

T.C. YEDITEPE UNIVERSITY

INSTITUTE OF EDUCATIONAL SCIENCES

DEGREE OF DOCTOR OF PHILOSOPHY IN THE ENGLISH LANGUAGE EDUCATION

ASSESSING PROFESSIONAL KNOWLEDGE OF ENGLISH FOR SPECIFIC PURPOSES TEACHERS

Mert TOPKARAOĞLU

JUNE, 2022

ASSESSING PROFESSIONAL KNOWLEDGE OF ENGLISH FOR SPECIFIC PURPOSES TEACHERS

DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

IN THE

ENGLISH LANGUAGE EDUCATION

BY

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YEDITEPE UNIVERSITY

JUNE, 2022

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EXPERIENCE

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Navy Vocational School Command
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English Language Instructor

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Turkish Naval Training Center
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Naval High School
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EDUCATION

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Maltepe University
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4th International Conference on New Trends in Education *2017*
NİŞANCI SİNAN, TOPKARAOĞLU MERT (2017). The Interaction Effect of Speech Rate and Language Proficiency on L2 Listening Comprehension. (Oral Presentation)

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Procedia - Social and Behavioral Sciences *2014*
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ERPA 2014 International Congresses on Education *2014*
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West Anatolian Journal of Educational Sciences (WAJES) *2013*
TOPKARAOĞLU MERT,DİLMAN HAKAN (2013). Effects of Studying Vocabulary Enhancement Activities on Students' General Language Proficiency Levels. 4(08), 15-29.

ACADEMIC MEMBERSHIPS

International Language Testing Association (ILTA) *2019*

ILTA is an international group of language testing and assessment scholars and practitioners whose dedication and work are respected both within and outside the profession, and who together define what it means to be a language tester.

European Association for Language Testing and Assessment (EALTA) *2019*

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VOCATIONAL TRAINING-EDUCATION

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Advanced English Language Teaching Certificate Course for Already Practicing ESL-EFL Teachers

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Defense Language Institute, USA *2014 (8 weeks)*

MELT (Managing English Language Training)

MELT students study the principles and practices involved in establishing and managing in-country language training programs. Participants encounter and explore real-world aspects of ELTP management and apply theories to understand the workings of educational environments.

Language Testing Seminar, Garmisch/Germany *June, 2009 (2 weeks)*

The Language Testing Seminar is the foundation course for English language professionals who will be responsible for developing proficiency tests to NATO standards. LTS participants become familiar with the STANAG 6001 descriptors and practice producing proficiency tests in the skills of listening, speaking, reading and writing for levels 1-3. Participants learn the proficiency test development process to include the steps of drafting test specifications; selecting passages and texts; writing, moderating and revising items and trialing tests. Fundamental statistical concepts are introduced.

Defense Language Institute, USA *2007 (16 weeks)*

Advanced English Language Instructor Course (AELIC)

Advanced English Language Instructor Course (AELIC) is designed to provide training and practice in English as a Second Language (ESL/EFL) methodology for novice as well as experienced instructors. Students attending these courses are provided advanced instruction in grammar and phonology while improving their individual language proficiency in listening comprehension, speaking, reading, and writing.

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ACKNOWLEDGMENTS

Writing a dissertation is a long and educating process. Knowing that you are not alone in this process makes it easier to move forward and fulfill your goals. I would like to acknowledge those without whom this work could never have been completed.

First and foremost, I would like to express my deepest gratitude to my thesis advisor, Prof. Dr. Hossein Farhady, for his invaluable and expert academic guidance, fatherly attitude, and continuous support throughout the study. He was always available whenever I needed him. He constantly encouraged me during the thesis writing process and enhanced my confidence in my study. It was a great honor for me to be his student.

Moreover, I would like to extend my heartfelt thanks to Prof. Dr. Gölge Seferoğlu for her kindness and benevolence. She always tried her best to participate in my progress meetings in person, traveling from the US, in spite of the great distance. I feel lucky to have had the chance to hear her insightful comments throughout the study.

Furthermore, I would like to thank my committee member Dr. Dilara Koçbaş Demir for her constructive feedback and contributions during jury meetings.

I also would like to express my gratitude to Prof. Dr. Ayşe Semra Akyel for her valuable support and guidance throughout my studies in the Ph.D. program at Yeditepe University.

I am more than grateful to Mert Çetinkaya for his numerous hours spent helping me with the software and supporting my study with his IT skills. I also owe special thanks to Dr. Evrim Eveyik Aydın who helped me with all administrative issues at Yeditepe University.

My thanks also go to my dear friend Cihat Çorbacı for his keen attention to detail in the analyses and interpretation of the data.

I must offer my sincere thanks to my colleagues and my dear friends Sevinç Yerli Usul, İlknur Dirik, and Suna Altun whom I have met thanks to the Ph.D. program. We always supported each other through difficult times during this process.

I would like to express my appreciation to my family for their endless love, patience, and encouragement.

Last but certainly not least, I would like to thank my soulmate Setenay for her constant support and understanding. Nonetheless, any errors or omissions are my own responsibility.

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Mert TOPKARAOĞLU

In memory of my late father (Yüksel Topkaraoğlu, R.I.P.), who always believed in my ability to be successful in the academic arena and who passed away on April 14th, 2022, days before the completion of this dissertation. You are gone, but your belief in me has made this journey possible.

ABSTRACT

Professional knowledge of teachers is an essential precondition for successful teaching (OECD, 2009). It is fundamental to teaching in that when a teacher has insufficient professional knowledge, his/her ability to give effective instructions inevitably gets affected, which leaves him/her incapable and leads to unproductive alternative routes (Darling-Hammond, 2000, Darling-Hammond & McLaughlin, 2011). Teachers, who do not have professional knowledge, generally do not have confidence in their classroom settings either (Rubio, 2009). They, by and large, are not able to develop a coherent pedagogy, cannot make informed decisions about the progress and achievement of students, get stuck with the contents of the coursebook, and thus are unable to cope with the mishaps during the course of teaching. The latest developments and research of the academic associations have led to a more detailed and comprehensive model of teachers' professional knowledge at length. However, though most of the frameworks demonstrate the components of professional knowledge in one way or another, they do not seem to propose a multidimensional model which could be utilized in different settings. In addition, the concepts they demonstrate are similar or at least connected and fail to include the expanding needs of learners. Nonetheless, only a few studies have tested whether there is indeed a distinct body of identifiable professional knowledge for different subject areas. In this respect, English for Specific Purposes (ESP) in general and Maritime English, in particular, is a missing paradigm. With recent advances in education, teachers are expected to apply effective procedures of instruction and improve different

dimensions of their professional knowledge. To address this issue, this study builds on the theory of the demonstration and the assessment of specific professional knowledge (SPK) sui generis to the teaching of English for Specific Purposes (ESP) in English as a Foreign Language (EFL) contexts. Another aim of the study is to develop a valid, reliable, and data-driven professional knowledge test to measure EFL teachers' SPK. For this purpose, the researcher first investigated 423 stakeholders including English language teachers, English-trained maritime English (ESP) teachers, subject specialists (maritime-trained maritime English teachers), professionals (former seafarers), students, coordinators, and administrators of ESP programs at Maritime Faculties in terms of their needs for a specific type of knowledge unique to the teaching of Maritime English through a cross-sectional survey. Secondly, follow-up observation checklists were filled out, field notes were recorded, and semi-structured interviews were carried out with 20 ESP teachers to cross-check the identified needs to assure appropriate content coverage and thus bolster the quantitative results to reach fair and precise results on the needs of ESP teachers. Thirdly, the data obtained from the needs assessment of teachers, observation checklists, field notes, and interviews were used to prepare the table of specifications of the test of SPK. Furthermore, after having the test reviewed by experts, it was piloted with 34 teachers, and the necessary revisions were made. The finalized test was administered to 64 teachers and the psychometric properties of the test were determined. On the whole, despite its limitations, the results of the study indicate that there might be a specific type of knowledge (knowledge for specific purposes) unique to the teaching of ESP in EFL contexts and it is observed carefully through the newly developed novel Professional Knowledge of Maritime English Test that ESP teachers are making extensive use of that necessary knowledge for specific purposes in their ESP settings. Finally, possible

contributions of the study to the researchers and practitioners in the field are discussed and implications for teacher education programs are explained.

Keywords: Professional knowledge, English for Specific Purposes, Assessment of specific professional knowledge, English as a Foreign Language, Professional Knowledge of Maritime English Test

ÖZ

Öğretmenler eğitimini verdikleri konu hakkında bilgi sahibi olmalıdır. Doğrusunu söylemek gerekirse, bu durum sınıf içindeki yeterlikleri için birinci derece önceliklidir. Gerekçesi basittir. Öğretecekleri konuyu bilmezlerse, öğrencilerinin konu içeriğini öğrenmesine yardımcı olamazlar. Fakat, sadece konu hakkında bilgi sahibi olmak, o konunun eğitimini vermek için yeterli olmayabilir. Bazı durumlar, Shulman'ın (1987) tanımladığı mesleki bilgiden farklı, özel bir bilgiye sahip olmayı ve o bilgiyi kullanmayı gerektirebilir. Özel amaçlı İngilizce eğitimi hızla gelişen ve gelecek vadeden bir dil eğitim sahasıdır. Muhtemelen, günümüzde dil eğitimi ve araştırması alanının en heyecan verici ve yenilikçi bölümüdür. Bu nedenle, İngilizce veya özel amaçlı İngilizce öğretmenlerinin mesleklerini icra ederken faydalanabilecekleri, iyi tanımlanmış, sınırları belli bir mesleki bilgi sistemine sahip olmamalarının ihmalkarlık olarak addedilmesi kaçınılmazdır. Bu bağlamda, bu çalışma, özel amaçlı İngilizce öğretimine özgü mesleki bilginin ölçülmesini amaçlamaktadır. Bu çalışmanın diğer bir amacı ise eğiticiler, alan uzmanları, mezunlar, öğrenciler, ders materyalleri ve alana ait derlemden veri toplayarak özel amaçlı İngilizce öğretmenleri için denizcilik İngilizcesi mesleki bilgi testi geliştirmektir. Bu amaçla denizcilik fakültelerinde görevli yöneticiler, özel amaçlı İngilizce öğretmenleri ve alan uzmanlarından oluşan 423 katılımcı özel amaçlı İngilizce öğretimine özgü spesifik bilgiye ihtiyaçları olup olmadığı açısından çapraz kesişimli anket metoduyla incelenmiştir. Buna ek olarak, nitel sonuçları özel amaçlı İngilizce öğretmenlerinin ihtiyaçlarına yönelik doğru ve kesin sonuçlarla desteklemek için, tamamlayıcı izlemeler, gözlem çizelgeleri, alan notları ve yarı yapılandırılmış

görüşmelerle 20 farklı öğretmenden içerik analizleri elde edilmiştir. Daha sonra anketlerden, gözlem çizelgelerinden, alan notlarından ve görüşmelerden elde edilen sonuçlar özel amaçlı İngilizce öğretmenlerine yönelik olarak hazırlanan özel amaçlı İngilizce Öğretimi Mesleki Bilgi Testi'nin belirtke tablosunun oluşturulmasında kullanılmıştır. Bunlara bağlı olarak, geliştirilen test, 64 özel amaçlı İngilizce öğretmenine uygulanmış ve testin psikometrik özellikleri belirlenmiştir. Çalışma sonuçları genel olarak Yabancı Dil Olarak İngilizce bağlamındaki Özel Amaçlı İngilizce öğretimine özgü bir bilgi türünün bulunabileceğine işaret etmektedir. Bu bilgi türünün, Özel Amaçlı İngilizce Öğretim faaliyetlerinde kullanıldığı, çalışmada geliştirilen özel amaçlı İngilizce Öğretimi Mesleki Bilgi Testi vasıtasıyla Özel Amaçlı İngilizce öğretmenleri tarafından gözlemlenmiştir. Son olarak, çalışmanın alandaki araştırmacılara ve öğretmenlere yönelik olası katkıları ve öğretmen yetiştirme programlarına yönelik öneriler tartışılmıştır.

Anahtar sözcükler: Mesleki bilgi, Özel amaçlı İngilizce, Özel mesleki bilginin ölçülmesi, Yabancı dil olarak İngilizce, Özel amaçlar için mesleki bilgi testi

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1. INTRODUCTION

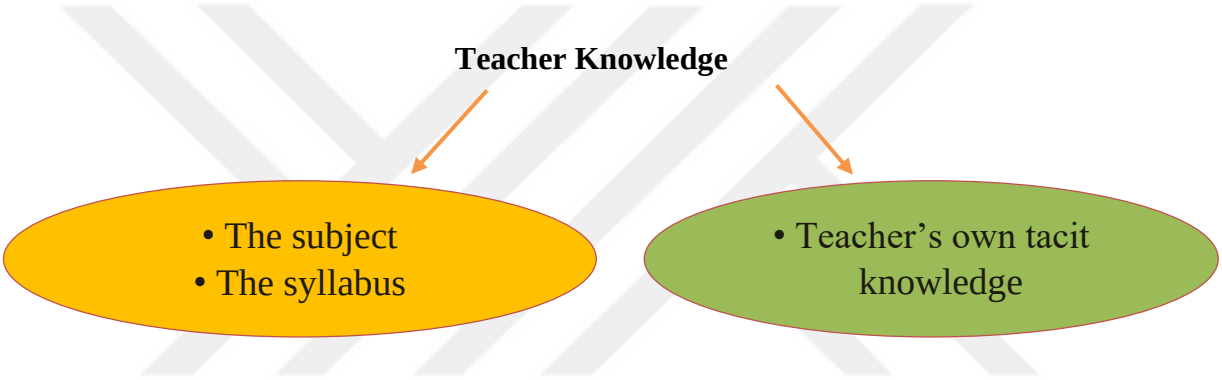
1.1 Statement of the Problem

Teaching in a classroom is a complicated activity that requires teachers to have a good grasp of critical thinking skills and a strong knowledge base (Cruickshank & Haefele, 2001). Similarly, high-quality instruction demands elaborate professional knowledge that extends well beyond basic principles such as engaging students in the classroom or allowing more student-directed activities. To that end, teachers are expected to demonstrate a knowledge of the subject, pedagogy, curriculum, and the needs of the students together with an awareness of the sensitivities of the community they teach. Stated in other words, the teacher should have professional knowledge which involves pedagogical, curricular, cultural, and learner knowledge en masse (Weiss & Miller, 2006; Wenglisky, 2000).

What comprises teachers' professional knowledge base, how many types of knowledge exist, and how these different components are acquired have been issues under investigation by researchers to determine teacher's professional knowledge of teaching (Carter, 1990; Clandinin and Connelly, 1996; Connelly and Clandinin, 1988; Elbaz, 1981, 1983; Grossman, 1995; Shulman, 1986, 1987). For instance, Elbaz (1981) postulates that teachers own a vast amount of tacit knowledge ranging from subject knowledge to the knowledge of their strengths and weaknesses as teachers. She underscores that the knowledge of teachers is active and is "in constant interaction to practice so as to shape it" (p.47). In the same vein, Clandinin and Connelly (1996) use the metaphor of landscape in their framework to represent how teachers' professional knowledge interacts with people, things, and incidents in which they work. They by and large draw attention to the fact that teachers' demeanor and

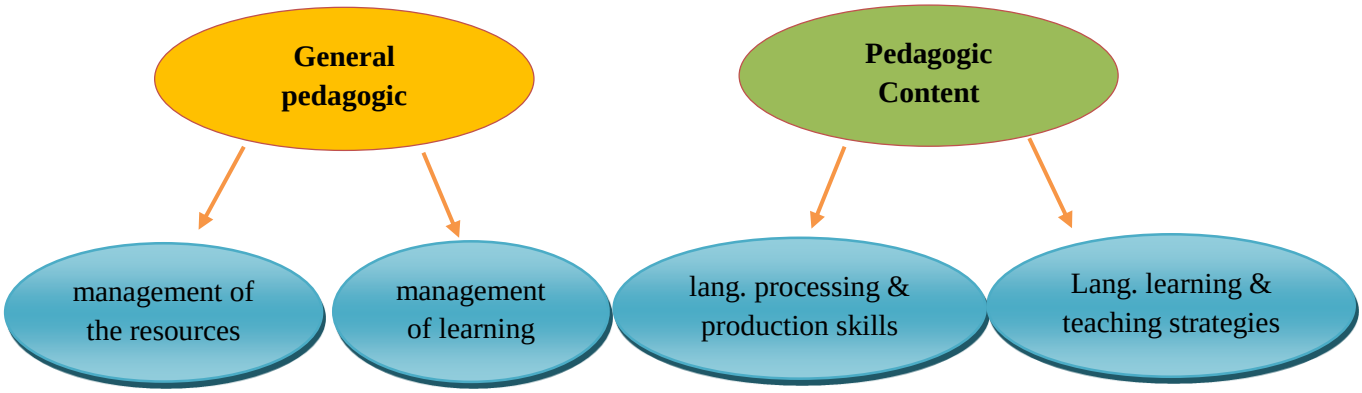
beliefs are easily shaped by the environment where they have been trained or where they have taught. Richards (1996), on the other hand, suggests a two-dimensional model (Figure 1). According to his model, EFL teachers may be said to apply two types of professional knowledge in classroom settings: The first one is associated with the subject and the syllabus and how these two aspects can be performed efficiently and systematically. The second one is related to the teacher's tacit knowledge of what generates good teaching (Richards, 1996).

Figure 1. *A schematic representation of Richards' two-dimensional model*



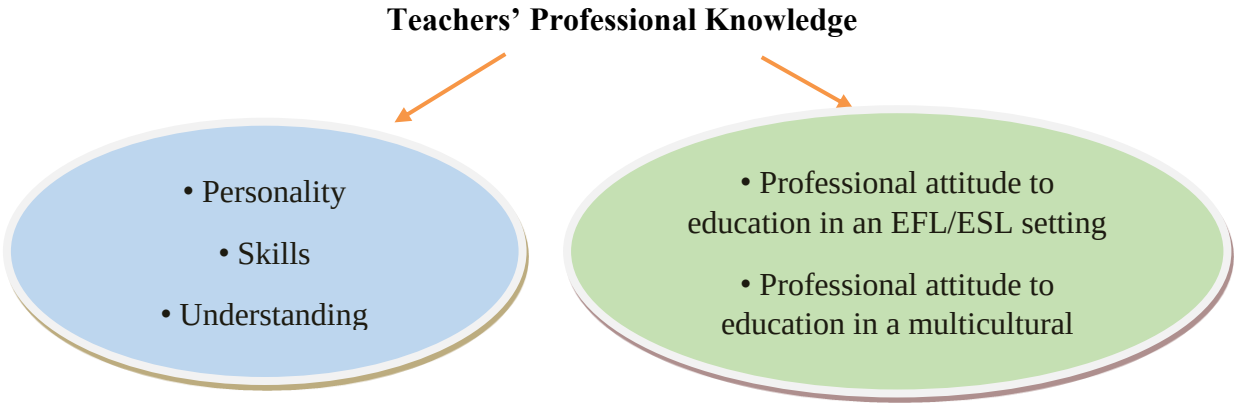
On the contrary, Nunan (1999) separates ESL/EFL teachers' knowledge into declarative knowledge and procedural knowledge. Procedural knowledge is fast and efficient as long as all the requirements for suitability are met. When those requirements fail, performance becomes ritual (Edwards & Mercer, 2013). Tsui and Nicholson (1999) elaborated on each category of professional knowledge. In their model, general pedagogic knowledge and pedagogic content knowledge have two sub-headings respectively. The former consists of management of the resources and management of learning and the latter includes language processing and teaching strategies.

Figure 2. *A schematic representation of Tsui & Nicholson's model*



Similarly, the Australian Council of TESOL Association (ACTA, 2006) outlines teachers' professional knowledge in a two-dimensional network that consists of (1) personality, skills, understanding, and (2) professional attitude to education in an EFL/ESL or a multicultural setting.

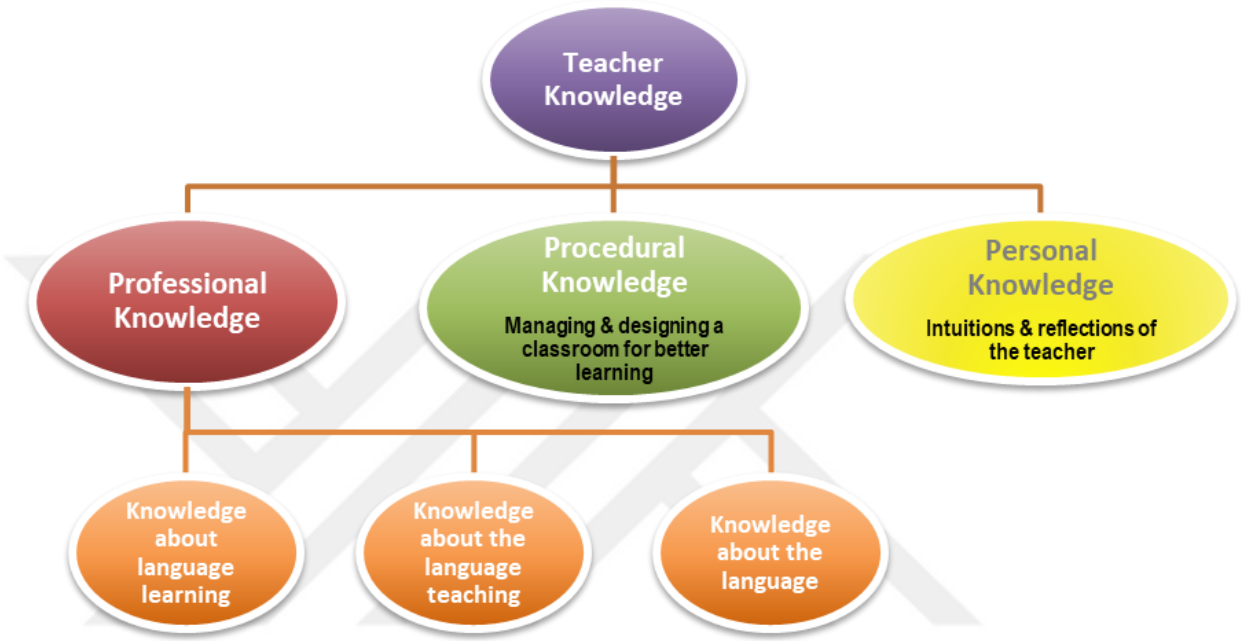
Figure 3. *A schematic representation of ACTA's TPK model*



Kumaravadivelu (2012), on the other hand, classified professional knowledge into three categories. The first one (professional knowledge) involves knowledge about the language, language learning, and language teaching. Procedural knowledge is

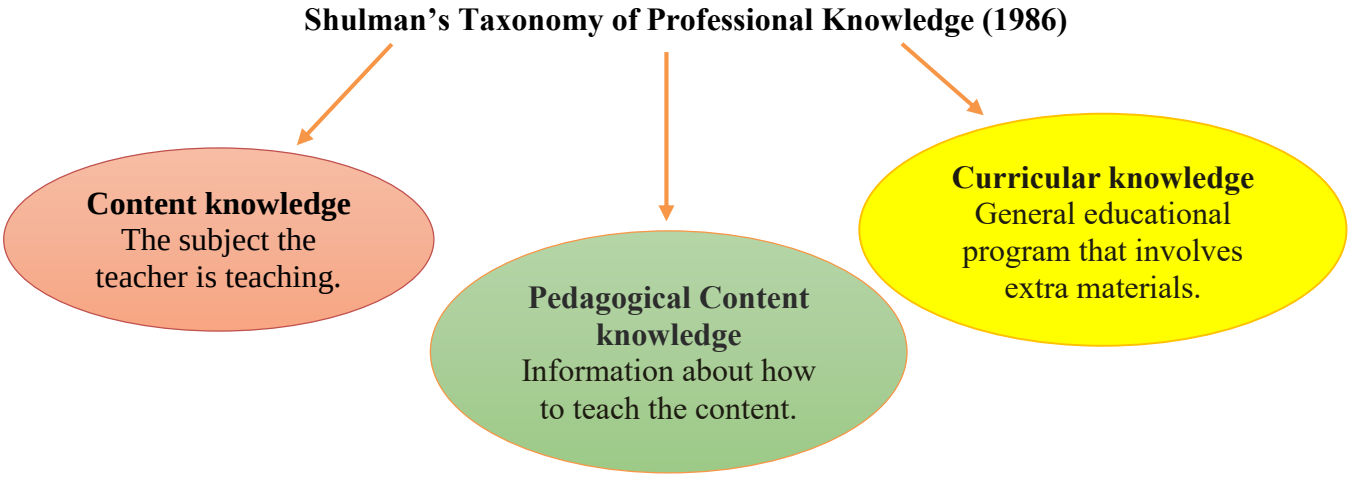
essentially about managing and designing a classroom for better learning. And personal knowledge is related to insights and reflections of a teacher throughout his/her teaching career.

