of your students? Where did they learn English?
11. What are the academic English needs of your learners for studying?
12. What do you think would be the future occupational English language needs of your students?
13. Do you think learners need an EGP threshold to start ESP courses? If yes, what do you think this level should be?

Graphic Elicitation Prompts: ESP Teachers

1. What are the EAP needs of your EFL learners?
2. What would be the future EOP needs of your EFL learners?

Questions: Employees

1. What did you study?
2. Where and in what position do you work?
3. How many years is it you have been working?
4. What is your level of English? Do you think this level is enough for your job?
5. How much English do you use for your profession? How often do you use English for your profession?
6. Who do you use English with for your profession?
7. How and for what purposes do you use English for your job?
8. What are your English language needs for your profession?
9. Have you received ESP course?
10. Do you think ESP should be taught as a common course for a variety of disciplines or fields or as discipline-specific course?
11. Do you think one needs an EGP level threshold to start ESP courses?

Graphic Elicitation Prompt(s): Employees

1. What are your English language needs for your profession?

Appendix J Common EAP Needs Across Three Disciplines: Technology Physical Sciences, Social Sciences

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary
7. Listening to and understanding lectures
8. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
9. Understanding and following instructions in fieldwork/laboratory.
10. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
11. Understanding different varieties/accent of English (e.g. English spoken by Germans, Italians, Indians, Chinese, etc.)
12. Listening and note-taking (in lectures/ seminars/tutorials/ discussions/supervisions.
13. Asking and answering questions (in the class, seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)
14. Participate/follow/engage in in-class discussions
15. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
16. Participating in communications in formal social interactions
17. Participating in communications in informal interactions
18. Making oral presentations
19. Reading academic/scientific journals/publications, papers, articles, texts
20. Major/field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
21. Reading instructions for assignments/exams/projects/exercises/labs
22. Reading (online) study notes and texts, handouts
23. Reading efficiently: comprehension and speed
24. Skimming and scanning skills
25. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.
26. Reading and note-taking

27. Summarizing
28. Paraphrasing
29. Reading and writing business letters, e-mails, faxes
30. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
31. Writing a CV/ Cover letter
32. Academic writing: conference abstracts, research papers, essays, theses, dissertations, proposals, etc.
33. Writing assignment/homework
34. Writing essays: Planning, drafting, revising, editing
35. Academic vocabulary
36. Field-specific/technical vocabulary/terminologies
37. Job interviews (application skills)
38. Translation
39. Use of Internet/technology (in English)

Appendix K: Themes, Sub-themes, and Codes Emerged from the PSA Part of the ESP Teacher Interviews

PRESENT SITUATION ANALYSIS	Themes	Sub-themes	Codes
	1.Common EAP Needs	a.Main Language Skills and Elements	- Listening - Speaking - Reading - Writing - Grammar - Vocabulary
		b.Listening-related sub-skills	-Listening to and understanding lectures, -Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks, etc. -Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations, -Understanding different varieties/accents of English, -Listening and note-taking
		c. Listening and Speaking-related Sub-skills	-Asking and answering questions, -Participating/following/engaging in in-class discussions, -Making video-calls -Participating in communications in formal social interactions.
		d. Oral presentation skills	- Preparing a presentation -Presentation delivering skills
		e.Reading-related sub-skills	- Academic and scientific reading - Major-related reading -Reading instructions for assignments/exams/projects/exercises /labs -Reading (online) study notes and texts, handouts, -Reading efficiently: comprehension and speed, -Skimming and scanning skills, -Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc. -Reading and note-taking.

		f. Writing-related sub-skills	-Writing and reading e-mails, -Occupational writing, -Writing assignments/homework, -Writing essays
		g. Job-application skills	-Job interviews -Writing a CV and/or cover
		e. Vocabulary use in EAP	-Academic Vocabulary -Field-specific vocabulary
	2.EGP Level	-----	-Insufficient GE level of ESP students -The threshold to take an ESP course
	3.Discipline-specific knowledge of ESP teachers	-----	-ESP teachers as language teachers -ESP teachers as not language teachers.
	4.ESP Course Design	-----	-Conduction of the Needs Analysis -Selection/Development of Materials

Appendix L: Common EOP Needs Across Three Disciplines: Technology, Physical Sciences, Social Sciences

1. Listening
2. Speaking
3. Reading
4. Writing
5. Grammar
6. Vocabulary
7. Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.
8. Understanding and following instructions in fieldwork/laboratory
9. Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations
10. Understanding different varieties/accents of English (e.g., English spoken by Germans, Italians, Indians, Chinese, etc.)
11. Listening and note taking (in lectures/ seminars/tutorials/ discussions/supervisions.
12. Asking and answering questions (in seminars, talks, lectures, fieldwork, lab, discussions, after presentations etc.)
13. Participate/follow/engage in discussions
14. Making video calls (Videoconferencing, skype/WhatsApp calls, etc.)
15. Making phone calls
16. Participating in communications in formal social interactions
17. Participating in communications in informal interactions
18. Making oral presentations
19. Reading academic/scientific journals/publications, papers, articles, texts
20. Field-related reading: articles, manuals, reports of projects, documents, blogs, and websites
21. Reading instructions for projects//labs etc.
22. Reading efficiently: comprehension and speed
23. Skimming and scanning skills
24. Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc.