Figure 4. *A schematic representation of Kumaravadivelu's TPK model*



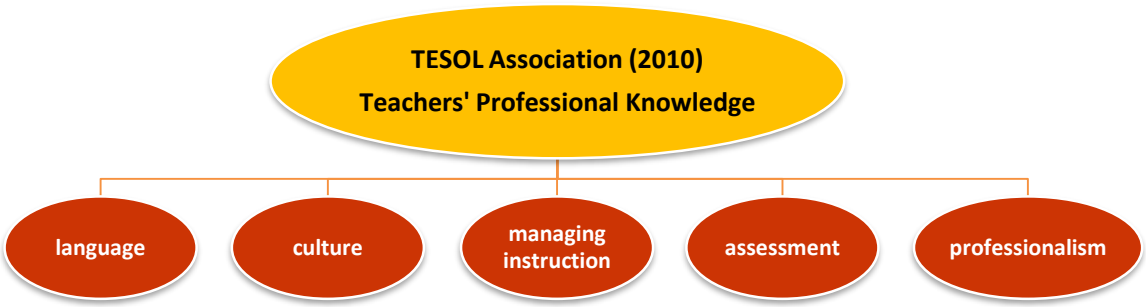
In the same year, Barge (2012) expanded on Kumaravadivelu's categorization by referring to key elements of teachers' professional knowledge as subject-matter knowledge (focusing on the content to teach), pedagogical knowledge (focusing on how to teach), curricular knowledge (focusing on what to teach), learner knowledge (focusing on whom to teach), and cultural/community knowledge (focusing on sensitivity to settings where one teaches). Credited with popularizing the concept of "pedagogical content knowledge" (PCK), Shulman (1987) wrote extensively about the notion of a specialized body of knowledge that only teachers possessed that distinguished them from others who might know a subject well but had no opportunity to develop the knowledge necessary for teaching.

Figure 5. *A schematic representation of Schulman's taxonomy of professional knowledge*



Indeed, he was at the forefront of the movement as a prominent researcher focusing on the categorization of teacher knowledge and paving the way for the following researchers. On the side, the TESOL association collected teachers' professional knowledge under 5 headings as language, culture, managing instruction, assessment, and professionalism (TESOL, 2010).

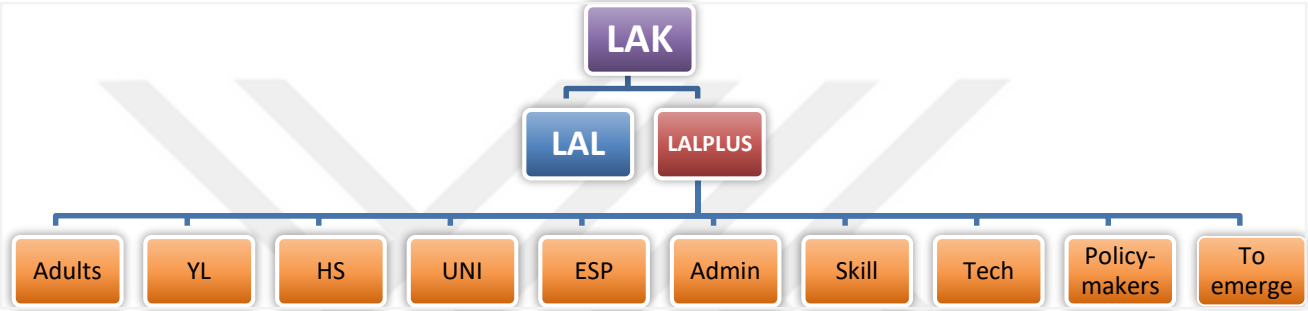
Figure 6. *A schematic representation of the TESOL Association's TPK model*



And, more recently, Karadağlı Dirik (forthcoming) classified the components of teachers' professional knowledge as teachers' pedagogical content knowledge, technological pedagogical content knowledge, assessment knowledge, and practical knowledge. To address the same issues, Farhady (2020) extended the existing frameworks and offered a new taxonomy that accounts for many specific contexts of

teaching. The new framework is made up of two parts. The first component is LAL, or language assessment literacy, which refers to the basic assessment knowledge that instructors must have to execute general assessment principles. The second component, referred to as LALPLUS, covers the special demands of EFL teachers in diverse situations outside LAL, which may be equally significant in the new era of evaluation.

Figure 7. *Farhady's graphic representation of the cross contextual model for LAK*



YL: Young Learners, **UN**: University instructors, **HS**: High school teachers, **ESP**: English for specific teachers, **Admin**: Administrators

The latest developments in the studies and research of the TESOL association have led to a more detailed and comprehensive model of teachers' professional knowledge at length. However, though most of the frameworks demonstrate the components of professional knowledge in one way or another, they do not seem to propose a multidimensional model which could be utilized in different settings. Besides, the literature review reveals that however different the knowledge categories may be worded, the concepts they demonstrate are similar or connected and fail to include the expanding needs of learners. Taking into account the advances in the field (Brown, 1994), diverse academic approaches in English language teaching (Richards & Lockhart, 1994), demands for specificity in particular domains (Farhadi, 2014; Farhady, 1994, 2006; Farhady & Tavassoli, 2018; Hyland, 2002) and proposals for testing ESL proficiency in differing contexts (Clapham, 2000; Farhady, 1991, 2005,

2012; Fulcher, 1999), it is evident that there have already been calls to formulate an up-to-date and multidimensional representation of teachers' professional knowledge to meet the specific needs of learners in distinct settings such as ESP or EAP.

One of the very first components that professional knowledge involves is subject knowledge. Subject matter knowledge is a necessary condition for efficient instruction within the classroom. A thorough understanding of the subject matter, procedures, methodology, and principles has a significant effect on teachers' choice of pedagogy that determines their decision-making (Loewenberg Ball, Thames & Phelps, 2008). Awareness and understanding of the subject matter constitute the core of professional knowledge; hence it naturally influences teachers' attitudes and behavior in classroom settings. Quite a few research reports (Cochran, DeRuiter & King, 1993; Hill, Rowan & Ball, 2005; Rowan, Chiang & Miller, 1997; Shulman, 1987) propose that teachers who have a solid knowledge of subject matter tend to reflect on their practices more and help their students to internalize knowledge accordingly. For instance, Mann's (2015) study showed that content knowledge had a positive influence on effective teaching. In other words, it is a critical requirement for a teacher to be competent in the subject area that s/he teaches. In the same way, Borg (2001) reported that teachers with a good command of content (it is language proficiency for language teachers) would be able to engage in discussions about various points, making the rules clear for the students instead of giving indirect answers to their questions. Thus, the common conclusion is that teaching something effectively requires a good command of the content that teachers are expected to convey.

With the developments in language teaching, efforts to develop a practice-based theory of content knowledge for teaching built on Shulman's (1986) notion of

pedagogical content knowledge have certainly gained momentum. As the concept of pedagogical content knowledge became famous, several empirical results (Hill et al., 2004; Schilling, 2007) suggested that content knowledge for teaching is multidimensional. Hence, a new line of research demonstrated that there is an empirically detectable subdomain of "pure" content knowledge (not mixed with knowledge of students or pedagogy), which is unique to the work of teaching and therefore different from the common content knowledge described by the scholars (Loewenberg Ball, Thames & Phelps, 2008). Throughout the past 10 years, researchers have used content knowledge to refer to a wide range of aspects of subject matter knowledge (pure content knowledge, specialized content knowledge, common content knowledge, etc.). There are indeed differences in the breadth of what the term includes and what teachers need to know but there is still room for controversy about how content knowledge is used to refer to the practice of teaching in particular domains like ESP and how much subject knowledge an ESP teacher should know to dispel the fears that s/he has towards ESP subject matter and build his/her confidence.

Other components of professional knowledge are curricular and learner knowledge. The school curriculum is in a sense an instrument used to shape the educational choices of a teacher. As Shulman (1986,1987) asserts, teachers should know the coursebook, the curriculum, the regulations of the education system, and the state's role in education. After all, technology is developing rapidly and what might be fun last year would no longer be able to interest the students next year. Curriculum development should be the last resort to fall back on (Hutchinson & Waters, 1987). Yet quite the opposite happens in real-life ESP contexts. ESP teachers generally find themselves in a situation where they are expected to produce a course that exactly matches the needs of a group of learners. However, they are expected to do so with

no, or very limited professional knowledge and begin to write their material right away.

Knowledge of learners includes knowledge of biological, psychological, social, and cognitive development of students and interaction between students, and issues related to learning difficulties (Liakopoulou, 2011). Given the fact that learners have diverse needs, there might never be perfect teaching/learning materials that can be used anywhere, anytime for the same level of students. Nonetheless, the teacher should have the appropriate professional knowledge to address his/her specific target learners. Even if a teacher must use a textbook for some reason, s/he still has to adjust it with the target learners by using his/her very own professional knowledge. Eventually, it is the teacher who makes everything from nothing.

Concerning the 'S' (specificity) of ESP, one of the purposes of the EFL teacher should be to familiarize him/herself with the cultural characteristics, history, values, belief systems, and social norms of the society (Byram, 2008) thereby using the language more effectively in his/her professional settings. Darling-Hammond (2007) is one of the researchers who draws attention to the importance of professional settings in teaching. She proposes that context has an important influence on teachers' success in that s/he may not be ready for teaching in a specific context and may be unsuccessful due to this. Under these circumstances, it would be remiss of an EFL/ESP teacher not to have the necessary set of knowledge (specific professional knowledge) to empower students to achieve success.

Efficient teaching is also based on the expertise the teacher has as to how s/he conveys the information to the students in classroom settings. For instance, Grossman (1990) argued how teachers' familiarization with literature changed their attitudes toward approaching the texts. In the same vein, Wilson and Wineburg (1988) showed

how fields of graduation and background knowledge of social science teachers influenced how they represent their subjects to the students. And Ball (1990) highlighted that teachers trained in biology teach physics courses differently than do teachers trained in physics or chemistry which is proof that specific knowledge in a discipline interacts with a different subdiscipline and influences the teaching carried out in the classroom. Consequently, a teacher's subject matter knowledge and pedagogical knowledge are to a large extent supplementary and interrelated. These two knowledge categories can be considered as the integration of content and pedagogy in such a harmony that distinct subjects, independent of each other, can be brought together for instruction (Shulman, 1987).

Therefore, the power of the idea that teaching in every field requires a special kind of professional knowledge (Shulman, 1987) is worth considering and could be regarded as a kind of manifestation that ESP, as an approach, deserves a specific professional knowledge as well and there is a need to carefully map it and measure it.

1.2 Justification

Professional knowledge of teachers is an essential precondition for successful teaching (OECD, 2009). It is fundamental to teaching in that when a teacher has insufficient professional knowledge, his/her ability to give effective instructions inevitably gets affected, which leaves him/her impotent and makes way for unproductive alternative routes (Eraut, 2002). Teachers, who do not have professional knowledge, generally do not have confidence in their classroom settings either. They by and large are not able to develop a coherent pedagogy, got stuck with the contents of the coursebook, and thus are unable to cope with the mishaps in the course of teaching (Hamilton, 2004).

Teachers' professional knowledge has been an issue that will cater for more research now and in the future. The research (Harris & Sass, 2007; Hill, Rowan & Ball, 2005; Rowan, Chiang & Miller, 1997; Moats & Foorman, 2003) affirms that there is a positive correlation between teacher's professional knowledge and learners' achievement at all proficiency levels. Most of these studies indicate and validate the influence of professional knowledge on the practice of teaching. There are a lot of components and sub-components of the concept and there may be more categories emerging through more research conducted in the field. Nevertheless, most of the research on content knowledge and pedagogical content knowledge which are the most important facets of professional knowledge remains on a descriptive level and the connection between knowledge and practice has remained thinly developed.

During the past 30 years, researchers have used the term professional knowledge to refer to what teachers need to know and to relate it to the practice of teaching. However, the taxonomy put forward by Shulman (1986) more than three decades ago yielded an inconclusive understanding of the concepts. Nonetheless, only a few studies have tested whether there is indeed a distinct body of identifiable professional knowledge for different subject areas. And, in this regard, English for Specific Purposes (ESP) is a missing paradigm. Taking this situation into account, this dissertation thesis builds on the theory of the demonstration and the assessment of specific professional knowledge unique to the teaching of English for Specific Purposes (ESP) in English as a Foreign Language (EFL) contexts.

1.3 Significance

Many (Goodson, 2003; König et al., 2016; Loughran, 2012, 2019) in academia believe "professional knowledge" is power. However, this is only half of the story. Only when knowledge is put into practice does it become strong. An effective way for a teacher to empower students is the knowledge of the profession. The teacher's knowledge can positively shape a student's achievement. The guidelines in the majority of the existing models of professional knowledge define a set of skills as general requirements for good teaching. Naturally, general guidelines do not address subject-specific pedagogical ability. Nor do they reorganize content knowledge for certain situations in the process of teaching under classroom conditions. This means that the guidelines do not include strategies of teaching unique to different contexts such as ESP or EAP.

Despite its extensive use in the field, the definition of the construct of professional knowledge is not as clear as it could be. For instance, in Shulman's (1986) words, pedagogical content knowledge is an important component of professional knowledge that would help teachers in their profession. However, up to now, facets of pedagogical knowledge regarding ESP teaching were not investigated. A model for professional knowledge based on the reduced version of Shulman's concept already exists for science teachers (Baumert et. al. 2010). This implies that other areas would also need specific knowledge that might be required for different contexts.

One of the requirements of professional knowledge calls for the understanding of learners and environmental settings at the same time (Cochran, 1993). Regarding

this, Vygotsky (1978) argues that progress from the current performance to the potential performance is not achieved only through input, but rather through social interaction and the assistance of more skilled and experienced others. Since ESP contexts comprise learners of different subject specialisms, EFL teachers, who have unique professional knowledge of ESP, can make good use of their students' background knowledge and skills to establish what to teach and how to teach.

Even though the essence and description of the professional knowledge seem obvious, there is a need to elaborate on the concept of professional knowledge since it has lacked definition and empirical testing in furthering our understanding of the relationship between subject-specific knowledge and pedagogy in ESP contexts. There is also a need to set up a new model for the existing ones lagging in establishing a strong connection between teachers' professional knowledge and ESP to construe the eventualities in specific contexts. Without this empirical foundation/a coherent theoretical framework, it is far from impossible but hard for EFL teachers to revamp their curriculum and find their ways in the uncharted land of ESP.

2. LITERATURE REVIEW

2.1. ESP and Teacher's Professional Knowledge

ESP is perhaps the most vibrant and innovative area of language teaching and research today. The foundation of ESP involves the learners, the language, and the learning contexts which are based on the primacy of need in ESP (Hutchinson & Waters, 1987). The underlying educational rationale is straightforward. Language learning is more effective and more motivating if the program content is relevant to learners' particular fields of need or interest (Nunan & Lamb, 1996).

Practically, if we focus on the origins of ESP, it is clear its development is closely linked with learners' interest in various specific disciplines such as 'English for Hotel Industry', 'English for Business, or 'English for Medicine'. Apropos of that it would not be misleading to assert that students learn English for a specific purpose, represented by studying the subject matter, to gain and develop appropriate knowledge and skills through English. In other words, students study ESP not only because they are interested in the English language but because they must perform a task in English. Their command of the English language must be such that they can reach a satisfactory level in their specialist subject studies.

Yet, it is not always enough to know something about the students for whom the course is intended. Particularly, the ESP teacher should have an awareness and understanding of the subject matter (knowledge for specific purposes) to design the program of study (ESP course) and fulfill the aims of the students.

In much the same way done for teachers' professional knowledge, many scholars attempted to formulate a framework for English for Specific Purposes.

Dudley Evans (1998), Jordan (1998), Robinson (1989), Strevens (1980), Widdowson (1983), and many others offered different models for ESP.

A brief schematic representation of the models offered for ESP is as follows:

Figure 8. *A schematic representation of Streven's model*

Streven's Model – 1970's.

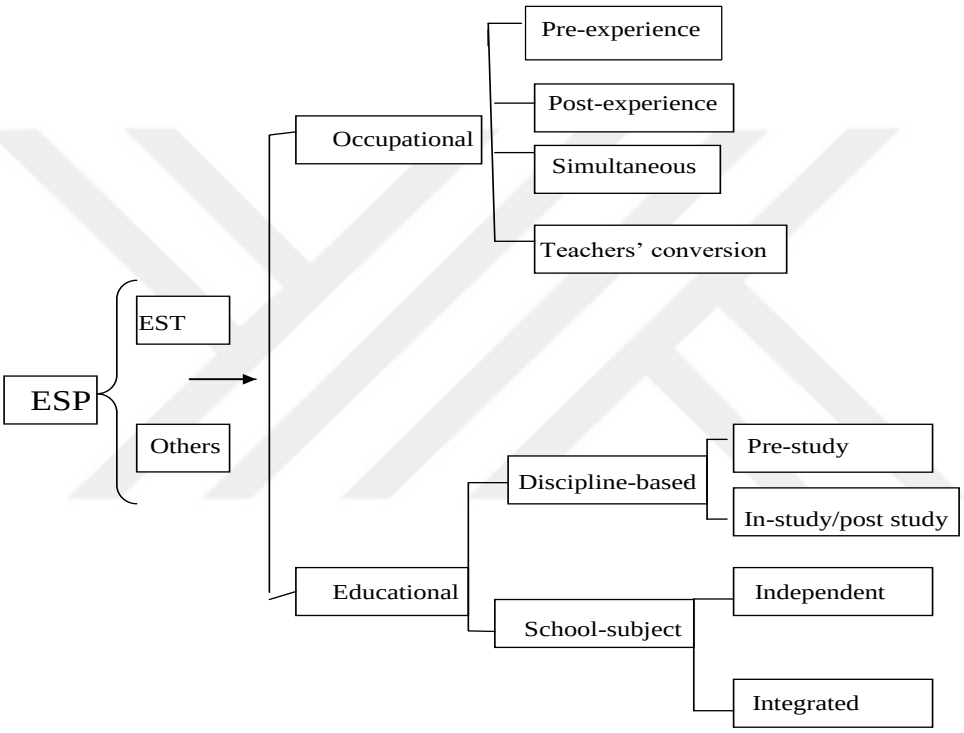


Figure 9. A *schematic representation of Robinson's model*

Robinson's Model – 1980's

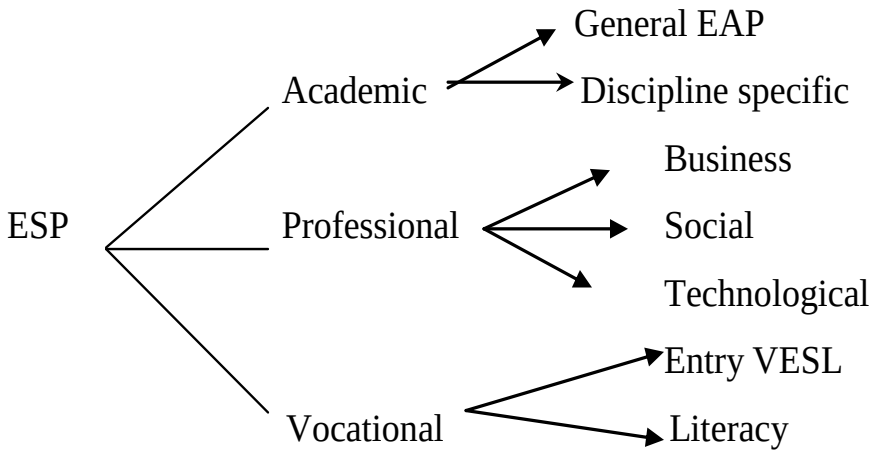


Figure 10. *A schematic representation of Jordan's model*

Jordan's Model – 1997

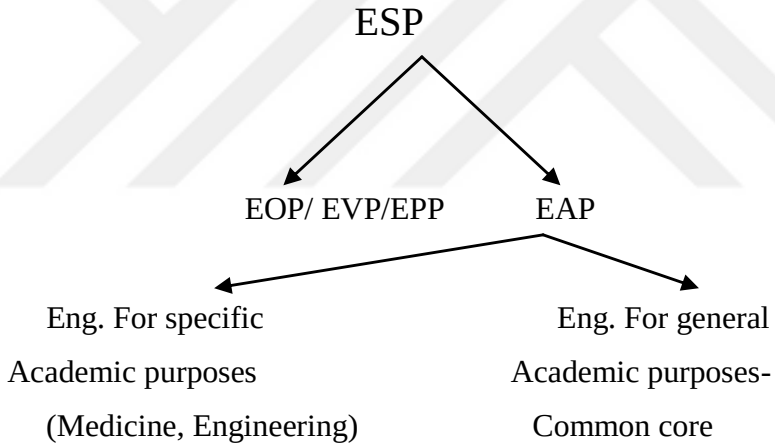
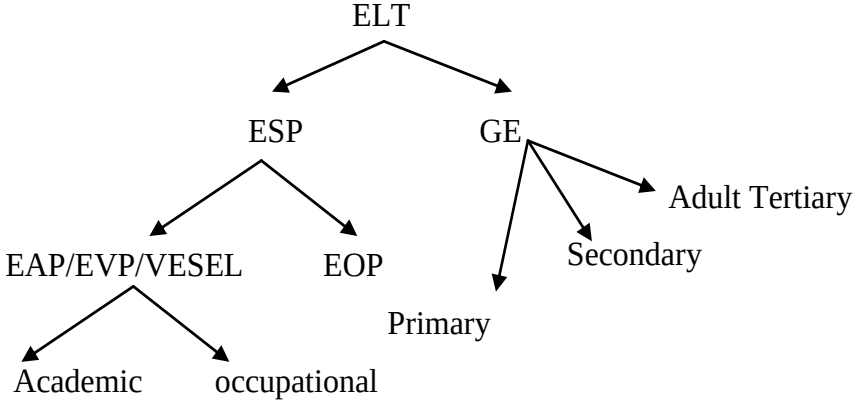


Figure 11. A *schematic representation of Hutchinson and Waters' model*

Hutchinson and Waters' Model – 1987



All these models are related in themes and topics to designated occupations or areas of study and offer individualized instruction devised to meet the learner's special needs. However, none of them has any specific reference to the teacher's professional knowledge either in their frameworks or in their specification of functions. To put it more explicitly, the linking component between a teacher's professional knowledge and ESP has not been explored thoroughly and has always been absent. Since ESP teachers cannot design a language course unless they know something about the students for whom the course is intended (Farrell & Jacobs, 2020, Stronge, 2018), it is necessary that they also get control over the Knowledge for Specific Purposes to qualify for teaching in the ESP world and cope with the undefined eventualities in the future.

Taking into account the recent developments in ELT and the changing objectives and interests of the learners as well, it is obvious that there seems to be a necessity to revise and modify our current models to include the missing component and to provide a sound and solid structure which the practitioners and researchers can benefit from in meeting the growing needs of learners.

2.2 Conceptual Framework: (Professional) Knowledge for Specific Purposes

My up-to-date framework for Knowledge for Specific Purposes is essentially an extension of the hybrid model of Shulman (1986) and Hutchinson & Waters (1987). There are some reasons why I have come to adopt the Shulman (1986) and Hutchinson & Waters (1987) models as the cornerstone of my extended hybrid classification.

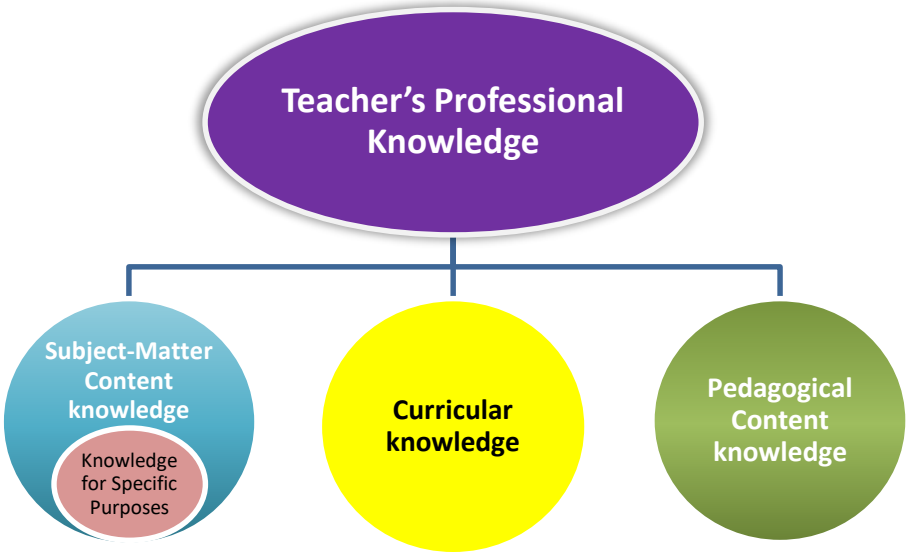
First, as was professed by Hutchinson & Waters in 1987, I believe that ESP has some features that can be identified as typical of exclusive use of context. Of course, selective, specific, and restrictive use of language is the main reason for the

development of ESP. However, I also believe that these differences should not be allowed to obscure the far larger area of common ground (teacher's professional knowledge) that underlies all language use. That's why, in my framework, Knowledge for Specific Purposes constitutes one of the components of a teacher's professional knowledge.

As for Shulman's taxonomy of professional knowledge (1987), I agree that a teacher's subject matter knowledge and pedagogical knowledge are to a large extent supplementary and interrelated. Besides, distinct subjects like ESP necessarily require the integration of content and pedagogy (pedagogical content knowledge) for efficient instruction. In any case, it is unimaginable for a teacher to have no awareness of the coursebook, the curriculum, the regulations of the education system, and the state's role in education. For all those reasons, the reduced version of Shulman's concept (1986) then again serves as one of the underpinnings of my model.

A schematic top to the bottom representation of the suggested framework (Knowledge for Specific Purposes) is as follows:

Figure 12. A schematic top to the bottom representation of the suggested teacher's professional knowledge

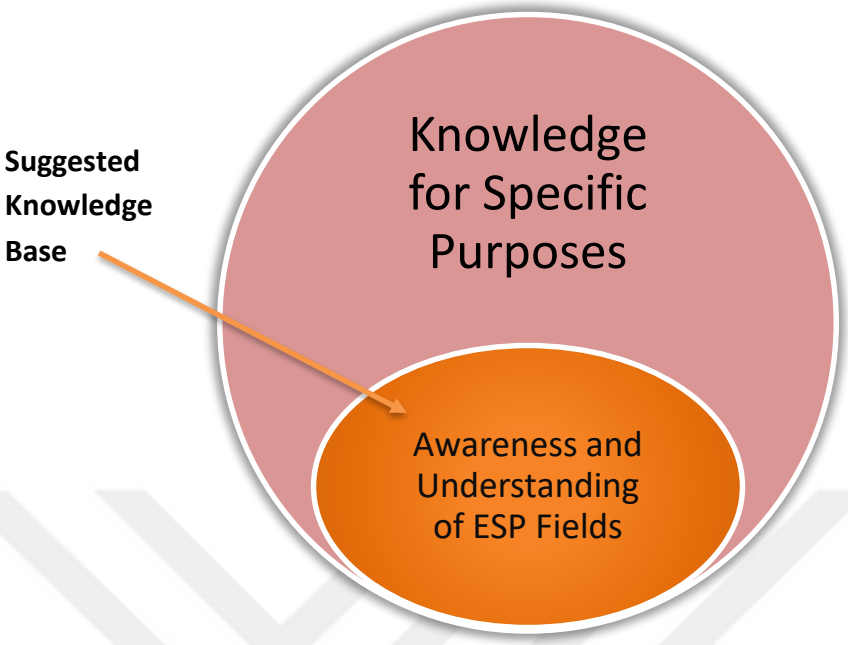


A closer examination of the idea of teacher professionalism reveals that researchers have recognized two key categories of knowledge: subject-matter content knowledge and pedagogical content knowledge. The subject matter that instructors teach is referred to as content knowledge. Teachers must have the skills and capacities, i.e., pedagogical content knowledge, to teach that subject matter in addition to content knowledge. The third component of teacher professional knowledge is what is known as curricular knowledge, or general teaching knowledge.

In the context of TEFL, subject knowledge refers to the language ability that instructors must have to be certified as language teachers. Whatever model is used, there is consensus that EFL teachers must know the language, knowledge of areas connected to language instruction; and understand some other concerns such as classroom and teaching setting.

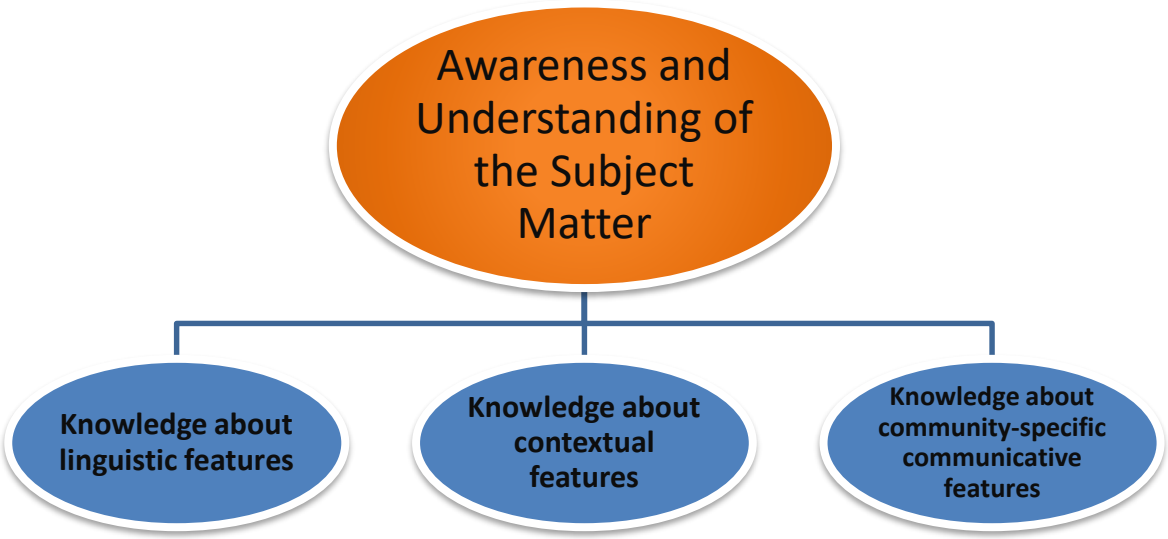
Adopting such a unidimensional framework mentioned above may be useful at a macro level. It may not be as successful, though, when some specific settings necessitate slightly different sorts of knowledge. Therefore, I propose a new conceptualization that is more extensive and designed to incorporate additional context-specific elements. Accordingly, in my suggested framework, subject-matter content knowledge includes a core knowledge (Knowledge for Specific Purposes) necessary for specific contexts.

Figure 13. A schematic top to the bottom representation of the suggested knowledge base for specific purposes



Since we cannot expect this core knowledge to address all context-specific issues, it naturally accommodates another component (awareness & understanding of the subject matter) to address concerns that are unique to a certain situation.

Figure 14. A schematic top to the bottom representation of suggested awareness and understanding of the ESP fields knowledge



And to focus on varied demands and requirements (more context-specific factors), this component (awareness & understanding of the subject matter) involves additional knowledge about linguistic analysis, contextual relevance, and community-specific communicative events needed for particular settings.

2.3 Sub-Components of the Suggested Knowledge Base (for ESP)

2.3.1 Knowledge about linguistic analysis

ESP courses are designed to educate certain groups of language learners on the language and communication skills they need or will require to succeed in their chosen fields, professions, or workplaces (Basturkmen, 2010). Because ESP focuses on teaching particular language and communication skills, ESP course design generally involves a needs analysis stage in which the ESP instructor determines the specific language and skills the group of language learners will require. As a result, to define and modify the material for the ESP course, the prospective ESP instructor should have an understanding of how language and skills are employed in the target environment (linguistic analysis).

2.3.2 Knowledge about contextual relevance

Language is learned in ESP, not for its purpose or to achieve a general education, but to make the path to admittance or to improve linguistic efficiency in certain situations easier (Paltridge & Starfield, 2012). The syllabus is likely to be inspiring for students who perceive the evident relevance of what they are studying because it is based on needs. Furthermore, most ESP courses are time-constrained, and time must be efficiently utilized (West, 1994). Since students in ESP programs frequently have limited time to learn English, it makes appropriate to give them descriptions of language use in these specific professions or types of labor rather than a more generic description that may or may not be relevant.

2.3.3 Knowledge about community-specific communicative events

Munby's Communicative Needs Processor (1981) was an early idea for ESP instruction that was directly tailored toward the demands of the target environment. Munby (1981) proposed that courses be designed on communicative occurrences that ESP students would encounter in their target environment. The target workplace's communication events and the speech actions that went with them were identified using a needs analysis. The list of communication events, speech actions, and language exponents constituted the basis for ESP course content. One flaw in this idea was that it ignored the reality that real-life meetings are frequently unpredictable, and events unfold in unexpected ways. ESP students, on the other hand, can be taught how to recognize (as readers) and reproduce (as writers) the "schematic structure" of texts in their selected discourse communities using genre analysis approaches (Swales, 1990). As a result, an ESP teacher who understands the communicative goal of a genre will have no trouble laying the basis for how the ESP text should be written or spoken, what topics it will address, and how it can do so. One reason that there has been little effort to develop a specific knowledge test may be a lack of clarity and precision of what exactly specific knowledge is and what such an instrument should measure.

Thus, the proposed knowledge base of Understanding and Awareness of Subject Matter may well provide a basis for the connection between Teacher's Professional Knowledge and ESP. That is, by acquiring knowledge about the linguistic analysis, contextual relevance, and community-specific communicative events of the related subject area (Awareness & Understanding of the Subject Matter), the ESP teacher would have the opportunity to develop the knowledge necessary for

teaching, reflect on his/her practices more and help his/her students to internalize knowledge accordingly.

Eventually, my point is that it would always be in the best interests of teachers if they obtain Knowledge for Specific Purposes before they move on their journey in the brave new world of ESP.

2.4 Maritime English – definition, and requirements

On March 13, 1994, at 22:20, the crude oil carrier M/T *Nassia* collided with the dry cargo vessel M/V *Ship Broker* in the Bosphorus. 29 people lost their lives, 9,000 tonnes of crude oil spilled, and 20,000 tonnes burnt over four days, severely affecting the marine environment. All the coastline was covered in oil and pitch. Nonetheless, the traffic in the strait was suspended for a week which prompted the Turkish government to adopt, unilaterally, its Maritime Traffic Regulations for the Turkish Straits and the Marmara Region (Ece, 2012). M/T Nassia, a double-hulled oil tanker with a gross weight of 66812 tons, was built in Spain, was registered in Cyprus, owned by Euro-tankers Inc., a Liberian company, operating by the certification of Bureau Veritas, a Greek Company, carrying Russian petroleum and was underway under the command of a Greek captain along with a crew of 2 Greeks, 13 Filipinos and 2 Maldivians. It is this global framework that has opened the way for Maritime English to be accepted as the lingua franca (international language) of the shipping trade hiring individuals who need to be fluent in English for successful communication while onboard and onshore.

Being a branch of ESP, Maritime English originated out of the necessity of effective communication between ship and shore and crew members and passengers to ensure safety at sea (Bocanegra-Valle, 2015; Mitropoulos, 2005). More than ninety percent of global trade is carried by sea. In a way, ships may be regarded as “micro

societies" on board which professionals not only work but live together twenty-four hours a day (Cole, Pritchard & Trenkner, 2007). They sleep in cabins instead of rooms and food is cooked in galleys. The smoke passes out from a funnel, not a chimney; commodities are placed not on the right or left sides but on the starboard or port sides and the ship makes sternway, headway, or leeway when it moves backward, forwards, or sideways while it is proceeding en route. Furthermore, instructions such as Proceed to distress position, keep the sea on your port quarter, Slack out your anchors under the hawse-pipes or Single up the lines and springs fore and aft present a real challenge due to their specialization and unfamiliarity. Before a mariner even starts to communicate aboard by using English as a means of communication, he needs to memorize a considerable number of words some of which are infrequent even to the native speaker.

Ships should be handled efficiently. Reports from many international organizations that investigate marine safety contain plenty of examples of shipping accidents in which language misunderstandings have put the vessel, the people on board, and the environment at stake (Bocanegra-Valle, 2010, 2013). Thus, a proficient command of the English language in general, and Maritime English, in particular, require not only ESP teachers who have good professional knowledge but also competent teachers who have specific professional knowledge (Knowledge for Specific Purposes) other than the teacher's professional knowledge.

ESP teachers who teach Maritime English need to have a good command of specific professional knowledge for the following reasons:

1. Maritime English is abundant and diverse by discipline (nautical, marine engineering, shipbuilding, port operations, etc.), and the process of

learning and mastering professional and technical English is very demanding. As ESP focuses on teaching specific languages and communication skills, designing ESP courses typically involves a needs analysis phase in which ESP teachers determine the skills required for a specific language and group of language learners. To design and enhance the material for the ESP course, the potential ESP Maritime English instructor is expected to understand how language and skills are employed in the target scenario (linguistic analysis). Therefore, only by having specific professional knowledge (knowledge about linguistic analysis), could ESP Maritime English teachers pay greater attention to terminology, structure, and style.

2. In ESP, language is studied to improve linguistic efficiency in specific situations rather than to achieve a comprehensive education (Paltridge & Starfield, 2012). As the syllabus is based on needs, Knowledge for Specific Purposes (knowledge about contextual relevance) helps ESP Maritime English teachers make stronger learning connections while teaching in the classroom, the more so if they could motivate the students by making the topics relevant and engaging to what they are studying.

3. Maritime English instruction plays a critical role in bridging the cultural divide and preventing mistakes caused by multicultural settings and communication challenges caused by crew members with different mother tongues. Therefore, a satisfactory level of specific professional knowledge (knowledge about community-specific communicative events of the related subject area) by ESP Maritime English teachers could be vitally

important to ensure successful language training and overcome language barriers that can cause accidents.

2.5 Assessing Language Teachers' Professional Skills and Knowledge

The role of instructors as the most essential component in student learning has gotten a lot of attention in the last several decades (Darling-Hammond, 2000, Scarino, 2013, Wallace, 1991). This tendency has a big impact on educational systems all around the world, as well as the number of English language instructors needed. As the need for teachers grew, so did the number of teacher training programs available. With the increased need for qualified instructors came an increased desire for documentation of their competence to teach, either through certification or licensure, before they entered the classroom. As a result, skilled instructors were in high demand. Since the 1980s, several examinations have been implemented all over the world for this aim. Some examples include the Praxis series, the National Board for Professional Teaching Standards (NBPTS), PACT (Performance Assessment for California Teachers), LPATE (Language Proficiency Assessment for Teachers), Certificate in Teaching English to Speakers of Other Languages (CELTA), Diploma in Teaching English to Speakers of Other Languages (DELTA), and the addition of a separate Teaching Knowledge Test (TKT) in 2005. What is common among these exams is their objective-scoring, multiple-choice characteristic, and their reliance mostly on the content knowledge of teachers.

Teacher assessment methods that are currently in use are as follows:

2.5.1. Available Measures of Professional Knowledge for EFL Teachers

2.5.1.1. Paper-and Pencil Tests of Teacher Competence. Their major goal is to choose candidates for a teaching certificate (or license) who do not possess a certain level of expertise. For many years, the Common

Examinations of the National Teacher Examinations (NTE) were widely used. For many years, the Common Examinations of the National Teacher Examinations (NTE) were widely used. The procedures used to establish the content validity of the NTE tests were considered state-of-the-art. However, content validity is no guarantee that the knowledge measured by a test is relevant to competent classroom performance. Since there's no reason to believe that alternative, less well-designed competence exams would correlate any better, it's possible to infer that traditional paper-and-pencil examinations with high content validity aren't reliable indicators of teacher effectiveness. There is currently no evidence that their usage in statewide testing systems enhances educational quality in nations that employ them.

2.5.1.2. Teacher Performance Assessment. In acknowledgment of this fact, some countries have implemented assessment programs in which instructors' actual performance on the job is monitored and assessed rather than their performance on paper-and-pencil assessments (Shannon & Medley, 1993). However, such systems have two flaws that essentially prevent them from accomplishing their goal.

One concern is timing. Allowing incompetent teachers to teach and deprive their students of the competent teaching they deserve for one or more years before rejecting their permission to continue would not meet the goal of safeguarding children from incompetent teachers. The other issue is about financing. Because running such a program is so expensive, some of the ones implemented thus far have been phased out after a few years (Eissenburg & Rudner, 1988).

2.5.1.3. National Board Certification. Teacher certification works on a state-by-state system in the USA. However, what makes National Board Certification (NBC) alluring is that it is recognized by many states. Certification is available in 25 areas spanning 16 disciplines, from Early Childhood to Young Adulthood including the English language. There are some requirements to be eligible for the certification process:

- A bachelor's degree from an accredited institution
- A valid state teaching license
- 3 years of successful teaching experience
- It costs $1,975 (as of 2019) to apply for all 4 components and you need to certify every 10 years.

A candidate must demonstrate proficiency in four NBC components: (1) content knowledge, (2) differentiated instruction, (3) teaching practice and classroom environment, and (4) effective and reflective practitioner (National Board for Professional Teaching Standards website, 2018). The first component is a computer-based assessment that must be completed at a testing center, while the other three are portfolio-based and must be submitted electronically. A computerized test measuring subject and pedagogical knowledge is the first component. The candidate is to take a timed test to demonstrate his/her depth of content knowledge. The second component is a detail-oriented portfolio of student work with artifacts, student samples, and analysis. The third component includes filmed sessions of the candidate's classrooms. After that, the candidates should write a written analysis in which they reflect on their teaching and demonstrate their ability to interact with students. Candidates must demonstrate their abilities as effective and reflective

practitioners in the fourth component (National Board for Professional Teaching Standards website, 2019).

2.5.1.4. Praxis Tests. The Praxis assessments are used to assess students' academic progress and competency when they enter or complete teacher education programs. More than 40 states in the United States need them as part of the certification procedure (Stabler-Havener, 2018). The Educational Testing Service (ETS) writes and administers the Praxis Series exams, which are divided into two categories: Praxis Core and Praxis topic tests. The Praxis Core (Core Academic Skills for Educators) examinations are computer-based assessments of a candidate's general academic skills in reading, writing, and math. A passing score is required before the graduate can apply for his/her teaching certificate. On the other hand, Praxis subject tests cover many different subject areas (90 Praxis test titles as of 2019) and measure a candidate's subject-specific content knowledge, as well as general and subject-specific teaching skills, to determine whether the candidate is ready to begin teaching. Each state requires a different combination of Praxis subject exams for certification (ETS website, 2019).

Nonetheless, of the available 90 subject titles in Praxis subject tests, it seems that none of them covers the essential areas that refer to language teaching in specific contexts like ESP or EAP which also requires specific knowledge. Nor are there any research reports or data-driven approach that clarifies the logic behind the selection of subject titles in circulation.

2.5.1.5. TKT (Teacher Knowledge Test). Among the teachers' professional knowledge tests, TKT (Teacher Knowledge Test) is one of the most popular ones around the world. Developed in the UK, TKT is a series of internationally recognized modular teaching qualifications which test your knowledge in a specific area of English language teaching (Cambridge English, 2016). The reasons that make TKT one of the most well-known tests can be summarized as follows:

- It is recognized in over 60 countries as proof of teaching knowledge.
- It is a highly respected qualification from Cambridge ESOL.
- It is flexible. Any modules can be taken over at any time.
- It is accessible. You can prepare for each module in your own time, at your own pace.

The components of the modules are as follows:

Table 1
The components of TKT

TKT Module 1	Language and background to language learning and teaching.
TKT Module 2	Lesson planning and use of resources for language teaching.
TKT Module 3	Managing the teaching and the learning process, including classroom management.
TKT CLIL	Content and Language Integrated Learning
TKT YL	Young Learners.

Source: TKT Handbook for teachers, 2016, p. 7.

TKT Handbook also provides information about which sources are used to develop the items in the test.

Table 2
The sources of the items for Modules 1-2 and 3

- English language teaching coursebooks or supplementary materials
- handbooks on English language teaching and learning
- English language teaching journals, including phonemic transcription (IPA-International Phonetic Alphabet)
- diagrams or other visuals
- transcriptions of classroom talk
- descriptions of classroom situations
- examples of learners' writing

*Source***:** TKT Handbook for teachers, 2016, p. 8.