25. Reading and note taking
26. Summarizing
27. Paraphrasing
28. Reading and writing business letters, e-mails, faxes
29. Occupational writing: lab reports, business reports, field trip reports, (and abstracts for projects)
30. Writing a CV/ Cover letter
31. Writing essays: Planning, drafting, revising, editing
32. Academic vocabulary
33. Field-specific/technical vocabulary/terminologies
34. Job interviews (application skills)
35. Translation
36. Use of Internet/technology (in English)

Appendix M: Themes, Sub-themes, and Codes Emerged from the TSA Part of the ESP Teacher Interviews

TARGET SITUATION ANALYSIS	Themes	Sub-themes	Codes
	1.Common Occupational Needs	a.Main Language Skills and Elements	- Listening - Speaking - Reading - Writing - Grammar - Vocabulary
		b.Listening-related sub-skills	-Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.; -Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations. -Understanding different varieties of English -Listening and note-taking
		c.Listening-Speaking-related Occupational Skills	- Asking and answering questions (in seminars, talks, fieldwork, lab, discussions, after presentations, etc.); - Participate/follow/engage in discussions; - Making video calls (Videoconferencing, skype/WhatsApp calls, etc.) - Participating in communications in formal social interactions.
		d.Reading-related Occupational Skills	-Reading academic/scientific journals/publications, papers, articles, and texts; -Major-related reading -Field-related reading; -Reading instructions for /projects/exercises/labs; -Reading efficiently: comprehension and speed; -Skimming and scanning skills; -Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; - Inference and guessing...etc. -Reading and note taking.
		e.Writing-related Occupational Skills	Writing and reading business letters and e-mails, Occupational writing
		f.Job-application skills	-Job interviews (application skills) -Writing a CV/ Cover letter

		g.Oral presentations	Preparing an Oral Presentation Delivering an Oral Presentation
	2. Importance of Vocabulary in Occupational English	-----	-Importance of Field/Major-related terminology -Field/major-related terminology as the most crucial aspect
	3. Teachers' Knowledge concerning ESP classes	-----	-Knowledge of the field-specific language - Knowledge of the needs

Appendix N : Themes, Sub-themes, and Codes Emerged from the Interviews with Workplace Experts on the Occupational English Needs

O C C U P A T I O N A L N E E D S	Themes	Sub-themes	Codes
	1.Common EOP Skills	1. Main language skills and elements	- Listening - Speaking - Reading - Writing - Grammar - Vocabulary
		b.Listening-related occupational skills	-Listening to and understanding presentations or discussions in meetings/seminars/conferences/talks etc.; -Understanding and following instructions in fieldwork/laboratory; -Listening to and understanding (major/field-related) videos, podcasts, and multimedia presentations -Understanding different varieties of Eng. -Listening and note-taking
		c.Listening-Speaking-related Occupational Skills	-Asking and answering questions, -Participate/follow/engage in discussions, -Making video calls, -Making phone calls, -Participating in communications in formal social interactions, -Participating in communications in informal interactions
		d. Reading-related Occupational Skills	-Reading academic/scientific journals/publications, papers, articles, and texts; -Field-related reading; -Reading instructions for projects//labs etc. -Reading efficiently: comprehension and speed; -Skimming and scanning skills; -Reading strategies: Identifying (understanding) main ideas, supporting ideas and examples; Inference and guessing...etc. -Reading and note-taking -Reading and Writing E-mails

	e. Occupational writing	-Report writing - Project writing -Procedure writing
	f. Job-application skills	-Writing a CV/ Cover letter -Job interviews
	g.Oral Presentations	-Preparation of the Presentations -Delivering the Presentations
	h.The terminology need	-Field-specific/technical vocabulary/ Terminologies -Plaza Language
	i. Common occupational needs requiring all skills	-Translation, -Use of the internet/technology, -Vocational Training
2. The Importance of Experience and GE level	-----	- Learning the field-specific terminology while working, - Did not take the EOP course -GE level threshold.
3. No clear-cut across the disciplines	-----	-Variety of sub-branches of the profession -Change of Discipline