As can be observed in what constitutes TKT Modules, the TKT test aims to test the general knowledge of the concepts related to language learning and teaching rather than assessing the language proficiency of teachers (Ashton & Khalifa, 2005, Novakovic, 2006). Thus, it can be argued that it is target-specific and provides an internationally accepted certificate as proof of one's language teaching ability (British Council website, 2019). On the other hand, though this is the latest version of the test released in December 2016 and though there is also a separate module for young learners in this improved version, there is yet not any mention or reference to English for specific purposes either in the test modules or in the sources used to develop the items in the test. Regrettably TKT, as a helpful tool, clearly lacks any material on the testing of specific purposes knowledge of teachers which is already considered an important component/dimension of content knowledge. Therefore, though TKT is an ambitious test aspiring to manifest teachers' level of professional knowledge and professional development, it lags in measuring the professional knowledge that is

necessary for language teaching in specific contexts. For this reason, there seems to be a need for the development of a more empirical and data-driven test to assess this specific dimension related to the professional knowledge of ESP teachers.

2.6 Developing a New Test

2.6.1. The Rationale

One reason that there has been little effort to develop a specific knowledge competency test (or another system for assessing specific knowledge) may be a lack of clarity and precision of what exactly specific knowledge is and what such an instrument should measure. My attempt at developing a valid test for assessing knowledge for specific purposes begins with the re-examination of a teacher's professional knowledge and proposing a definition for a specific knowledge base (awareness & understanding of subject matter).

Literature review affirms that a valid test of knowledge for specific purposes must measure a type of knowledge that has the following properties:

- first, it must be something that ESP Maritime English teachers are expected to possess,
- something that can be assessed,
- and it must be related to how well ESP Maritime English teachers apply this specific knowledge to the solution of their problems an EFL teacher is not equipped to solve. (Bachman & Palmer, 1996; Young & Ockey, 2013).

For example, members of the medical profession have that special knowledge to preserve human life. Members of the aviation profession have it to fly the aircraft. And members of the legal profession have that specialized knowledge for the protection of human rights. Hence, venturing into the brave new world of teaching Maritime English, in that case, should certainly be based on the possession of this

proposed knowledge base (awareness & understanding of subject matter) which this new test (test of knowledge for specific purposes) is supposed to measure.

2.6.2 The Development Process

There is no shortcut to creating tests that are valid, reliable, and fair. Hence, the test development process is rigorous and requires a good plan and significant investment of time. At the outset, the test construction process should rest on a sound scientific basis (Downing, 2006; National Research Council, 2004). Though the order of the construction process changes from program to program, there are some general guidelines that one should conform to while developing a test. These general stages described also by Bachman and Palmer (1996) and Farhady, Jafarpur, and Birjandi (1994) are as follows:

- A clear statement of the purpose of the test
- Developing the content framework and identifying the constructs
- Building test specifications
- Creating a set of potential items and scoring rubrics
- Item review procedures and pilot testing
- Evaluating the quality of items
- Compiling the test forms
- Setting cut scores to determine pass/fail or proficiency levels

More recently, Irwing and Hughes (2018) and Lane, Raymond, Haladyna, and Downing (2016) offered a comprehensive and practical compendium to test the development process that includes ten and twelve steps respectively extending from construct definition to test documentation. The literature review reveals that a test is rarely developed based on data collected at early stages (He & Min, 2017; Kim & Elder, 2015). Generally, the test development process is commenced after the test is

developed and the items are revised accordingly. However, what makes the development process of the Knowledge for Specific Purposes Test (for Maritime English) remarkable in this sense is its data-driven approach beginning from the earlier stages of the needs analysis procedure. The content of the test was determined, and the items were prepared based on the data collected at the early stages. In addition, related literature was reviewed and cross-checked with the results of the needs analysis.

3. METHODOLOGY

3.1 Needs analysis framework of the study

Dudley-Evans and St. John (1998) created a requirements analysis model that encompassed practically all techniques to gather information about the needs of important stakeholders to construct effective ESP courses. Theirs is regarded as a complete needs analysis model. They also included many other elements, such as outsider and insider viewpoints, as well as a distinction between needs determined from a goal situation analysis, current situation analysis, and learning situation analysis. However, despite significant breakthroughs in the area since 1998, significant advancements in corpus-based research, and shifting aims and interests of shareholders since then, little progress has been made in terms of incorporating new characteristics into the present methodology. One reason might have been the overemphasis on students' motivation at the cost of other significant issues in designing ESP programs. However, with their limited knowledge and experiences, relying simply on their wants and expectations for the course would be shortsighted. Subject specialists' and workplace professionals' opinions and judgments should also be taken into account. Furthermore, current technology advancements are making it possible to access and use a huge number of authentic materials for the definition of the content of instructional texts for many disciplines. In other words, today, there are more dimensions/aspects of learners' needs than there were in 1998 for the researchers to deal with while focusing on the needs analysis of learning. Therefore, there seems to be a necessity to revise and modify the current needs analysis models to provide a contemporary framework from which the practitioners and researchers can benefit in meeting the growing needs of both stakeholders and learners.

As a result, this study improved and expanded the Dudley-Evans and St. John's (1998) needs analysis model by incorporating three subcomponents to identify students' learning needs as well as the specification of the content of instructional materials that should be used in the ESP classroom based on the perceptions of subject specialists and professionals from the workplace because the latter has first-hand knowledge of what students need to learn and eventually learn (Tsou & Chen, 2014). It is hoped that these newly added considerations will help students in the faculties of maritime studies better understand the educational context and realistically depict the constraints and opportunities of ESP teaching and learning for maritime transportation management engineering and marine engineering students. Table 3 shows an overview of the study's requirements analysis approach, as well as the data collecting equipment and individuals engaged.

Table 3
Needs Analysis Framework of the Study

Needs Analysis Approach	Assessment Items	Participants	Instruments
1. PSA	- Factual information about learners - Language proficiency - Language use outside the faculty - Language difficulties	➢ Learners ➢ Content Specialists	➢ Questionnaire/ group discussion ➢ Questionnaire
2. TSA			
A. Language Needs	- Language skills - Pedagogical techniques - Materials	➢ Content Specialists	➢ Questionnaire
B. Professional Needs	- Language skills - Employers' language standards for recruitment	➢ Content Specialists with work experience ➢ Learners with work experience ➢ HR managers in the maritime sector	➢ Questionnaire ➢ Questionnaire ➢ Interviews

3.2 Research Questions

Teachers should know the subject they teach. It is fundamental to their success in the classroom. The rationale is straightforward. If they do not know their subject well, they cannot help their students to learn the content. However, just knowing the subject is not sufficient for teaching. Certain contexts may require a particular form of knowledge (Knowledge for Specific Purposes) different from the professional knowledge described by Shulman (1987) and more recently delineated by Kumaravadivelu (2012). ESP is a fast-growing and promising sphere of teaching the English language. Therefore, it may be a drawback, not to have a justifiable, well-defined framework for professional knowledge that EFL teachers utilize in their profession. Furthermore' in accordance with the model this study aims to develop a valid, reliable, and data-driven professional knowledge test for ESP teachers to make the test as authentic and valid as possible, the real practitioners of the test including ESP teachers, ELT teachers, subject matter-specialists, professionals at work place, administrators, and the students contributed to data collected for the study. More specifically, the research questions driving the study are:

1. What are the needs of ESP teachers at Maritime Faculties regarding their professional knowledge?

2. Is there a specific type of knowledge (Knowledge for Specific Purposes) unique to the teaching of ESP in EFL contexts?

3. How well ESP teachers who teach maritime English in Turkey would perform in the newly developed Test of Knowledge for Specific Purposes?

To answer these questions, mixed methods sequential research design (Creswell et al., 2003) which is characterized by the integration of two separate

data collection and analysis was carried out. The first was to collect information on the needs of stakeholders (ESP teachers (context experts), EFL teachers, subject experts (subject specialists), professionals, and students). Three issues addressed were their perceptions about their language needs within a specific domain (maritime English) and the quality of ESP programs currently implemented at a number of Maritime Faculties. Using modified versions of needs analysis questionnaires developed by Barnawi (2011), Dengiz (1995), and Pham (2013), the language needs of 423 participants (78 EFL and 64 ESP teachers, 58 subject specialists, 68 professionals, and 155 students) were identified. Participants were selected across the country through availability sampling, and they responded to 5 different questionnaires delivered to every one of them according to their status.

The following table illustrates the schematic representation of the steps taken in the process of this study:

Table 4
Design of the Study

Research questions	**Participants**	**Data Collection Instruments**	**Data Analysis**	**Purpose of the Analysis**
- What are the needs of ESP teachers at Maritime Faculties in terms of their professional knowledge?	- ESP teachers - ELT teachers - Subject specialists - Professionals - Students - Administrators	- Needs Analysis survey - Observation checklists - Fieldnotes - Interviews	- Descriptive statistics/Factor analysis - Descriptive statistics / Content analysis	- To find out what ESP teachers' needs are in terms of their professional knowledge.
- Is there a specific type of knowledge (Knowledge for Specific Purposes) unique to the teaching of ESP in EFL contexts?	- ESP teachers - Subject specialists - Professionals	- The survey conducted with ESP teachers. - Observation checklists - Fieldnotes	- Descriptive statistics/Factor analysis - Descriptive statistics / Content analysis	- To determine if there is a need for a specific professional knowledge sui generis to ESP.
- How well are ESP teachers who teach maritime English in Turkey performing in the newly developed Test of Knowledge for Specific Purposes?	- ESP teachers	- Test of Knowledge for Specific Purposes	- Statistical analyses of reliability, validity, item facility/discrimination, choice distribution.	- To find out if the test is of any use to the existing literature. - To measure the competency level of ESP teachers.

3.3 Participants

Multiple sets of participants contributed to the data for the needs analysis process: all stakeholders including English language teachers who teach general English, ELT/ESP teachers (English-trained maritime English teachers), subject specialists (maritime-trained maritime English teachers), professionals (former seafarers), students, coordinators, and administrators of ESP programs from various maritime faculties and sea person working in the shipping companies participated in this study. As for the preparation and the development of the test of Knowledge for Specific Purposes, ELT/ESP teachers who are qualified to teach maritime English and the deck officers/marine engineers who hold a variety of positions on cargo and passenger ships are the sole participants. Participants were from across the country and contributed through availability sampling presented in Table 3.4.

3.4 Information on the Characteristics of the Participants (N=423)

Table 5
Questionnaire for Students

Variable	**Description**
Department	89 Maritime Transportation Management Engineering 66 Marine Engineering
Attended English Preparatory Class	100 Yes 55 No

Table 6
Questionnaire for Subject Specialists

Variable	Description
Teaching Students From	22 → Marine Engineering Operations 20 → Maritime Transportation ME 16 → Maritime Business Management
How long have you been teaching at the MF?	30 → 7 to 15 years 28 → 16 to 26 years
Fields of Graduation	25 → MTM Engineering 30 → Marine Engineering 3 → Others
Degree	33 → Bachelor's 15 → Master's 10 → Doctorate / candidate
ESP Teaching Experience	18 → under 6 years 14 → 6 to 15 years 21 → to 15 years 5 → More than 15 years

Table 7
Questionnaire for Professionals

Variable	Description
Graduated From	4 → Marine Engineering Operations 6 → Naval Architecture and ME 3 → Shipbuilding and Ocean Engineering 5 → MTME 3 → Maritime Business Management
Graduation Date	11 → 1996 to 2006 10 → 2007 to 2017
Experience at Sea	8 → Under 5 5 → 6 to 10 6 → More than 10

Table 8
Questionnaire for ELT-ESP Teachers

Variable	Description
Teaching Students from	6 → Marine Engineering Operations 13 → Naval Architecture and ME 6 → Shipbuilding and Ocean Engineering 31 → MTME 4 → Maritime Business Management 3 → Others
Experience at the Maritime Faculty	48 → 1 to 10 12 → 11 to 20 3 → 21 to 30
Fields of Graduation	51 → ELT 2 → Linguistics 2 → Translation 7 → Literature 1 → Others
Degree	43 → Bachelor's 15 → Master's 5 → Doctorate
Experience in Teaching General English	37 → under 6 years 11 → 6 to 10 10 → 11 to 15 5 → more than 15

Table 9
Questionnaire for ELT Teachers

Variable	Description
Teaching students from	9 → Marine Engineering Operations 2 → Naval Architecture and ME 9 → Shipbuilding and Ocean Engineering 4 → MTME
Experience at the Maritime Faculty	12 → 1 to 10 10 → 11 to 20 2 → 21 to 30
Fields of Graduation	19 → ELT 4 → Linguistics 1 → Translation
Degree	11 → Bachelor's 12 → Master's 1 → Doctorate
Experience in Teaching General English	21 → under 6 years 2 → 11 to 15 1 → More than 15
Experience in Teaching ESP	6 → under 6 years 8 → 6 to 15 years 8 → 11 to 15 years 2 → More than 15 years

3.5 Instruments

One of the aims of the present study was to investigate the extent of teachers' professional knowledge that is unique to Maritime English teaching. Another aim of the study was to develop a valid, reliable, and data-driven professional knowledge test to measure EFL teachers' special professional knowledge. Therefore, the study employed various kinds of instruments:

1. First, to consult English language teachers, ESP (English-trained maritime English teachers) teachers, subject specialists (maritime-trained maritime English

teachers), professionals (former seafarers), students, coordinators, and administrators of ESP programs at Maritime Faculties. The purpose was to collect information about their needs for a specific type of knowledge unique to the teaching of Maritime English. This was accomplished by developing and validating five different questionnaires.

2. Second, follow-up observation checklists were prepared before observing twenty ESP teachers during their teaching practices. These observation checklists were filled out to cross-check the data obtained through the questionnaires thereby ensuring appropriate content coverage.

3. Third, detailed field notes were recorded during the same observations to bolster the quantitative results.

4. Fourth, semi-structured interviews were carried out with 20 ESP teachers to reach fair and precise results on the needs of ESP teachers.

5. Fifth, the data obtained from the needs assessment of teachers (questionnaires), observation checklists, field notes, and interviews were used to prepare the table of specifications of the test of Professional Knowledge of Maritime English.

After preparing the questionnaires, some experts reviewed them. Following their feedback, the finalized test was piloted and administered to 64 ESP teachers, and the psychometric properties of the test were determined. The development process of the needs analysis questionnaires and the other instruments are described comprehensively in the following sections.

3.6 Instrument Development

Needs assessment in ESP is seen as the foundation on which all other decisions are, or should be made (Belcher, 2006). In line with her and other scholars' assertion, 5 different needs analysis questionnaires (Appendix E-I) were developed to administer to all shareholders (ELT teachers, ELT-ESP teachers, subject specialists, professionals [workplace people] & maritime students). As a key analytical tool, the questionnaires are intended to explore:

1. The match between the real needs and the objectives of ESP programs. (Target Needs, Hutchinson & Waters, 1987).
2. What ESP teachers think is essential in the course of teaching related to their professional knowledge. (Target Needs, Hutchinson & Waters, 1987).
3. What resources are available during the practice of ESP teaching. (Learning Needs, Jolly & Bolitho, 1998).

Next, key points related to ESP teaching (obtained from the survey) were noted down and observation checklists including these key points were developed. These observation checklists were used to observe a fair amount of (20) ESP teachers to cross-check the survey results. Additionally, field notes were taken throughout the observations, and interviews were done with the same instructors, faculty administrators, and maritime employers to help validate the survey and observation data. The semi-structured questions, which were thematically comparable to those in the questionnaires, directed the interviews. The interviewer also included time at the conclusion for an open-ended question so that respondents freely shared their views concerning marine English education at the Maritime Faculty. Thereafter, the outcome of the needs analysis questionnaires, observations, field notes, and the

interviews were used to prepare the table of specifications of the test of Knowledge for Specific Purposes. The newly developed test was pre-piloted, piloted, and necessary modifications were made. After several reviews and revisions, the finalized test was administered to the specific participants. Finally, the psychometric properties (validity & reliability) of the test were determined, and the results were discussed.

3.6.1 Procedures followed in questionnaire development

The following steps were pursued to develop the needs analysis questionnaires:

1. First, related literature (Barnawi, 2011; Belcher, 2006; Dengiz, 1995; Farhady, Tavassoli & Irani, 2018; Harwood & Petric, 2011; Hyland, 2006; Pham, 2013; Stoller & Robinson, 2017; Tomlinson, 2013), and coursebook materials that were expected to be the main information sources for needs analysis of ESP teachers and various stakeholders were extensively reviewed and examined.
2. Next, demographic questions that aimed to better understand the identity of participants were developed to get an in-depth analysis of the population.
3. The literature was reviewed to write up the rating-scale questions. Rating-scale questions were specifically prepared to provide more information than merely Yes/No.
4. Additionally, answers such as “fairly important” and “sometimes” were deliberately excluded to encourage responders to make a choice in one direction or the other and thereby avoid the problem of missing data.

To ensure getting the best possible answers from the respondents, the survey questions should be clear, concise, and direct (Fink, 2015). Therefore, items were carefully prepared to ensure the accuracy and appropriacy of the language. Optional open-ended questions were added at the end of each.

5. The questionnaires were pre-piloted with a small subsample of the population to clarify potential misunderstandings or ambiguities of wording. A pre-pilot study was conducted with 26 participants (approximately 5 participants from each relevant population) and made necessary modifications following the feedback. For example, in Part 2 of the ‘questionnaire for ELT teachers, most of the participants reacted that they hardly distinguished the difference between very important and extremely important for most of the questions in that section. Hence, the rating scale in this section was reviewed and revised.
6. Data analysis included statistical tests for validity and reliability.

The flowchart that demonstrates the steps followed in pre-piloting is presented in Figure 15.

Figure 15. Flowchart of the process used to validate the initial questionnaires (pre-piloting)



After pre-piloting, all 5 questionnaires were cross-checked with the related components of the available measures of professional knowledge for EFL teachers (National Board Certification (NBC), Praxis Tests, and Cambridge TKT (Teacher Knowledge Test). Redundant items were checked and removed. For example:

Table 10
Example of an Item Changed to Match ESP Context

	1	**2**	**3**	**4**
QUESTION STATEMENT / **SCALE**	**strongly disagree**	**disagree**	**agree**	**strongly agree**
Teaching ESP is ~~demanding~~ for me				
Teaching ESP is challenging for me				

In ‘Questionnaire for ELT-ESP Teachers’ the first item of part 2 ‘Field Knowledge in ESP Teaching and Learning’ was modified to make it more ESP (maritime English) specific.

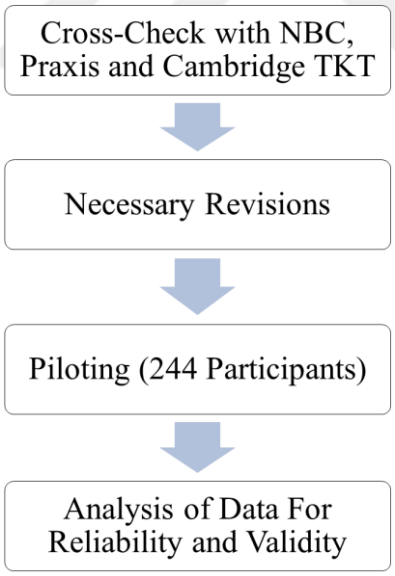
7. In addition, the participants were given an informed consent form (Appendix C) to sign to remind them that it was their choice to participate in the study and to guarantee them that their responses would stay anonymous.
8. A formal invitation letter (about English for Specific Purposes) was prepared both in Turkish and in English (Appendix D) with the official permission of the Dean of the Naval Academy to be sent to the various maritime faculties located in Turkey. Furthermore, internet versions of the revamped versions of the (5) questionnaires were prepared in google forms, and google drive links were attached to the same invitation letter.
9. The pilot study was conducted with 244 participants together with 7 interviews. The number of participants that attended the pilot study was presented in table 11.

Table 11
Number of participants in the pilot study

Questionnaires	Number of Participants
ELT Teachers	63
ELT-ESP Teachers	24
Subject Specialists	16
Professionals	21
Maritime Students	120
Interviews	7

The flowchart that demonstrates the steps followed in piloting is presented in Figure 16.

Figure 16. Flowchart of the procedures followed to validate the needs analysis questionnaires (pilot study)



3.7 Overview of the Analyses of the Instruments

Various qualitative and quantitative analyses were conducted for the instruments developed for the study:

- Needs analysis survey tools (questionnaires etc.) were piloted to ensure reliability and validity issues before they were put into use.

- Following the observations, the markings (related to key points provided by ESP teachers) on the observation checklists were compared with the survey results. Any mismatch was explored and scrutinized before developing the Professional Knowledge of Maritime English Test.

- Fieldnotes were read and deemed to be necessary as evidence that supported the understanding of the maritime English teaching.

- Interviews were transcribed verbatim. Descriptive coding and content analysis were run, and the related themes that emerged were documented.

- Professional Knowledge of Maritime English Test for ESP teachers was also piloted, and necessary improvements were made.

3.7.1 Analysis of Questionnaires

This study used 5 different questionnaires specifically developed for the needs analysis procedure. Participants of both Questionnaires for ELT-ESP teachers and the Questionnaire for Subject Specialists attend ESP classes so they both share the same parts in their respective questionnaires. In the same vein, the Questionnaire for Professionals (workplace people) and Questionnaire for Students have the same parts and same items. The final part of all the questionnaires is the same. It is the part related to the “Language needs of Students and Teachers”. This final part comprises 2

subparts or scales. The first scale includes items inquiring about the needs of ESP courses (responded by all groups) and the second scale includes items inquiring about the needs of the maritime profession. They are entitled Scale A and Scale B respectively for simplicity purposes only in statistical analyses. Scale A (items inquiring about the needs of ESP courses) was not responded to by workplace people because this group by and large graduated way too long ago and was assumed almost impossible for them to recall the characteristics of their ESP courses taught at the campus. The following table depicts the separate and common parts of the needs analysis questionnaires developed for the needs analysis procedure of the study.

Table 12
Parts of the Needs Analysis Questionnaires

A.	Questionnaire for ELT-ESP Teachers 4 Parts
	Part 1 Background Information
	Part 2 Field Knowledge in ESP Teaching & Learning
	Part 3 ESP Instructional Issues & Delivery
	Part 4 Language Needs of Students & Teachers
B.	Questionnaire for Subject Specialists 4 Parts
	Part 1 Background Information
	Part 2 Field Knowledge in ESP Teaching & Learning
	Part 3 ESP Instructional Issues & Delivery
	Part 4 Language Needs of Students & Teachers
C.	Questionnaire for Professionals (Workplace People) 4 Parts
	Part 1 Background Information
	Part 2 Teaching Methods & Strategies Used in the ESP Program
	Part 3 Textbooks and Materials Used in the ESP Program
	Part 4 Language Needs of Students & Teachers
D.	Questionnaire for Students 4 Parts
	Part 1 Background Information
	Part 2 Teaching Methods & Strategies Used in the ESP Program
	Part 3 Textbooks and Materials Used in the ESP Program
	Part 4 Language Needs of Students & Teachers
E.	Questionnaire for English Language Teachers 2 Parts
	Part 1 Background Information
	Part 2 Language Needs of Students & Teachers

3.7.1.1 ***Factor Analyses of the Questionnaires*** Next, to examine the construct validity of the scales, exploratory factor analysis with orthogonal rotation was performed to uncover the underlying structure of the variables.

Table 13 shows the rotated factor solution of Field Knowledge in ESP Teaching and Learning for ELT-ESP Teachers.

Table 13
Rotated Factor Matrix of Field Knowledge in ESP Teaching and Learning of ELT-ESP Teachers

ELT-ESP Teachers (Part 2)

Factor Matrix[a,b]	
	Factor
	1
PART2_Q1_FK	,74
PART2_Q2_FK	,62
PART2_Q3_FK	,68
PART2_Q4_FK	,68

As observed in Table 14 only one factor was extracted and all items (four items) in part 2 loaded on one factor which is statistically a desirable and convenient result. Table 14 shows the rotated factor solution of Field Knowledge in ESP Teaching and Learning for Subject Specialists.

Table 14
Rotated Factor Matrix of Field Knowledge in ESP Teaching and Learning of Subject Specialists

Subject Specialists (Part 2)

Factor Matrix[a,b]		
	Factor	
	1	2
PART2_Q1_FK	,81	
PART2_Q2_FK	,81	
PART2_Q3_FK		,66
PART2_Q4_FK		,67

As observed in Table 14, all items in part 2 loaded on two factors and rotation converged in 3 iterations which is again statistically a favorable result.

Table 15 shows the rotated factor solution of ESP Instructional Issues and Delivery for ELT-ESP Teachers.

Table 15
Rotated Factor Matrix of ESP Instructional Issues and Delivery

ELT-ESP Teachers (Part 3)

Rotated Factor Matrix[a,b]

	Factor	
	1	2
PART3_Q1_ESP_II	,38	,35
PART3_Q2_ESP_II	,81	
PART3_Q3_ESP_II		,85
PART3_Q4_ESP_II	,42	
PART3_Q5_ESP_II	,51	,37

As observed in Table 15, all items (five items) in part 3 loaded on two factors and rotation converged in 3 iterations. Items 1 and 5 were checked to see what is common between them that loaded on 2 factors.

Table 16
Items on Part 3 of the Questionnaire for ELT-ESP Teachers

			1	2	3	4
QUESTION STATEMENT		**SCALE**	**strongly disagree**	**disagree**	**agree**	**strongly agree**
1	There is a wide range of ESP teaching resources					
2	Current ESP materials give students the language proficiency necessary for their disciplines					
3	Teachers are given opportunities to make appropriate changes in ESP materials to meet the specific needs of their students					
4	Midterms and finals are the primary means for assessing the language ability of ESP students					
5	Teachers are not concerned about the current textbooks and materials in use at the faculty					

As regards table 16 and the result of the factor solution, it was concluded that both items more or less refer to the same responses. Thus, these two items were revised and reworded accordingly. Table 17 shows the rotated factor solution of ESP Instructional Issues and Delivery for Subject Specialists.

Table 17
Rotated Factor Matrix of ESP Instructional Issues and Delivery

Subject Specialists (Part 3)

Rotated Factor Matrix[a,b]		
	Factor	
	1	2
PART3_Q1_ESP_II	,96	
PART3_Q2_ESP_II	,49	
PART3_Q3_ESP_II		,68
PART3_Q4_ESP_II	,57	,33
PART3_Q5_ESP_II	,35	,65

As observed in Table 17, 3 items loaded on two factors subsequently and rotation converged in 3 iterations. Items 4 and 5 were checked in the same way to see what is common between them that loaded on 2 factors.

Table 18
Items on Part 3 of the Questionnaire for Subject Specialists

			1	**2**	**3**	**4**
QUESTION STATEMENT		**SCALE**	**strongly disagree**	**disagree**	**agree**	**strongly agree**
1	There is a wide range of ESP teaching resources					
2	Current ESP materials give students the language proficiency necessary for their disciplines					
3	Teachers are given opportunities to make appropriate changes in ESP materials to meet the specific needs of their students					
4	Midterms and finals are the primary means for assessing the language ability of ESP students					
5	Teachers are not concerned about the current textbooks and materials in use at the faculty					

Regarding the result of the factor solution, it was discovered that both items give reference to the same responses again. For this reason, items 4 and 5 were also revised and rewritten. Table 19 shows rotated factor solution of Teaching Methods and Strategies Used in the ESP Program for Students.

Table 19
Rotated Factor Matrix of Teaching Methods and Strategies Used in the ESP Program Students (Part 2)

Factor Matrix[a,b]	
	Factor
	1
PART2_Q1_1_TMS	,62
PART2_Q1_2_TMS	,63
PART2_Q1_3_TMS	,58
PART2_Q1_4_TMS	,62
PART2_Q1_5_TMS	,61

As observed in Table 19, only one factor was extracted and all items (five items) in the related part loaded on this factor. This result is an indication of a statistically approving outcome for this part of the questionnaire. Table 20 shows rotated factor solution of Teaching Methods and Strategies Used in the ESP Program for Professionals (Workplace People).

Table 20
Rotated Factor Matrix of Teaching Methods and Strategies Used in the ESP Program Professionals (Part 2)

Factor Matrix[a,b]	
	Factor
	1
PART2_Q1_1_TMS	,62
PART2_Q1_2_TMS	,74
PART2_Q1_3_TMS	,49
PART2_Q1_4_TMS	,61
PART2_Q1_5_TMS	,51

As observed in Table 20, only one factor was extracted and all items (five items) in the related part loaded on one factor. This result apparently represents a statistically favorable outcome for part 2 of the Questionnaire for Professionals. Table 21 shows rotated factor solution of Textbooks and Materials Used in the ESP Program for Students.

Table 21
Rotated Factor Matrix of Textbooks and Materials Used in the ESP Program

Students (Part 3)

Factor Matrix[a,b]	
	Factor
	1
PART3_Q2_1_TM	,58
PART3_Q2_2_TM	,54
PART3_Q2_3_TM	,76
PART3_Q2_4_TM	,41
PART3_Q2_5_TM	,75
PART3_Q2_6_TM	,68

As observed in Table 21, only one factor was extracted and all items (six items) in the related part loaded on one factor. This result clearly displays a statistically positive outcome for part 3 of the Questionnaire for Students. Table 22 shows rotated factor solution of Textbooks and Materials Used in the ESP Program for Professionals.

Table 22
Rotated Factor Matrix of Textbooks and Materials Used in the ESP Program

Rotated Factor Matrix[a,b]		
	Factor	
	1	2
PART3_Q2_1_TM		,55
PART3_Q2_2_TM	,41	
PART3_Q2_3_TM	,54	
PART3_Q2_4_TM		,91
PART3_Q2_5_TM	,54	
PART3_Q2_6_TM	,69	

When Table 22 is observed, it is evidently seen that all six items are evenly loaded on just two factors. This outcome could also well be interpreted as a statistically favorable result for part 3 of the Questionnaire for Professionals (Workplace people). Table 23 shows rotated factor solution of Language Needs of Students and Teachers for ELT teachers (Part 4 / Scale A).

Table 23
Rotated Factor Matrix of Language Needs of Students and Teachers
ELT Teachers (Part 4 / Scale A)

Rotated Factor Matrix[a,b]

	Factor		
	1	2	3
PART4_Q1_1A	.698	.384	
PART4_Q1_2A		.612	.341
PART4_Q1_3A	.647		.422
PART4_Q1_4A	.408	.614	.389
PART4_Q1_5A		.491	.448
PART4_Q4_1A	.729		
PART4_Q4_2A	.462		.452
PART4_Q4_3A	.792		.337
PART4_Q4_4A	.689	.315	
PART4_Q4_5A	.670		.399
PART4_Q4_6A	.882		.311
PART4_Q5_1A	.381	.348	.624
PART4_Q5_2A			.827
PART4_Q5_3A		.466	.515
PART4_Q5_4A			.672
PART4_Q6_1A	.337		
PART4_Q6_2A			.455
PART4_Q6_3A		.717	
PART4_Q6_4A	.514	.678	
PART4_Q7_1A	.853	.307	
PART4_Q7_2A	.744	.470	
PART4_Q7_3A	.601	.540	
PART4_Q7_4A	.774	.522	
PART4_Q8_1A	.821	.401	
PART4_Q8_2A	.634	.622	
PART4_Q8_3A	.784	.476	
PART4_Q8_4A	.512	.654	

A. The items were fixed to 3 dimensions

Rotated Factor Matrix[a,b]

	Factor	
	1	2
PART4_Q1_1A	.744	.385
PART4_Q1_2A		.633
PART4_Q1_3A	.665	.445
PART4_Q1_4A	.493	.657
PART4_Q1_5A		.651
PART4_Q4_1A	.750	.324
PART4_Q4_2A	.455	.392
PART4_Q4_3A	.791	.308
PART4_Q4_4A	.722	.358
PART4_Q4_5A	.661	.342
PART4_Q4_6A	.878	
PART4_Q5_1A	.413	.670
PART4_Q5_2A		.668
PART4_Q5_3A	.331	.674
PART4_Q5_4A	.315	.658
PART4_Q6_1A	.367	.361
PART4_Q6_2A		.479
PART4_Q6_3A	.392	.603
PART4_Q6_4A	.620	.504
PART4_Q7_1A	.884	.343
PART4_Q7_2A	.810	.396
PART4_Q7_3A	.681	.452
PART4_Q7_4A	.849	.396
PART4_Q8_1A	.875	.342
PART4_Q8_2A	.725	.513
PART4_Q8_3A	.852	.373
PART4_Q8_4A	.610	.594

B. The items were fixed to 2 dimensions

There are 6 components in part 4 Scale A (responses for ESP courses) of the Questionnaire for ELT Teachers. Since there was more than one component, factor analysis was not calculated directly for this part. At the outset, it was needed to be examined whether the items were equally distributed (loaded) in each tier of the factor analyses. To this end, items were first fixed to 4 dimensions, 3 dimensions, and two

dimensions respectively just for one group (ELT teachers). The results of the analyses revealed that in each tier, the items loaded on the dimensions proportionally, and a consistent pattern was observed. After that, the rotated factor solution was calculated for Subject Specialists. Table 24 shows rotated factor solution of Language Needs of Students and Teachers for Subject Specialists (Part 4 / Scale A).

Table 24
Rotated Factor Matrix of Language Needs of Students and Teachers

All Groups (Part 4 / Scale A)

Rotated Factor Matrix[a]

	Factor				
	1	2	3	4	5
PART4_Q1_1A	.715				
PART4_Q1_2A			.580		
PART4_Q1_3A	.645				
PART4_Q1_4A		.356	.474		.332
PART4_Q1_5A			.491		.326
PART4_Q4_1A	.568			.369	
PART4_Q4_2A	.467				.340
PART4_Q4_3A				.699	
PART4_Q4_4A	.794				
PART4_Q4_5A				.769	
PART4_Q4_6A	.446			.711	
PART4_Q5_1A					.561
PART4_Q5_2A					.755
PART4_Q5_3A	.372		.476		.374
PART4_Q5_4A	.400				.557
PART4_Q6_1A				.322	
PART4_Q6_2A					.343
PART4_Q6_3A	.333		.754		
PART4_Q6_4A	.531	.338	.516		
PART4_Q7_1A	.715	.448			
PART4_Q7_2A	.650	.521			
PART4_Q7_3A		.619		.313	
PART4_Q7_4A	.626	.581			
PART4_Q8_1A	.578	.587			
PART4_Q8_2A		.614	.365	.379	
PART4_Q8_3A	.426	.675			
PART4_Q8_4A	.515	.435	.377		

As observed in Table 24, all items (27 items) loaded on 5 factors for all the groups. Naturally, there are some discrepancies but that does not affect the overall homogenous pattern of the rotated factor loadings of the items which are deemed to

be statistically appropriate for part 4 Scale A of the questionnaire. Table 25 shows the rotated factor solution of Language Needs of Students and Teachers for Subject Specialists (Part 4 / Scale A).

Table 25
Rotated Factor Matrix of Language Needs of Students and Teachers
Subject Specialists (Part 4 / Scale A)

Rotated Factor Matrix[a,b]						
	Factor					
	1	2	3	4	5	6
PART4_Q1_1A			.652			
PART4_Q1_2A	.673		.366		-.521	
PART4_Q1_3A						.634
PART4_Q1_4A		.310			-.377	
PART4_Q1_5A	.525					
PART4_Q4_1A	.552					
PART4_Q4_2A						
PART4_Q4_3A				-.766		
PART4_Q4_4A						.655
PART4_Q4_5A	.416					
PART4_Q4_6A	.557					
PART4_Q5_1A		.329	.499			
PART4_Q5_2A						
PART4_Q5_3A		-.328		.690		
PART4_Q5_4A			-.309			.483
PART4_Q6_1A						
PART4_Q6_2A					.792	
PART4_Q6_3A	.422	.340	.315			
PART4_Q6_4A			.369			
PART4_Q7_1A	-.435		.427			
PART4_Q7_2A			.371			
PART4_Q7_3A						
PART4_Q7_4A		.648				
PART4_Q8_1A	-.384					
PART4_Q8_2A	.524	.610				
PART4_Q8_3A		.546				
PART4_Q8_4A		.303				.357

Table 26
Rotated Factor Matrix of Language Needs of Students and Teachers

Subject Specialists (Part 4 / Scale A)

Rotated Factor Matrix[a,b]				
	Factor			
	1	2	3	4
PART4_Q1_1A			.349	.341
PART4_Q1_2A	.690		.397	.492
PART4_Q1_3A				.442
PART4_Q1_4A			.364	
PART4_Q1_5A	.498			
PART4_Q4_1A	.400			
PART4_Q4_2A				
PART4_Q4_3A			-.520	
PART4_Q4_4A			-.316	
PART4_Q4_5A	.454			
PART4_Q4_6A	.441			
PART4_Q5_1A		.466		.518
PART4_Q5_2A				
PART4_Q5_3A			.624	
PART4_Q5_4A			-.315	
PART4_Q6_1A				
PART4_Q6_2A				-.642
PART4_Q6_3A	.353	.402	.408	
PART4_Q6_4A			.459	
PART4_Q7_1A	-.639	.340		
PART4_Q7_2A		.477		
PART4_Q7_3A				
PART4_Q7_4A		.606		
PART4_Q8_1A	-.348			
PART4_Q8_2A	.414	.749		
PART4_Q8_3A		.440		
PART4_Q8_4A				

As can be observed in Table 25 and Table 26, the same procedure was applied to the Subject Specialists group. Items were first fixed to 6 dimensions, 5 dimensions, and 4 dimensions respectively and the ensuing patterns were compared and examined. It was observed that in each tier, items loaded on the factors evenly and in a similar pattern. Seeing that the patterns were analogous, rotated factor analysis was performed for all groups that responded to the scale (A) of the questionnaire. Table 27 shows the rotated factor solution of Language Needs of Students and Teachers for all the participants that responded on scale A.

Table 27
Rotated Factor Matrix of Language Needs of Students and Teachers

All Groups (Part 4 / Scale A)

Rotated Factor Matrix[a]

	Factor				
	1	2	3	4	5
PART4_Q1_1A	.715				
PART4_Q1_2A			.580		
PART4_Q1_3A	.645				
PART4_Q1_4A		.356	.474		.332
PART4_Q1_5A			.491		.326
PART4_Q4_1A	.568			.369	
PART4_Q4_2A	.467				.340
PART4_Q4_3A				.699	
PART4_Q4_4A	.794				
PART4_Q4_5A				.769	
PART4_Q4_6A	.446			.711	
PART4_Q5_1A					.561
PART4_Q5_2A					.755
PART4_Q5_3A	.372		.476		.374
PART4_Q5_4A	.400				.557
PART4_Q6_1A				.322	
PART4_Q6_2A					.343
PART4_Q6_3A	.333		.754		
PART4_Q6_4A	.531	.338	.516		
PART4_Q7_1A	.715	.448			
PART4_Q7_2A	.650	.521			
PART4_Q7_3A		.619		.313	
PART4_Q7_4A	.626	.581			
PART4_Q8_1A	.578	.587			
PART4_Q8_2A		.614	.365	.379	
PART4_Q8_3A	.426	.675			
PART4_Q8_4A	.515	.435	.377		

As observed in Table 27, all items (27 items) loaded on 5 factors for all the groups which are considered statistically acceptable for the related scale. Table 28 shows the rotated factor solution of Language Needs of Students and Teachers for Students (Part 4 / Scale B).

Table 28
Rotated Factor Matrix of Language Needs of Students and Teachers

Students (Part 4 / Scale B)

Rotated Factor Matrix[a,b]					**Rotated Factor Matrix[a,b]**			
	Factor					Factor		
	1	2	3	4		1	2	3
PART4_Q1_1B		.750			PART4_Q1_1B	.594		.313
PART4_Q1_2B		.727			PART4_Q1_2B	.627		
PART4_Q1_3B		.553		.309	PART4_Q1_3B	.583		.314
PART4_Q1_4B		.649		.420	PART4_Q1_4B	.725		
PART4_Q1_5B		.372		.513	PART4_Q1_5B	.638		
PART4_Q4_1B			.690		PART4_Q4_1B			.712
PART4_Q4_2B			.671		PART4_Q4_2B			.704
PART4_Q4_3B			.651		PART4_Q4_3B			.660
PART4_Q4_4B			.675		PART4_Q4_4B			.638
PART4_Q4_5B			.622		PART4_Q4_5B			.596
PART4_Q4_6B			.624		PART4_Q4_6B			.618
PART4_Q5_1B		.359		.574	PART4_Q5_1B	.678		
PART4_Q5_2B				.609	PART4_Q5_2B	.604		
PART4_Q5_3B				.781	PART4_Q5_3B	.638		
PART4_Q5_4B	.303			.523	PART4_Q5_4B	.542		
PART4_Q6_1B		.347			PART4_Q6_1B	.343		
PART4_Q6_2B	.373	.321		.429	PART4_Q6_2B	.537	.369	
PART4_Q6_3B	.364	.356		.416	PART4_Q6_3B	.551	.359	
PART4_Q6_4B	.381			.488	PART4_Q6_4B	.531	.369	
PART4_Q7_1B	.668				PART4_Q7_1B		.673	
PART4_Q7_2B	.729				PART4_Q7_2B		.722	
PART4_Q7_3B	.396				PART4_Q7_3B		.396	
PART4_Q7_4B					PART4_Q7_4B			
PART4_Q8_1B	.608	.436	.339		PART4_Q8_1B	.330	.608	.394
PART4_Q8_2B	.636				PART4_Q8_2B	.302	.638	
PART4_Q8_3B	.512	.385			PART4_Q8_3B	.461	.513	
PART4_Q8_4B	.538				PART4_Q8_4B		.539	

As observed in Table 28, items were fixed to 4 dimensions and 3 dimensions, and the patterns were observed. The items were examined whether they loaded on in a similar pattern in each tier of the calculations. Rotated factor analysis was performed for all the groups that responded to scale B of the questionnaires. Table 29 shows the rotated factor solution of Language Needs of Students and Teachers for all the participants that responded on scale B.

Table 29

Rotated Factor Matrix of Language Needs of Students and Teachers (Scale B)

Rotated Factor Matrix[a]					
	Factor				
	1	2	3	4	5
PART4_Q1_1B	.505	.689			
PART4_Q1_2B		.695			
PART4_Q1_3B	.472	.586		.310	
PART4_Q1_4B	.307	.693			
PART4_Q1_5B		.429		.467	
PART4_Q4_1B			.570		
PART4_Q4_2B			.590		
PART4_Q4_3B			.650		
PART4_Q4_4B	.484		.539		
PART4_Q4_5B			.555		
PART4_Q4_6B			.543		.510
PART4_Q5_1B	.510	.318		.445	
PART4_Q5_2B				.504	.327
PART4_Q5_3B	.491			.566	
PART4_Q5_4B	.416			.533	
PART4_Q6_1B				.316	
PART4_Q6_2B				.340	.609
PART4_Q6_3B	.624	.354		.307	
PART4_Q6_4B	.679	.323			
PART4_Q7_1B	.798				
PART4_Q7_2B	.680				.353
PART4_Q7_3B					.613
PART4_Q7_4B	.411				
PART4_Q8_1B	.748				
PART4_Q8_2B	.604				.414
PART4_Q8_3B	.561				.438
PART4_Q8_4B	.585				.417

It was observed in Table 29 that all 27 items loaded on 5 factors in an analogous pattern that was regarded statistically favorable for the related questionnaire. Table 30 shows the rotated factor solution of Language Needs of Students and Teachers for ELT Teachers (Part 4 / Scale B).

Table 30

Rotated Factor Matrix of Language Needs of Students and Teachers

ELT Teachers (Part 4 / Scale B)

Rotated Factor Matrix[a,b]						**Rotated Factor Matrix[a,b]**				
	Factor						Factor			
	1	2	3	4	5		1	2	3	4
PART4_Q1_1B	.432	.829				PART4_Q1_1B	.420	.841		
PART4_Q1_2B		.685			.345	PART4_Q1_2B	.392	.638		
PART4_Q1_3B	.406	.711		.429		PART4_Q1_3B	.363	.721		.460
PART4_Q1_4B	.337	.765				PART4_Q1_4B	.395	.754		
PART4_Q1_5B	.319	.525		.457		PART4_Q1_5B	.338	.511		.456
PART4_Q4_1B	.396		.483	.351		PART4_Q4_1B	.404	.307	.482	.364
PART4_Q4_2B		.358	.421	.424		PART4_Q4_2B		.377	.409	.448
PART4_Q4_3B	.317	.383	.749			PART4_Q4_3B		.416	.708	
PART4_Q4_4B	.468	.596	.506			PART4_Q4_4B	.395	.613	.445	
PART4_Q4_5B			.525			PART4_Q4_5B			.537	
PART4_Q4_6B	.372		.741			PART4_Q4_6B	.386		.746	
PART4_Q5_1B	.718	.350		.355		PART4_Q5_1B	.652	.373		.410
PART4_Q5_2B	.464	.336	.348			PART4_Q5_2B	.507	.333	.344	
PART4_Q5_3B	.734			.415		PART4_Q5_3B	.699			.467
PART4_Q5_4B	.579		.315	.443		PART4_Q5_4B	.557		.309	.477
PART4_Q6_1B				.604		PART4_Q6_1B				.611
PART4_Q6_2B			.338	.490		PART4_Q6_2B	.326		.352	.458
PART4_Q6_3B	.710	.517				PART4_Q6_3B	.752	.509		
PART4_Q6_4B	.733	.519				PART4_Q6_4B	.753	.519		
PART4_Q7_1B	.771	.458				PART4_Q7_1B	.724	.471		.344
PART4_Q7_2B	.684	.372			.417	PART4_Q7_2B	.780	.351		
PART4_Q7_3B	.467		.371		.549	PART4_Q7_3B	.617		.383	
PART4_Q7_4B	.794	.456				PART4_Q7_4B	.785	.467		
PART4_Q8_1B	.853	.321		.306		PART4_Q8_1B	.777	.344		.377
PART4_Q8_2B	.685	.427	.353		.349	PART4_Q8_2B	.769	.417	.352	
PART4_Q8_3B	.781		.351			PART4_Q8_3B	.798		.342	
PART4_Q8_4B	.692	.345			.464	PART4_Q8_4B	.806	.324		

As observed in Table 30, items were fixed to 5 and 4 dimensions respectively for the ELT Teachers group only. The items were examined, and it was observed that in each tier of fixation, items loaded on factors in a similar pattern. Since the patterns were alike, exploratory factor analysis with orthogonal rotation was performed to check whether factor loadings were also similar for all the groups that responded to the same

scale. Table 31 shows the rotated factor solution of Language Needs of Students and Teachers for all the participants that responded to scale B.

Table 31
Rotated Factor Matrix of Language Needs of Students and Teachers (Scale B)

Rotated Factor Matrix[a]					
	Factor				
	1	2	3	4	5
PART4_Q1_1B	.505	.689			
PART4_Q1_2B		.695			
PART4_Q1_3B	.472	.586		.310	
PART4_Q1_4B	.307	.693			
PART4_Q1_5B		.429		.467	
PART4_Q4_1B			.570		
PART4_Q4_2B			.590		
PART4_Q4_3B			.650		
PART4_Q4_4B	.484		.539		
PART4_Q4_5B			.555		
PART4_Q4_6B			.543		.510
PART4_Q5_1B	.510	.318		.445	
PART4_Q5_2B				.504	.327
PART4_Q5_3B	.491			.566	
PART4_Q5_4B	.416			.533	
PART4_Q6_1B				.316	
PART4_Q6_2B				.340	.609
PART4_Q6_3B	.624	.354		.307	
PART4_Q6_4B	.679	.323			
PART4_Q7_1B	.798				
PART4_Q7_2B	.680				.353
PART4_Q7_3B					.613
PART4_Q7_4B	.411				
PART4_Q8_1B	.748				
PART4_Q8_2B	.604				.414
PART4_Q8_3B	.561				.438
PART4_Q8_4B	.585				.417

As observed in Table 31, all 27 items loaded on 5 factors in an identical pattern. Statistically, this result was interpreted as a favorable outcome for the related questionnaire. Table 32 shows the rotated factor solution of Language Needs of Students and Teachers for ELT-ESP Teachers (Part 4 / Scale B).

Table 32
Rotated Factor Matrix of Language Needs of Students and Teachers

ELT-ESP Teachers (Part 4 / Scale B)

Rotated Factor Matrix[a,b]						**Rotated Factor Matrix[a,b]**			
	Factor						Factor		
	1	2	3	4	5		1	2	3
PART4_Q1_1B				.716		PART4_Q1_1B			
PART4_Q1_2B	.469	.320	.387			PART4_Q1_2B	.371	.410	
PART4_Q1_3B						PART4_Q1_3B			
PART4_Q1_4B			.490			PART4_Q1_4B			.390
PART4_Q1_5B	.424	.448			.314	PART4_Q1_5B	.375	.532	
PART4_Q4_1B		-.457				PART4_Q4_1B	.329	-.452	
PART4_Q4_2B		.684				PART4_Q4_2B		.682	
PART4_Q4_3B					.537	PART4_Q4_3B			
PART4_Q4_4B					.752	PART4_Q4_4B			
PART4_Q4_5B					.519	PART4_Q4_5B			
PART4_Q4_6B			.460			PART4_Q4_6B			.509
PART4_Q5_1B		.434	.333			PART4_Q5_1B		.463	.308
PART4_Q5_2B	.427			.894		PART4_Q5_2B	.577		
PART4_Q5_3B		-.428				PART4_Q5_3B		-.381	
PART4_Q5_4B	.734					PART4_Q5_4B	.750		
PART4_Q6_1B	.769					PART4_Q6_1B	.736		
PART4_Q6_2B	.589					PART4_Q6_2B	.578		
PART4_Q6_3B			.542			PART4_Q6_3B			.483
PART4_Q6_4B			.390			PART4_Q6_4B			.307
PART4_Q7_1B			.383			PART4_Q7_1B			.368
PART4_Q7_2B	.568	-.443				PART4_Q7_2B	.631	-.314	.323
PART4_Q7_3B	.330					PART4_Q7_3B			
PART4_Q7_4B			.377			PART4_Q7_4B			.379
PART4_Q8_1B						PART4_Q8_1B			
PART4_Q8_2B		.571				PART4_Q8_2B		.497	
PART4_Q8_3B		.478	.346	.363		PART4_Q8_3B		.589	.308
PART4_Q8_4B	.682	-.445				PART4_Q8_4B	.754	-.354	

As observed in Table 32, items were fixed to 5 and 4 dimensions respectively for the ELT Teachers group only. The items were examined, and it was observed that in each tier of fixation, items loaded on factors in a similar pattern. Since the patterns were alike, exploratory factor analysis with orthogonal rotation was performed to check whether factor loadings were also similar for all the groups that responded to the same scale. Table 33 shows the rotated factor solution of Language Needs of Students and Teachers for all the participants that responded to Scale B.

Table 33
Rotated Factor Matrix of Language Needs of Students and Teachers (Scale B)

Rotated Factor Matrix[a]					
	Factor				
	1	2	3	4	5
PART4_Q1_1B	.505	.689			
PART4_Q1_2B		.695			
PART4_Q1_3B	.472	.586		.310	
PART4_Q1_4B	.307	.693			
PART4_Q1_5B		.429		.467	
PART4_Q4_1B			.570		
PART4_Q4_2B			.590		
PART4_Q4_3B			.650		
PART4_Q4_4B	.484		.539		
PART4_Q4_5B			.555		
PART4_Q4_6B			.543		.510
PART4_Q5_1B	.510	.318		.445	
PART4_Q5_2B				.504	.327
PART4_Q5_3B	.491			.566	
PART4_Q5_4B	.416			.533	
PART4_Q6_1B				.316	
PART4_Q6_2B				.340	.609
PART4_Q6_3B	.624	.354		.307	
PART4_Q6_4B	.679	.323			
PART4_Q7_1B	.798				
PART4_Q7_2B	.680				.353
PART4_Q7_3B					.613
PART4_Q7_4B	.411				
PART4_Q8_1B	.748				
PART4_Q8_2B	.604				.414
PART4_Q8_3B	.561				.438
PART4_Q8_4B	.585				.417

As regards Table 33, it can be observed that all 27 items loaded on 5 factors, and statistically, this outcome could be interpreted as a positive result for this Scale B of the questionnaires. Table 34 shows the rotated factor solution of Language Needs of Students and Teachers for Subject Specialists (Part 4 / Scale B).

Table 34
Rotated Factor Matrix of Language Needs of Students and Teachers

Subject Specialists (Part 4 / Scale B)

Rotated Factor Matrix[a,b]						**Rotated Factor Matrix[a,b]**				
	Factor						Factor			
	1	2	3	4	5		1	2	3	4
PART4_Q1_1B		.665				PART4_Q1_1B		.558		
PART4_Q1_2B			-.354			PART4_Q1_2B				
PART4_Q1_3B		.610				PART4_Q1_3B		.460		
PART4_Q1_4B			-.433			PART4_Q1_4B				
PART4_Q1_5B				.477		PART4_Q1_5B				.448
PART4_Q4_1B				.308		PART4_Q4_1B				
PART4_Q4_2B			.483			PART4_Q4_2B				
PART4_Q4_3B						PART4_Q4_3B				
PART4_Q4_4B		.710				PART4_Q4_4B		.756		
PART4_Q4_5B		.404	.334			PART4_Q4_5B		.510		
PART4_Q4_6B			-.431	.410		PART4_Q4_6B	-.309			.465
PART4_Q5_1B					.491	PART4_Q5_1B			.486	
PART4_Q5_2B				.355		PART4_Q5_2B				.398
PART4_Q5_3B	.409			.384		PART4_Q5_3B				.437
PART4_Q5_4B	.772					PART4_Q5_4B	.738			
PART4_Q6_1B	.536		.558			PART4_Q6_1B	.729			
PART4_Q6_2B	.473					PART4_Q6_2B	.333			
PART4_Q6_3B				.333		PART4_Q6_3B	.325			.314
PART4_Q6_4B		.387		.468		PART4_Q6_4B		.427	.335	.430
PART4_Q7_1B				-.360	.610	PART4_Q7_1B			.608	-.388
PART4_Q7_2B	.546					PART4_Q7_2B	.515			
PART4_Q7_3B	.373					PART4_Q7_3B	.423			
PART4_Q7_4B	-.309				.375	PART4_Q7_4B			.397	
PART4_Q8_1B					.615	PART4_Q8_1B			.654	
PART4_Q8_2B					.391	PART4_Q8_2B			.385	
PART4_Q8_3B				.461		PART4_Q8_3B				.436
PART4_Q8_4B	.487		.409			PART4_Q8_4B	.633			

Regarding Table 34, all 27 items on the responses of the maritime profession were first fixed to 5 dimensions and then 4 dimensions respectively for the Subject Specialists group. Next, the ensuing pattern was examined. It was observed that the distribution aka the loadings of the items onto the factors displayed an analogous pattern. For this reason, the rotated factor solution was calculated to verify whether factor loadings were also similar for all the groups for the same scale (B). Table 35

shows the rotated factor solution of Language Needs of Students and Teachers for all the participants that responded to Scale B.

Table 35
Rotated Factor Matrix of Language Needs of Students and Teachers (Scale B)

Rotated Factor Matrix[a]					
	Factor				
	1	2	3	4	5
PART4_Q1_1B	.505	.689			
PART4_Q1_2B		.695			
PART4_Q1_3B	.472	.586		.310	
PART4_Q1_4B	.307	.693			
PART4_Q1_5B		.429		.467	
PART4_Q4_1B			.570		
PART4_Q4_2B			.590		
PART4_Q4_3B			.650		
PART4_Q4_4B	.484		.539		
PART4_Q4_5B			.555		
PART4_Q4_6B			.543		.510
PART4_Q5_1B	.510	.318		.445	
PART4_Q5_2B				.504	.327
PART4_Q5_3B	.491			.566	
PART4_Q5_4B	.416			.533	
PART4_Q6_1B				.316	
PART4_Q6_2B				.340	.609
PART4_Q6_3B	.624	.354		.307	
PART4_Q6_4B	.679	.323			
PART4_Q7_1B	.798				
PART4_Q7_2B	.680				.353
PART4_Q7_3B					.613
PART4_Q7_4B	.411				
PART4_Q8_1B	.748				
PART4_Q8_2B	.604				.414
PART4_Q8_3B	.561				.438
PART4_Q8_4B	.585				.417

As observed in Table 35, it can be observed that all 27 items loaded on 5 factors, and this could be statistically interpreted as a favorable result for Scale B of the questionnaires. Table 36 shows the rotated factor solution of Language Needs of Students and Teachers for Professionals (Part 4 / Scale B).

Table 36
Rotated Factor Matrix of Language Needs of Students and Teachers

Professionals (Part 4 / Scale B)

Rotated Factor Matrix[a,b]

	Factor			
	1	2	3	4
PART4_Q1_1B		.675		
PART4_Q1_2B				
PART4_Q1_3B		.487		
PART4_Q1_4B				
PART4_Q1_5B	.746			
PART4_Q4_1B			.428	
PART4_Q4_2B	.712			
PART4_Q4_3B			.771	
PART4_Q4_4B		.807		
PART4_Q4_5B			.387	
PART4_Q4_6B			.815	
PART4_Q5_1B	.363	.411		
PART4_Q5_2B	.727			
PART4_Q5_3B				
PART4_Q5_4B	.722			
PART4_Q6_1B	.598		-.393	
PART4_Q6_2B	.674			
PART4_Q6_3B				.680
PART4_Q6_4B				.525
PART4_Q7_1B		.475		
PART4_Q7_2B	.425			.337
PART4_Q7_3B	.445			
PART4_Q7_4B				.695

Rotated Factor Matrix[a,b]

	Factor				
	1	2	3	4	5
PART4_Q1_1B			.702		
PART4_Q1_2B					.967
PART4_Q1_3B			.444		
PART4_Q1_4B					.487
PART4_Q1_5B	.760				
PART4_Q4_1B		.426			
PART4_Q4_2B	.714				
PART4_Q4_3B		.764			
PART4_Q4_4B			.787		
PART4_Q4_5B		.414			
PART4_Q4_6B		.812			
PART4_Q5_1B	.399		.373		
PART4_Q5_2B	.723				
PART4_Q5_3B					
PART4_Q5_4B	.743				
PART4_Q6_1B	.621	-.373			
PART4_Q6_2B	.644				
PART4_Q6_3B				.672	
PART4_Q6_4B				.538	
PART4_Q7_1B			.465		
PART4_Q7_2B	.469			.358	
PART4_Q7_3B	.404				
PART4_Q7_4B				.696	

In Table 36, all 27 items were fixed to 5 dimensions and 4 dimensions subsequently for Professionals. Thereafter, the ensuing pattern was examined. Because the patterns of the factor loadings were similar for professionals, rotthe ated factor solution was calculated to check whether rotated factor loadings were also analogous for all the groups that responded to the same scale. Table 37 shows the rotated factor solution of

Language Needs of Students and Teachers for all the participants that responded to Scale B.

Table 37
Rotated Factor Matrix of Language Needs of Students and Teachers (Scale B)

Rotated Factor Matrix[a]					
	Factor				
	1	2	3	4	5
PART4_Q1_1B	.505	.689			
PART4_Q1_2B		.695			
PART4_Q1_3B	.472	.586		.310	
PART4_Q1_4B	.307	.693			
PART4_Q1_5B		.429		.467	
PART4_Q4_1B			.570		
PART4_Q4_2B			.590		
PART4_Q4_3B			.650		
PART4_Q4_4B	.484		.539		
PART4_Q4_5B			.555		
PART4_Q4_6B			.543		.510
PART4_Q5_1B	.510	.318		.445	
PART4_Q5_2B				.504	.327
PART4_Q5_3B	.491			.566	
PART4_Q5_4B	.416			.533	
PART4_Q6_1B				.316	
PART4_Q6_2B				.340	.609
PART4_Q6_3B	.624	.354		.307	
PART4_Q6_4B	.679	.323			
PART4_Q7_1B	.798				
PART4_Q7_2B	.680				.353
PART4_Q7_3B					.613
PART4_Q7_4B	.411				
PART4_Q8_1B	.748				
PART4_Q8_2B	.604				.414
PART4_Q8_3B	.561				.438
PART4_Q8_4B	.585				.417

As observed in Table 37, all items (27 items) loaded on 5 factors and the distribution pattern of the loadings shows similarity to Table 36. This outcome could statistically be interpreted as a favorable result for part 4 Scale B of the questionnaires.

3.7.1.2 ***Reliabilities of the Needs Analysis Questionnaires*** In addition to investigating the dimensionality of the scales with factor analyses, the alpha coefficient of reliability was calculated to measure how closely related the items are as a group. The alpha correlation coefficient of each section of the questionnaire was measured at most 0.97 and at least 0.54. A generally accepted rule is that an alpha of 0.6-0.7 indicates an acceptable level of reliability. Hence, except for part 4 Scale B of the Subject Specialists group, items in each section of the questionnaires have a relatively satisfactory level of internal consistency and reliability. Table 38 shows Cronbach's Alpha values computed for each part of the 5 questionnaires used for the study.

Table 38
Cronbach's Alpha Scores for Each Section of the Questionnaires

	PART2_FK	**PART2_TMS**	**PART3_TM**	**PART3_ESP_II**	**PART4_A**	**PART4_B**
Students		,75	,79			,91
ELT Teachers					,97	,97
ELT-ESP Teachers	,78			,66	,81	,64
Subject Specialists	,68			,71	,60	,54
Professionals		,73	,68			,80

A low alpha could be due to a low number of questions or poor correlation between items. For this reason, some items in Scale B of Subject Specialists were revised, and the poorly correlated ones were identified and removed.

3.7.2 Interviews

Semi-structured 20 interviews (2 deans, 2 vice deans, 16 workplace people) were conducted with the faculty administrators and employees/employers from the maritime sector to create room for various shareholders. Their opinions could lead to

additional topics of interest that may not have been covered in the questionnaires. Each interview protocol (Appendices K & L) consisted of eleven questions framed from general to specific. The first two questions (e.g., what is the most rewarding part of your job? how long have you been working as a vice-dean/chief engineer/second captain? etc.) were used as a warm-up to relieve and relax the interviewee. The following nine questions were asked to get a deeper understanding of the factors that may play a part while learning English through the technical knowledge and specialized vocabulary of their profession and pursuing their career. Additionally, supplementary probes assisted the intercommunication between the researcher and the interviewee. All in all, in each interview, the researcher purposefully controlled the conversational frame to create an ambiance where the participants could fully engage in the conversation. Interviews lasted approximately 35 minutes and were audio-recorded and transcribed verbatim. Thereafter, the data was coded to reach conclusions.

3.7.2.1 ***Coding and Analysis of Interviews*** Coding is deemed to be the most necessary part of the analysis (Basit, 2003). Concerning that assertion, interview transcriptions and field notes were analyzed by way of descriptive coding and content analysis (Schreier, 2012, Wilkinson & Birminghan, 2003). Two main reasons why I opted for using descriptive coding were as follows:

1. First and foremost, since qualitative studies are by and large based on descriptions (Wolcott, 1994), I postulated that instead of probing into the details of the needs for knowledge for specific purposes (ESP) right away, using descriptive codes, in this regard, might prove beneficial in grasping an overall perception of the phenomenon.
2. In the second place, as suggested by Saldana (2003), descriptive codes, collected in separate time frames, are one of the best predictors in identifying

the shifts and differentiation in participants. Thus, descriptive codes, in that regard, helped me way a lot in advance for up-close examination of the basic topics (Turner, 1994) and to understand the general perspective of the study. Coding is not a constant but a repetitive process (Saldana, 2013). Therefore, in connection with this argument (Creswell & Poth, 2016), I first read through the entire data to get a sense of what it looked like and to assign my first set of codes during the first cycle coding process. In the second cycle, I identified concepts and tried to find relations between them and then reclassified and recombined them (Grbich, 2012), to strengthen meaning and find significant themes. In the third cycle, I redesigned the organizational structure of the themes and arranged them in a systematic order.

Representing an accurate transcription of interviews plays a pivotal role in qualitative studies since analysis begins with it (Lapadat & Lindsay, 1999). Apropos of their assertion, I paid extra attention to the exact interpretation of the interviews. I shared the draft forms of the transcripts with the respondents to clear up any errors and finalized the drafts with senior coworkers to assure trustworthiness (Glesne & Peshkin, 1999). Besides, it was expressed explicitly that anonymity would be provided when the results were reported. Specific conventions were further developed to convey the discourses truthfully.

I used braces for explanation/editorial comments and designed the convention of [interruption] to demonstrate stops in conversations. Sample citations indicating the usage of conventions are as follows:

1. *(heh) If there is no English, there is no communication on such ships.*
2. *One [Indian or Pinoy] says "screwdriver", for example.*
3. *No…. [delay] it is to receive a license…[delay] For example, you are studying…*

All the conventions used in the documents are shown as footnotes in interview transcripts.

Using a codebook serves a very important purpose in the qualitative data analysis process (Fereday & Muir-Cochrane, 2006). As you code more, you likely forget some of your codes. Keeping track of your codes through a codebook might help keep you organized. For this reason, upon applying the codes I created, I reexamined the data through axial coding (Corbin & Strauss, 2008) to find meaningful connections between the codes. I reorganized categories and applied inclusion/exclusion criteria for the piling patterns (MacQueen et al., 2008). And lastly, I revised the codebook several times to detect and remove any commonalities.

The preliminary codebook designed for the qualitative part of the study is as follows:

Table 39
Preliminary Codebook

Code	Definition	Inclusion/Exclusion Criteria	Example from Text
1. Necessity of Reading Skill for Engine Room	All manuals and operating mechanisms of the main engine, diesel engine and other auxiliary machines in the engine room are in English and officers need to be able to read and understand them.	Includes reading in engine department on ships. Excludes reading at the deck and bridges.	*".....So, when repairing equipment, engineers need to be able to understand what they read as all manuals are in English. That is why they need to be able to both read and understand. Therefore, this is a priority for engineers.*
2. English as a Lingua Franca	Use of English as a Lingua Franca to manage the ship and run the daily work.	Includes English inside the ship. Excludes the use of English for communication purposes outside the ship.	*"Of course, there must be a common language between these people with different nationalities to ensure that they serve the same purpose and safely carry the ship from the departing to the arrival point".* *"There is a need for English even for the normal functioning of the ship."*
3. IMO, SMCP, STCW & NATO Standards	Regulations required by the International Maritime Organization & NATO	Includes standards & certifications regarding IMO. Excludes standards as regards to other international organizations.	*"At the same time, lessons on Maritime English must be completed by the Standards of Training, Certification, and Watchkeeping (STCW) – the convention on authorization and certification of seamen stipulated by the International Maritime Organization."*
4. Minimizing Human Errors & Accidents	Finding ways to reduce the risk of accidents caused by human factors and increase workplace safety	Includes human factors & accidents caused by human error. Excludes other types of work accidents.	"Of course, what is the most important factor here? It is to minimize accidents resulting from human error. This is vital for merchant marines or ships. And what is the purpose of this? It is to prevent human-being caused accidents, as they are not wanted, of course."

5. Importance of General English	The importance of the prior English proficiency level of maritime students before they are accepted by maritime faculties.	Includes General English Excludes English for Specific Purposes (ESP).	*"However, if you do not have basic English, it is always a problem to build maritime English skills on top of poor English language skills."*
6. YDS Exam Requirement by the Ministry.	Proficiency in English is a decisive factor in receiving a license or being promoted as a chief officer or master	Includes scores of English language proficiency tests administered in Turkey. Excludes other foreign language exams.	*"Currently, there is the foreign language obligation in the directive and regulation of exams and assessment of seamen including maritime pilots issued by the Ministry of Administration, Transportation, and Infrastructure. Thus, they have to take the YDS [Foreign Language Exam]."*
7. Pivotal Role of Maritime English for Success	The need for maritime English for deck officers and engineers on ships.	Includes maritime English usage on the bridge deck, radars, cruising classes, etc. Excludes maritime English usage with other parties for socializing.	*"We give the radio and ask the intern to tell certain things, but he fails. Why? Because he does not know what to say exactly."* *"There are certain terms, and you will have to familiarize yourself with these terms so that you can learn what seamen expect."*
8. Use of Maritime English in Other Classes (Logbook, Navigation, Cruising, etc.)	Teachers make good use of the nautical terms in other vocational classes	Includes nautical terminology usage in a logbook, navigation, marine communication, etc. classes. Excludes maritime English sessions.	*"In a general sense, it was not under the name "Maritime English", but we always used English terms in our classes."*

Two different raters coded the transcriptions. Accordingly, to measure the extent of consistency among the raters and hence, to ensure the reliability of the emerging themes, interrater reliability was tested. A percent agreement level of 75.44% was calculated which is considered a satisfactory level of reliability for an index that relied on the degree of agreement of coded components between two separate coders.

In the final phase, I reclassified the codes to extract common themes and concepts. Importance of General English, English as a Lingua Franca, and Pivotal Role of Maritime English for Success came up as important themes.

3.8 Identifying Learning Objectives

One of the essential stages in the test construction process is identifying the constructs thereby learning objectives (Bachman & Palmer, 1996; Farhady, Jafapur & Birjandi, 1994). To this end, Part 4 (Scale A, Scale B) of the questionnaires which all groups responded to and which mainly involves items referring to the language needs of students and teachers was particularly used to identify the learning objectives. Table 40 shows the results of the descriptive statistics for Part 4 Scale A and Scale B.

Table 40
Descriptive Statistics on Language Needs of Students and Teachers (Scale A and B)

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
Scale A	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
PART4_Q1_1A	155	3,265	78	2,897	64	3,313	58	3,259	0	
PART4_Q1_2A	155	3,1226	78	2,7692	64	2,5938	58	2,6379	0	
PART4_Q1_3A	155	3,1484	78	2,9487	64	3,2969	58	3,1552	0	
PART4_Q1_4A	155	3,2581	78	2,7564	64	2,8594	58	2,5172	0	
PART4_Q1_5A	155	3,0323	78	2,3974	64	2,4219	58	2,1897	0	
PART4_Q2	0		0		64	2,11	58	1,88	0	
PART4_Q3	131	2,26	27	2,37	64	2,00	58	2,02	68	1,53
PART4_Q4_1A	155	3,1677	78	2,9615	64	3,1719	58	3,2241	0	
PART4_Q4_2A	155	2,9419	78	2,6410	64	2,9063	58	2,5000	0	
PART4_Q4_3A	155	2,9548	78	2,7051	64	2,1562	58	2,5172	0	
PART4_Q4_4A	155	2,9935	78	2,6538	64	3,2031	58	3,1724	0	
PART4_Q4_5A	155	2,9935	78	2,7308	64	1,7656	58	2,2069	0	
PART4_Q4_6A	155	3,0194	78	2,8333	64	2,5625	58	2,8621	0	
PART4_Q5_1A	0		78	2,8333	64	2,6562	58	2,3966	0	
PART4_Q5_2A	0		78	2,9359	64	2,5313	58	2,2586	0	
PART4_Q5_3A	0		78	2,8974	64	2,9687	58	2,8621	0	

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
Scale A	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
PART4_Q5_4A	0		78	2,9103	64	3,0000	58	2,9138	0	
PART4_Q6_1A	0		78	2,4487	64	2,1406	58	2,2759	0	
PART4_Q6_2A	0		78	2,6923	64	2,6406	58	2,4655	0	
PART4_Q6_3A	0		78	2,8205	64	2,9844	58	2,9655	0	
PART4_Q6_4A	0		78	2,7821	64	3,2344	58	3,1379	0	
PART4_Q7_1A	0		78	2,8590	64	3,1719	58	3,1724	0	
PART4_Q7_2A	0		78	2,7308	64	3,0313	58	3,0000	0	
PART4_Q7_3A	0		78	2,5128	64	2,0000	58	1,8448	0	
PART4_Q7_4A	0		78	2,7821	64	3,1094	58	3,0345	0	
PART4_Q8_1A	0		78	2,9103	64	2,9375	58	2,9828	0	
PART4_Q8_2A	0		78	2,6026	64	2,3125	58	2,1379	0	
PART4_Q8_3A	0		78	2,8718	64	2,9688	58	2,6552	0	
PART4_Q8_4A	0		78	2,7179	64	2,9531	58	2,7931	0	

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
Scale B	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
PART4_Q1_1B	155	3,3161	78	3,1154	64	3,9688	58	3,9138	68	3,7059
PART4_Q1_2B	155	3,2774	78	2,8718	64	3,2500	58	3,3448	68	3,2941
PART4_Q1_3B	155	3,3290	78	3,0000	64	3,8750	58	3,8448	68	3,6471
PART4_Q1_4B	155	3,3032	78	2,8974	64	3,2187	58	3,4138	68	3,3088
PART4_Q1_5B	155	3,0452	78	2,5769	64	2,9531	58	2,8621	68	2,5588
PART4_Q4_1B	155	3,1677	78	2,8333	64	2,9688	58	3,0000	68	3,0735
PART4_Q4_2B	155	3,0968	78	2,6410	64	3,0313	58	3,0000	68	2,9412
PART4_Q4_3B	155	3,2065	78	2,7692	64	2,9531	58	2,7759	68	2,4706
PART4_Q4_4B	155	3,1871	78	2,8462	64	3,7188	58	3,8103	68	3,6324
PART4_Q4_5B	155	2,9935	78	2,2821	64	2,5938	58	2,3448	68	2,1176
PART4_Q4_6B	155	3,1806	78	2,4744	64	1,8906	58	1,9828	68	1,7353
PART4_Q5_1B	155	3,2903	78	2,7949	64	3,4531	58	3,5517	68	3,4706
PART4_Q5_2B	155	3,1613	78	2,7564	64	2,9531	58	2,9483	68	2,6912
PART4_Q5_3B	155	3,0839	78	2,9487	64	3,5000	58	3,4138	68	3,2794
PART4_Q5_4B	155	2,9484	78	2,8077	64	3,0313	58	3,1034	68	2,7059
PART4_Q6_1B	155	2,7290	78	2,5000	64	2,8594	58	2,8621	68	2,6324
PART4_Q6_2B	155	3,1097	78	2,3077	64	1,9219	58	2,1379	68	1,8088
PART4_Q6_3B	155	3,2516	78	2,9744	64	3,6563	58	3,6034	68	3,4706
PART4_Q6_4B	155	3,1871	78	3,0385	64	3,9063	58	3,8276	68	3,6029

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
Scale B	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
PART4_Q7_1B	155	3,1032	78	3,0513	64	3,8594	58	3,8793	68	3,7941
PART4_Q7_2B	155	3,0129	78	2,7692	64	3,0313	58	3,2414	68	3,0735
PART4_Q7_3B	155	3,0194	78	2,7692	64	2,2813	58	2,4310	68	2,3382
PART4_Q7_4B	155	3,3097	78	3,0641	64	3,7656	58	3,7414	68	3,4265
PART4_Q8_1B	155	3,1290	78	3,0256	64	3,7187	58	3,7241	0	
PART4_Q8_2B	155	3,1806	78	2,8205	64	3,1250	58	3,1207	0	
PART4_Q8_3B	155	3,1419	78	2,8077	64	3,0156	58	3,0517	0	
PART4_Q8_4B	155	3,0581	78	2,7821	64	3,0156	58	3,0000	0	

After examining the means of each item for each group, only the ones above the average mean of 3 were selected to put on a shortlist. As a result, 13 items from Scale A and 25 items from Scale B were identified as prospective learning objectives. Table 41 shows the constructs identified as prospective learning objectives.

Table 41

Descriptive Statistics with Identified Learning Objectives (Scale A and B)

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
SCALE A	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
PART4_Q1_1A	155	3,265	78	2,897	64	3,313	58	3,259	0	
PART4_Q1_2A	155	3,1226	78	2,7692	64	2,5938	58	2,6379	0	
PART4_Q1_3A	155	3,1484	78	2,9487	64	3,2969	58	3,1552	0	
PART4_Q1_4A	155	3,2581	78	2,7564	64	2,8594	58	2,5172	0	
PART4_Q1_5A	155	3,0323	78	2,3974	64	2,4219	58	2,1897	0	
PART4_Q2	0		0		64	2,11	58	1,88	0	
PART4_Q3	131	2,26	27	2,37	64	2,00	58	2,02	68	1,53
PART4_Q4_1A	155	3,1677	78	2,9615	64	3,1719	58	3,2241	0	
PART4_Q4_2A	155	2,9419	78	2,6410	64	2,9063	58	2,5000	0	
PART4_Q4_3A	155	2,9548	78	2,7051	64	2,1562	58	2,5172	0	
PART4_Q4_4A	155	2,9935	78	2,6538	64	3,2031	58	3,1724	0	
PART4_Q4_5A	155	2,9935	78	2,7308	64	1,7656	58	2,2069	0	
PART4_Q4_6A	155	3,0194	78	2,8333	64	2,5625	58	2,8621	0	
PART4_Q5_1A	0		78	2,8333	64	2,6562	58	2,3966	0	
PART4_Q5_2A	0		78	2,9359	64	2,5313	58	2,2586	0	
PART4_Q5_3A	0		78	2,8974	64	2,9687	58	2,8621	0	

PART4_Q5_4A	0	78	2,9103	64	3,0000	58	2,9138	0
PART4_Q6_1A	0	78	2,4487	64	2,1406	58	2,2759	0
PART4_Q6_2A	0	78	2,6923	64	2,6406	58	2,4655	0
PART4_Q6_3A	0	78	2,8205	64	2,9844	58	2,9655	0
PART4_Q6_4A	0	78	2,7821	64	3,2344	58	3,1379	0
PART4_Q7_1A	0	78	2,8590	64	3,1719	58	3,1724	0
PART4_Q7_2A	0	78	2,7308	64	3,0313	58	3,0000	0
PART4_Q7_3A	0	78	2,5128	64	2,0000	58	1,8448	0
PART4_Q7_4A	0	78	2,7821	64	3,1094	58	3,0345	0
PART4_Q8_1A	0	78	2,9103	64	2,9375	58	2,9828	0
PART4_Q8_2A	0	78	2,6026	64	2,3125	58	2,1379	0
PART4_Q8_3A	0	78	2,8718	64	2,9688	58	2,6552	0
PART4_Q8_4A	0	78	2,7179	64	2,9531	58	2,7931	0

	Students		Teachers		ELT-ESP Teachers		Subject Specialists		Professionals	
SCALE B	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
PART4_Q1_1B	155	3,3161	78	3,1154	64	3,9688	58	3,9138	68	3,7059
PART4_Q1_2B	155	3,2774	78	2,8718	64	3,2500	58	3,3448	68	3,2941
PART4_Q1_3B	155	3,3290	78	3,0000	64	3,8750	58	3,8448	68	3,6471
PART4_Q1_4B	155	3,3032	78	2,8974	64	3,2187	58	3,4138	68	3,3088
PART4_Q1_5B	155	3,0452	78	2,5769	64	2,9531	58	2,8621	68	2,5588
PART4_Q4_1B	155	3,1677	78	2,8333	64	2,9688	58	3,0000	68	3,0735
PART4_Q4_2B	155	3,0968	78	2,6410	64	3,0313	58	3,0000	68	2,9412
PART4_Q4_3B	155	3,2065	78	2,7692	64	2,9531	58	2,7759	68	2,4706
PART4_Q4_4B	155	3,1871	78	2,8462	64	3,7188	58	3,8103	68	3,6324
PART4_Q4_5B	155	2,9935	78	2,2821	64	2,5938	58	2,3448	68	2,1176
PART4_Q4_6B	155	3,1806	78	2,4744	64	1,8906	58	1,9828	68	1,7353
PART4_Q5_1B	155	3,2903	78	2,7949	64	3,4531	58	3,5517	68	3,4706
PART4_Q5_2B	155	3,1613	78	2,7564	64	2,9531	58	2,9483	68	2,6912
PART4_Q5_3B	155	3,0839	78	2,9487	64	3,5000	58	3,4138	68	3,2794
PART4_Q5_4B	155	2,9484	78	2,8077	64	3,0313	58	3,1034	68	2,7059
PART4_Q6_1B	155	2,7290	78	2,5000	64	2,8594	58	2,8621	68	2,6324
PART4_Q6_2B	155	3,1097	78	2,3077	64	1,9219	58	2,1379	68	1,8088
PART4_Q6_3B	155	3,2516	78	2,9744	64	3,6563	58	3,6034	68	3,4706
PART4_Q6_4B	155	3,1871	78	3,0385	64	3,9063	58	3,8276	68	3,6029
PART4_Q7_1B	155	3,1032	78	3,0513	64	3,8594	58	3,8793	68	3,7941
PART4_Q7_2B	155	3,0129	78	2,7692	64	3,0313	58	3,2414	68	3,0735
PART4_Q7_3B	155	3,0194	78	2,7692	64	2,2813	58	2,4310	68	2,3382
PART4_Q7_4B	155	3,3097	78	3,0641	64	3,7656	58	3,7414	68	3,4265
PART4_Q8_1B	155	3,1290	78	3,0256	64	3,7187	58	3,7241	0	
PART4_Q8_2B	155	3,1806	78	2,8205	64	3,1250	58	3,1207	0	
PART4_Q8_3B	155	3,1419	78	2,8077	64	3,0156	58	3,0517	0	
PART4_Q8_4B	155	3,0581	78	2,7821	64	3,0156	58	3,0000	0	

Since the newly developed Professional Knowledge of Maritime English Test was specifically intended to be used for ESP teachers within the system of the maritime sector and maritime profession, Part 4 Scale B of the questionnaire which involves items particularly addressing the needs of the Maritime Profession was prioritized and taken into consideration in translating the needs into learning objectives. Out of 27 items in Part 4 Scale B of the questionnaires, the number of items above average the mean of 3 for all groups is as follows:

Table 42
Number of Items Above Average Mean of 3 for the Groups

Scale B	**Number of Items**
Students	24
EFL Teachers	6
ESP Teachers	18
Subject Specialists	19
Professionals	13

* There are 5 common items above the mean of 3 and responded by all groups.

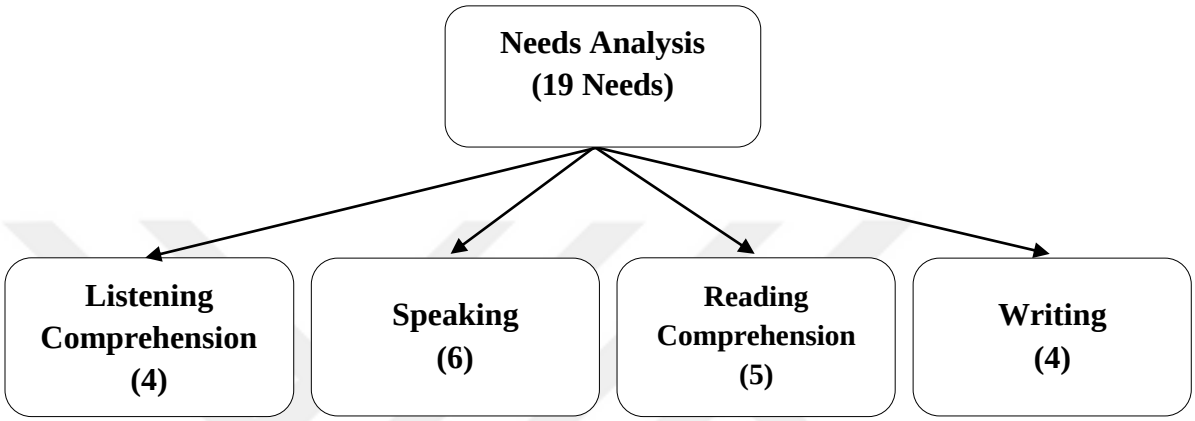
According to the mean of 3 and the selection rate of the questionnaire items by the groups, 19 learning needs were eventually determined as the most basic learning needs to be utilized in translating the needs into learning objectives and thus were capitalized on in developing the sample items for Professional Knowledge of Maritime English Test. Table 43 shows the list of the top 19 learning needs that were used in developing the sample items.

Table 43
List of Most Frequent 19 Learning Needs

1. *Part 4_Q1_1B* To understand spoken instructions (this learning need/objective is related to listening).	***10.*** *Part 4_Q1_2B* To read materials related to maritime issues (this learning need/objective is related to reading)
2. *Part 4_Q1_3B* To engage in personal communication (this learning need/objective is related to speaking)	***11.*** *Part 4_Q1_4B* To read manuals/instructions (this learning need/objective is related to reading)
3. *Part 4_Q6_4B* Signs, rules, and notices (this learning need/objective is related to reading)	***12.*** *Part 4_Q5_1B* To be able to write reports (this learning need/objective is related to writing)
4. *Part 4 Q7_1B* To listen to and understand conversations (this learning need/objective is related to listening)	***13.*** *Part 4_Q8_2B* Stating an opinion about different topics (this learning need/objective is related to speaking)
5. *Part 4 _Q4_4B Language Skills / Speaking*	***14.*** *Part 4_Q7_2B* To listen to and understand presentations and discussions (this learning need/objective is related to listening)
6. *Part 4 _Q7_4B* To listen to and understand instructions (this learning need/objective is related to listening)	***15.*** *Part 4_Q4_2B Language skills / Writing*
7. *Part 4_Q8_1B* Introducing oneself and others in a variety of situations (this learning need/objective is related to speaking)	***16.*** *Part 4_Q4_1B Language skills / Reading*
8. *Part 4_Q6_3B* To be able to read manuals/product descriptions (this learning need/objective is related to reading)	***17.*** *Part 4_Q5_4B* To be able to write projects (this learning need/objective is related to writing)
9. *Part 4_Q5_3B* To be able to write instruction (this learning need/objective is related to writing)	***18.*** *Part 4_Q8_3B* Making requests (for further information or confirmation) (this learning need/objective is related to speaking)
	19. *Part 4_Q8_4B* Giving a presentation (this learning need/objective is related to speaking)

The distribution of these 19 needs into 4 foundational skills of language learning for proper and effective interpersonal communication are as follows:

Figure 17. Distribution of top 19 learning needs



3.9 Procedures Followed in Item Writing

The following steps were followed in developing the sample items for the Professional Knowledge of Maritime English Test for ESP teachers.

1. First, instructional materials (websites, wikis, textbooks, supplementary materials, videos, audios, etc.) related to maritime English teaching and sample prestigious professional knowledge tests (ETS Praxis, Cambridge TKT, Pearson's NES, National Board Certification Tests, etc.) designed to measure basic linguistic and pedagogical knowledge for those interested in working in the context of teaching were widely reviewed. By strictly avoiding copyright infringement, authentic audios, reading and writing resources (mostly from magazines, newspaper blogs, wikis, and fan/hobby websites) related to the purpose of the test were benefited.

2. Next, the selected materials were compiled, allocated for their intended use (maritime English teaching or pedagogical content knowledge), and classified in line with the identified 19 learning objectives. In other words, authentic audio materials, reading passages, or authentic writing materials obtained from various sources were categorized by the identified 19 learning needs that were translated into learning objectives.

3. Further, to address each of the four basic language skills (listening, speaking, reading, and writing) sample items were written in agreement with the identified learning objectives. The number of sample items for the identified learning needs is as follows:

Table 44
Details of Sample Items

Learning Needs	**Number of Sample Items**
Listening (4)	35
Reading (5)	35
Writing (4)	3
Speaking (6)	12 Interviews

To ensure validity, ideally, two items (at least) should be constructed for each identified learning need (Haladyna, 2004). In tandem with this, 35 sample listening items were written up for 4 identified listening comprehension needs, 20 sample reading comprehension items for 5 identified reading comprehension needs, and 8 sample writing items were created/written for 4 identified writing needs, respectively. As for the speaking skill needs, 12 interviews (out of 20) conducted with ESP teachers and subject specialists were used to prepare the related items. Identified speaking skill needs that were used for creating the sample speaking items are shown in Table 45.

Table 45
Speaking Skill Needs

Identified Speaking Skill Needs
1. To engage in personal communication
2. Speaking as a language skill
3. Introducing oneself and others in a variety of situations
4. Stating opinions about different topics
5. Making requests (for further information or confirmation)
6. Giving a presentation

Using procedures of qualitative research, content analysis was done for the analysis of interview transcriptions to prepare sample speaking items. First, the concepts related to the speaking skill needs were identified and themes were codified. Next, the prominent themes were examined in detail and were utilized during the item writing process.

4. Apropos of that, the aforementioned three themes (Importance of General English, English as a Lingua Franca, and Pivotal Role of Maritime English for Success) emerged in the overall analysis of the interview transcripts were also taken into account. To exemplify, since English proves to be a common tool in the international shipping industry and since it is essentially the skill that all seafarers should acquire to adapt to diverse situations aboard a ship, most of the dialogues in sample listening items were purposefully selected from different varieties of English to raise test takers' awareness to different usages and dialects of other Englishes hence English as a Lingua Franca. In tandem with this, "the importance of maritime English" was attached priority by placing a reading passage about "tugs" with particular reference to the nautical vocabulary through match-up and scenario-based critical thinking items. Additionally, plenty of selected-response items of comprehension were were

added both in maritime English and pedagogical content knowledge sections of the test to tap into and measure test takers' basic competency thus their general English language proficiency.

5. Every learning task we do, we use our learning micro-skills to do it. It is micro-skills that allow us to learn and do these things. Concerning this, micro-skills that are related to each macro skill (reading, writing, speaking, listening) were also added while constructing each sample item stem and options. Those components acted as a guideline and helped me a lot to see clearly whether the items and the relevant options were measuring what they were meant to measure.

Table 46
Example of Micro Reading Skill

Stern Drive tugs:
Micro Reading Skill: Reading for detail

D	**A.** Push with the bow **B.** Tow with the stern **C.** Tow and pull with the stern **D.** Tow and pull with the bow

Table 47
Example of Micro Listening Skill

What was the cause of the collision?
Micro reading skill: Distinguishing the main idea from supporting detail

A	**A.** The officer of the watch could not see both vessels. **B.** There was heavy weather at the time of the collision. **C.** The bridge equipment was not working correctly.

6. Sample item stems and choices were revised in 6 different rounds. In each round, expert opinion was valued, and constructive feedback was received in the first place from the thesis advisor and then the colleagues and the professionals (ESP teachers

and subject specialists) attending maritime English classes. Subsequently, some of the items were revised and some were modified and rewritten in each round.

7. Lastly, the overall sample test was compiled in two sections as maritime English and pedagogical knowledge, and both parts (including listening items) were pretested with a limited number of (52+34) participants.

3.10 Pretesting of Professional Knowledge of Maritime English Test

One of the aims of this study is to develop a novel professional knowledge test for ESP teachers. Before pretesting, the new test developed for this purpose is composed of two sections. The following table illustrates the sections and parts of the Professional Knowledge of Maritime English Test before pretesting.

Table 48
Parts of the Test Before Pretesting

Section 1 Maritime English	
Reading Passage 1	
	Part A Matching-Up Questions
	Part B Multiple Choice Questions
Reading Passage 2	
	Part A True-False Questions
	Part B Reference Questions
	Part C Multiple Choice Questions
Reading Passage 3	
	Part A Match-Up Questions
	Part B Multiple Choice Questions
Section 2 Pedagogical Knowledge	
	Part A Choose the Best Reaction to Scenarios
	Part B Write the Best Reaction to Scenarios
	Part C Completing the Assignment

3.10.1 Pretesting of Sample Listening Comprehension Items

35 sample listening items were pretested with 52 participants. In the first place, all 35 items were classified with respect to the top 4 identified listening comprehension needs that they were intended to measure. The results of the classification are as follows:

Table 49
Classification of the Sample Listening Comprehension Items

Listening Comprehension Needs	**Items Addressing the Needs**
1. To understand spoken instructions	3,6,7,14,17,20,1,24,27,29,31,34
2. To listen to and understand conversations	1,2,4,5,9,10,11,15,16,18,21,28,32,33,35
3. To listen to and understand instructions	12,13,19,22,23,26
4. To listen to and understand presentations and discussions	8,9,14,16,25,26,30

Next, exploratory factor analysis with orthogonal rotation was run to uncover the underlying structure of the set of variables and to investigate whether different participants share the same pattern in the same test. During the initial analysis of the data, it was noticed that all test takers marked the correct options for item 26 and item 33. Since there is no variance for those two items, item 26 and item 33 were not included in calculating the rotated factor analysis. The following tables describe the rotated factor solutions for each item. Table 50 shows rotated factor matrix of 33 sample listening comprehension items.

Table 50

Rotated Component Matrix of Sample Listening Comprehension Items

Rotated Component Matrix[a]

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
i1				,764									
i2	,711							-,308					
i3	-,763												
i4									,317			,486	
i5					,810								
i6	,363							,411			-,367		
i7										,871			
i8					-,349		,363	,305				,326	
i9							,633						
i10					,398				,388				,509
i11											-,887		
i12				,719									,344
i13		,527				-,306		,351					
i14					,447		,346		,329		,341		
i15			,416	,358	,301					,401			
i16		,726											
i17				,474				-,482					
i18													-,874
i19									,857				
i20		,650										-,339	
i21						,749							
i22			,636										
i23								,765					
i24						,559			-,340		,322		
i25						,790				,302			
i27	,783												
i28												,813	
i29			,843										
i30								,379	,358			-,351	
i31							,738						
i32	,363		,440				-,440						
i34					,587								
i35		-,365	,446										

As observed in Table 3.36, all items (33 items) loaded on 13 factors in total and rotation converged in 16 iterations. 17 items (1, 3, 5, 7, 9, 11, 16, 18, 19, 21, 22, 23, 27, 28, 29, 31 and 34) loaded on one factor and 7 items (2, 4, 12, 17, 20, 25 and 35) loaded on two factors.

In addition to investigating the dimensionality of the scales with factor analyses, the alpha coefficient of reliability was calculated to measure how closely related the items are as a group. The alpha correlation coefficient of sample listening comprehension items (pretesting) was measured at 0.53. Table 51 shows Cronbach's Alpha values computed for 33 listening comprehension items used for the pretesting of the listening part of the newly developed test.

Table 51
Cronbach's Alpha Scores for Sample Listening Comprehension Items

Reliability Statistics

Cronbach's Alpha	N of Items
,532	33

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
i1	19,15	12,290	,210	,514
i2	18,56	13,114	-,004	,537
i3	19,38	13,339	-,111	,544
i4	18,67	12,734	,099	,529
i5	18,75	12,426	,173	,519
i6	18,92	12,268	,191	,517
i7	18,60	13,069	,003	,537
i8	18,58	12,759	,144	,524
i9	19,21	13,268	-,083	,551
i10	19,21	12,641	,117	,527
i11	19,17	13,362	-,113	,555
i12	19,15	12,603	,113	,527
i13	18,92	12,465	,134	,525
i14	18,77	12,103	,270	,506

i15	18,79	11,464	,470	,478
i16	18,58	12,994	,042	,533
i17	18,90	12,402	,153	,522
i18	18,65	13,368	-,114	,552
i19	18,90	12,285	,187	,517
i20	19,04	12,704	,068	,534
i21	19,23	12,416	,199	,517
i22	18,88	11,555	,410	,484
i23	18,85	12,094	,252	,508
i24	18,71	13,111	-,034	,545
i25	19,04	12,665	,079	,532
i27	18,54	12,724	,207	,520
i28	18,62	12,869	,074	,531
i29	18,98	11,823	,322	,497
i30	18,71	12,601	,129	,525
i31	18,62	12,633	,165	,522
i32	18,98	12,568	,104	,529
i34	18,87	12,080	,252	,508
i35	18,83	12,617	,099	,529

A generally accepted rule is that an alpha of 0.6-0.7 indicates an acceptable level of reliability. A low alpha could be due to a low number of questions or poor correlation between items. For this reason,

First, the poorly correlated items were identified by looking at the results of both rotated factor solution and item-total statistics. Items 2, 3, 9, 11, 18, and 24 were specified as poorly correlated items concerning initial analysis.

Next, those items were double-checked with the classification table of the sample listening comprehension items. If any of them addresses an important need and if there is not any other listening comprehension item fulfilling its task, they would be discarded. They would be reworded and revised. If there are other multiple strong items addressing the same need and functioning well, the weak item would be removed.

With regards to this procedure, the poorly correlated 6 items highlighted in Table 52 were examined in depth. It was seen that there were many more items substituting their tasks. In other words, there were other strong items addressing and measuring the same needs as they do. As a result, these 6 weak items were removed.

After these detailed processes, exploratory factor analysis with orthogonal rotation was run again, and the reliability was calculated. The following tables show rotated component matrix results and Cronbach Alpha values for the pretesting of revised sample listening comprehension items.

Table 52

Rotated Component Matrix of Revised Sample Listening Comprehension Items

Rotated Component Matrix[a]

	Component										
	1	2	3	4	5	6	7	8	9	10	11
i1		,733									
i4				,761							
i5			-,385				,346				-,482
i6	,588										
i7		-,312				,461	,482				
i8											,869
i10				,737							
i12		,768									
i13			,383				,458	,392			
i14	,355			,311	,428						
i15							,765				
i16			,847								
i17		,399	-,337					-,398	,301		
i19				,316						,816	
i20			,365	-,384					-,413		
i21			-,353			,649				,354	
i22					,813						
i23								,843			
i25						,899					
i27	,794										
i28	,585	,307									
i29			,432		,594				,305		
i30	,380									,651	
i31	,715										
i32								,385	,560	,335	
i34	,510				-,375			,300			
i35									,801		

Table 53

Cronbach's Alpha Scores for Revised Sample Listening Comprehension Items

Reliability Statistics

Cronbach's Alpha	N of Items
,709	27

As it can be observed in Table 53, in the ensuing analyses, revised sample listening comprehension items in the newly developed Professional Knowledge of Maritime English Test for ESP Teachers have a relatively satisfactory level of internal consistency and reliability.

3.10.2 Pretesting of Sample Reading Items

As regards sample reading comprehension items, 29 items in section 1 (Maritime English) were pretested with 34 participants. These sample items were purposefully constructed in various formats to be able to address different learning preferences and thereby measure them thoroughly. The following table provides a list of each question type which features the draft form of the Professional Knowledge of Maritime English Test.

Table 54
Categorization of Sample Items into Question Types

Test Question Types	Number of Items
1. Multiple Choice Questions	11
2. Identify True Statements	3
3. True or False with Justification Questions	5
4. Identifying to Whom or to What Words Refer	4
5. Matching Statements with their Sources	6

For multiple-choice questions, there are three options, only one of which is correct according to the reading text. Test takers should write the appropriate letter in the answer box provided. In identifying true statements, test takers should identify the statements that are true according to the reading passage. For true/false questions, candidates should indicate whether each statement is true or false by checking T for True, F for False, and N for Not Mentioned. Candidates should also justify their

choice by writing one or two sentences relevant to the statement. Both the check and the justification must be correct to receive the mark. No half mark is given. For the next question type, the question is a short quotation taken from the reading passage with one or more words underlined. Test takers are supposed to identify to whom or to what each identified word(s) refers. Answers may be a single word or multiple words. For matching questions, test takers are expected to identify the statement that applies to each person, based on the information in the reading text. They should answer by placing a tick in the boxes. They should tick only one option for each statement. Furthermore, all sample reading comprehension items were again classified for the identified learning needs that they address. In this way, it was thought that working on the results of item-by-item analysis might have been much easier. Table 55 provides sample reading comprehension items classified according to the learning needs they address.

Table 55
Classification of the Sample Reading Comprehension Items

Reading Comprehension Needs	**Items Addressing the Needs**
1. Signs, rules and notices	21,22,23,24,25,26,27,28,29
2. To be able to read manuals/product descriptions	1,2,3,4,5,6,7,8
3. To read materials related to maritime issues	9,10,11,12,13,14,15,16,17,18,19,20
4. To read manuals/instructions	1,2,3,4,5,6,7,8
5. Language skill/Reading	4,5,6,7,8

Next, exploratory factor analysis with orthogonal rotation was run to observe the underlying structure of the variables and to investigate the factor loadings of the sample reading comprehension items. Table 56 describes the rotated factor solutions for 29 sample reading comprehension items.

Table 56
Rotated Component Matrix of Sample Reading Comprehension Items

Rotated Component Matrix[a]

	Component										
	1	2	3	4	5	6	7	8	9	10	11
i1										,921	
i2			,344	,645							
i3			,321	,507							,345
i4			,680				-,428				
i5						,867					
i6		-,350	,376	,309			,307				,591
i7								,800			
i8		,892									
i9				,347			,748				
i10				,776							
i11							,715	-,301			
i12			,826								
i13	,749										
i14	,491		,640								
i15									,399	,576	
i16									,903		
i17		,609									
i18	,315				-,353				,478	,342	,393
i19				-,360		,418	,470	,373			
i20		,389			,687	,322					
i21											,824
i22	,637					,439					
i23					,736						
i24	,547				,595						
i25		,712									,327
i26	,411		,405		,354			,443			
i27	,861										
i28		,467	,389			-,618					
i29								,658	,372		

As regards to Table 56, it can be observed that all 29 items loaded on 11 factors. This pretesting result is not very compatible with 5 reading comprehension needs as the expected outcome might have been 5-factor loadings in line with 5 learning needs.

Additionally, the alpha coefficient of reliability was calculated to measure how closely related the items are as a group. Table 57 describes Cronbach's Alpha values calculated for 29 sample reading comprehension items used for the pretesting of section 1 reading part of the newly developed test.

Table 57
Cronbach's Alpha Scores for Sample Reading Comprehension Items

Reliability Statistics

Cronbach's Alpha	N of Items
,835	29

As can be seen in Table 57, the alpha score of sample reading comprehension items (pretesting) was measured at 0.83 which indicates a good level of internal consistency and reliability.

3.10.3 Pretesting of Sample Writing Items

3 scenario-based critical thinking and writing items in section 2 (Pedagogical Knowledge) were pretested with 34 participants. These 3 unique scenario-based questions were specifically created by the identified writing needs. In the first scenario, the candidates are supposed to comprehend the situation, think critically, and make use of their maritime knowledge and pedagogical knowledge to give an appropriate answer. In the second one, they are again expected to blend their basic linguistic knowledge, subject matter knowledge, and pedagogical knowledge to react to the scenario. The third one is in a way the most demanding part. In this assignment part, there is an extended amount of information about the case. First, the candidates are expected to internalize the situation, then make good use of both their content knowledge and pedagogical knowledge effectively, and lastly, put all their teaching experience related to maritime English teaching into use.

In the first place, 3 sample writing items were categorized for 4 identified learning needs. The results of the classifications are as follows:

Table 58

Classification of the Sample Writing Items

Writing Needs	**Items Addressing the Needs**
1. To be able to write instructions	Scenario 37
2. To be able to write reports	Item 39
3. To be able to write projects	Item 39
4. Language skill/Writing	Scenario 38

Next, by adhering to the principles of qualitative research, content analysis was done for the preliminary analysis of the sample writing items. The concepts were not coded

in pretesting, but it was observed that the instructions were intelligible, all 3 items worked well and most of the candidates answered all 3 sample items successfully.

3.10.4 Pretesting of Sample Pedagogical Content Knowledge Items

With regard to sample pedagogical content knowledge items, 7 items in section 2 (Pedagogical Knowledge) were pretested with 34 test-takers. Exploratory factor analysis with orthogonal rotation was performed to examine the factor loadings and it was observed that all 7 items loaded on two factors. Table 59 describes the rotated factor solutions for 7 sample pedagogical content knowledge items.

Table 59
Rotated Component Matrix of Sample Pedagogical Content Knowledge Items

Rotated Component Matrix[a]

	Component	
	1	2
i30	,508	,694
i31	,508	,372
i32		,802
i33	,711	,355
i34		,902
i35	,707	
i36	,802	

Indeed, 2-factor loadings were not an expected and desired pretest outcome for the analysis of sample pedagogical content knowledge items as each sample item was designed to measure different knowledge types related to pedagogical knowledge. Therefore, each item was examined and revised in line with the knowledge type that is intended to measure before pedagogical knowledge items were put into practice.

Table 60
Cronbach's Alpha Scores for Sample Pedagogical Content Knowledge Items

Reliability Statistics

Cronbach's Alpha	N of Items
,817	7

As it can be observed in Table 60, contrary to factor loadings, the alpha value of 0.8 reflects a usually preferred, good level of internal consistency and reliability.

3.11 Chi-Square Statistics for the Second Research Question

To answer the second research question **"Is there a specific type of knowledge unique to the teaching of ESP in EFL contexts?"**, and thereby to determine whether there is statistically a significant relationship between categorical variables, chi-square tests of association were run. All items (except the ones that were not responded to by the respective groups during the administration) in Part 4 of the questionnaire were included in performing the analyses.

Table 61
GE Teachers vs ESP Teachers

Item No.	**X^2**	**P-Value**
PART4_Q1_1B	21.36	0.00
PART4_Q1_2B	21.84	0.00
PART4_Q1_3B	22.51	0.00
PART4_Q1_4B	21.36	0.00
PART4_Q1_5B	14.88	0.00
PART4_Q4_1B	13.61	0.00
PART4_Q4_2B	23.72	0.00
PART4_Q4_4B	23.04	0.00
PART4_Q5_1B	19.1	0.00
PART4_Q5_2B	17.7	0.00
PART4_Q5_3B	10.97	0.00
PART4_Q5_4B	6.71	0.00
PART4_Q6_1B	18.61	0.00
PART4_Q6_2B	22.47	0.00
PART4_Q6_3B	21.84	0.00
PART4_Q6_4B	23.69	0.00
PART4_Q7_1B	12.74	0.00
PART4_Q7_2B	21.45	0.00
PART4_Q7_3B	12.44	0.00
PART4_Q7_4B	21.36	0.00
PART4_Q8_1B	22.51	0.00
PART4_Q8_2B	20.67	0.00
PART4_Q8_3B	20.67	0.00
PART4_Q8_4B	20.26	0.00
PART4_Q4_3B	4.1	0.04
PART4_Q4_5B	**1.95**	**0.16**
PART4_Q4_6B	**0.55**	**0.45**

Firstly, chi-square tests of association were performed to evaluate the relationship between General English teachers and ESP teachers. As observed in Table 1, out of 27 items responded to by both GE Teachers and ESP Teachers, 25 of them do show a significant difference (P-value ≤ α), whereas in 2 items, the deviations between GE Teachers and ESP teachers are statistically not significant (P-value > α). About those two items which turned out to be non-significant; "In your opinion, how often is grammar skill used in the maritime profession? and In your opinion, how often is vocabulary skill used in the maritime profession?" it seems that General English teachers and ESP teachers thought in the same direction as both groups did agree on the importance of those issues in similar proportions. Though these two items are related to the language skills used in the maritime profession, they do not specifically refer to ESP specifics, accordingly, they are not directly related to ESP knowledge. Therefore, it could well be interpreted that there is enough evidence to conclude that there is a substantially significant difference between GE Teachers and ESP Teachers as regards the perception of ESP knowledge related to the language needs of students and teachers.

Table 62
GE Teachers vs Subject Specialists

Item No.	X^2	P-Value
PART4_Q1_1B	19.51	0.00
PART4_Q1_2B	22.77	0.00
PART4_Q1_3B	20.58	0.00
PART4_Q1_4B	19.51	0.00
PART4_Q1_5B	9.4	0.00
PART4_Q4_2B	23.84	0.00
PART4_Q4_4B	23.9	0.00
PART4_Q5_1B	17.43	0.00
PART4_Q5_2B	13.46	0.00
PART4_Q5_3B	12.53	0.00
PART4_Q6_1B	14.1	0.00
PART4_Q6_3B	22.77	0.00
PART4_Q6_4B	21.67	0.00
PART4_Q7_1B	8.92	0.00
PART4_Q7_2B	22.01	0.00
PART4_Q7_3B	7.48	0.00
PART4_Q7_4B	19.51	0.00
PART4_Q8_1B	17.64	0.00
PART4_Q8_2B	18.7	0.00
PART4_Q8_3B	21.67	0.00
PART4_Q8_4B	15.72	0.00
PART4_Q4_1B	6.42	0.01
PART4_Q4_3B	6.03	0.01
PART4_Q5_4B	5.72	0.01
PART4_Q6_2B	3.96	0.04
PART4_Q4_5B	**0.35**	**0.55**
PART4_Q4_6B	**0.04**	**0.84**

With regards to results of chi-square between GE teachers versus Subject Specialists, apart from the same two items (Q4_5B & Q4_6B), GE teachers and Subject Specialists did differ significantly. In other words, aside from the usage rate of vocabulary and grammar skills in the maritime profession, GE teachers and Subject Specialists had different viewpoints regarding ESP knowledge. While this indicates a sharp discrepancy between GE teachers and Subject Specialists or most probably a lack of knowledge on the part of GE teachers, it also signifies a strong presence of common ground for ESP teachers and Subject Specialists.

Table 63
GE Teachers vs Professionals

Item No.	X^2	P-Value
PART4_Q1_1B	19.56	0.00
PART4_Q1_2B	20.42	0.00
PART4_Q1_3B	20.75	0.00
PART4_Q1_4B	16.88	0.00
PART4_Q1_5B	16.36	0.00
PART4_Q4_1B	12.33	0.00
PART4_Q4_4B	21.99	0.00
PART4_Q5_1B	14.62	0.00
PART4_Q5_3B	9.36	0.00
PART4_Q6_1B	16.64	0.00
PART4_Q6_2B	13.44	0.00
PART4_Q6_3B	23.21	0.00
PART4_Q6_4B	19.22	0.00
PART4_Q7_1B	10.7	0.00
PART4_Q7_2B	10.4	0.00
PART4_Q7_3B	12.28	0.00
PART4_Q7_4B	19.56	0.00
PART4_Q8_1B	18.03	0.00
PART4_Q4_2B	6.25	0.01
PART4_Q8_3B	4.24	0.03
PART4_Q4_6B	**2.66**	**0.1**
PART4_Q4_3B	**2.43**	**0.11**
PART4_Q5_2B	**2.02**	**0.15**
PART4_Q4_5B	**1.49**	**0.22**
PART4_Q8_4B	**1.21**	**0.27**
PART4_Q8_2B	**0.95**	**0.32**
PART4_Q5_4B	**0.4**	**0.52**

As can be observed in Table 63, in the ensuing analyses regarding GE Teachers and Professionals, 20 variables show statistically significant association, yet 7 variables are not significant. When we take a closer look at those non-significant items, we can easily see that all 7 items refer to Scale B of the questionnaire which includes items related to the usage of skills in the maritime profession e.g.

PART4_Q5_4B
In your opinion, how important is it for your students to be able to write projects in the maritime profession?

and thus, which do not involve items particularly tap into the utilization of ESP knowledge. For that reason, it could be interpreted that while GE teachers once more

differ significantly from Professionals regarding the practice and application of ESP knowledge, the other party including ESP teachers, Subject Specialists, and Professionals come to terms with the very same issues.

Table 64

GE Teachers vs Students

Item No.	**X^2**	**P-Value**
PART4_Q1_2B	7.8	0
PART4_Q4_2B	8.86	0
PART4_Q4_4B	6.79	0
PART4_Q4_3B	6.4	0.01
PART4_Q5_2B	6.31	0.01
PART4_Q5_1B	5.23	0.02
PART4_Q6_2B	5.39	0.02
PART4_Q1_3B	4.48	0.03
PART4_Q1_1B	4.14	0.04
PART4_Q1_4B	3.63	0.05
PART4_Q4_1B	**3.49**	**0.06**
PART4_Q8_2B	**2.91**	**0.08**
PART4_Q1_5B	**2.7**	**0.09**
PART4_Q8_1B	**2.62**	**0.1**
PART4_Q6_3B	**2.43**	**0.11**
PART4_Q5_4B	**1.73**	**0.18**
PART4_Q7_3B	**1.74**	**0.18**
PART4_Q8_3B	**1.27**	**0.25**
PART4_Q4_5B	**1.13**	**0.28**
PART4_Q7_2B	**1.16**	**0.28**
PART4_Q7_1B	**1.06**	**0.3**
PART4_Q5_3B	**1.02**	**0.31**
PART4_Q6_4B	**0.82**	**0.36**
PART4_Q8_4B	**0.6**	**0.43**
PART4_Q4_6B	**0.55**	**0.45**
PART4_Q6_1B	**0.1**	**0.74**
PART4_Q7_4B	**0.08**	**0.77**

In Table 64, the responses of GE teachers and Students are compared. As can be observed, only 10 items do show a statistically significant difference. On the other hand, the majority of items (17 items) do not show significance. In other words, for most of the items, it seems that GE teachers and students concur on the importance or non-importance of the issues. As we are well aware that students are not very knowledgeable about the use and implementation of ESP knowledge, this outcome might also be an indication of GE teachers' less or no knowledge about the principles of ESP.

Table 65

ESP Teachers vs Subject Specialists

Item No.	X^2	P-Value
PART4_Q4_2B	8.29	0.00
PART4_Q6_2B	13.02	0.00
PART4_Q7_3A	8.8	0.00
PART4_Q8_3A	12.64	0.00
PART4_Q5_3A	4.6	0.03
PART4_Q6_1A	4.38	0.03
PART4_Q8_4A	4.2	0.04
PART4_Q7_2A	3.39	0.06
PART4_Q1_2A	3.04	0.08
PART4_Q7_4A	2.24	0.13
PART4_Q4_1B	1.69	0.19
PART4_Q5_4A	1.69	0.19
PART4_Q7_1A	1.11	0.29
PART4_Q7_1B	1.11	0.29
PART4_Q1_2B	0.91	0.33
PART4_Q1_3B	0.91	0.33
PART4_Q4_4B	0.91	0.33
PART4_Q5_3B	0.91	0.33
PART4_Q8_3B	0.91	0.33
PART4_Q6_3A	0.76	0.38
PART4_Q4_6A	0.64	0.42
PART4_Q1_5B	0.56	0.45
PART4_Q4_2A	0.56	0.45
PART4_Q4_5B	0.55	0.45
PART4_Q7_3B	0.53	0.46
PART4_Q8_2A	0.52	0.46
PART4_Q1_5A	0.47	0.49
PART4_Q8_1B	0.45	0.5
PART4_Q8_2B	0.45	0.5
PART4_Q8_4B	**0.32**	**0.56**
PART4_Q4_3B	**0.26**	**0.6**
PART4_Q1_4A	**0.25**	**0.61**
PART4_Q4_6B	**0.25**	**0.61**
PART4_Q5_2B	**0.25**	**0.61**
PART4_Q7_2B	**0.24**	**0.61**
PART4_Q6_1B	**0.23**	**0.63**
PART4_Q6_2A	**0.17**	**0.67**
PART4_Q8_1A	**0.13**	**0.7**
PART4_Q5_2A	**0.09**	**0.75**
PART4_Q5_1A	**0.02**	**0.87**
PART4_Q5_4B	**0.01**	**0.9**
PART4_Q4_5A	**0.01**	**0.91**
PART4_Q4_1A	**0.01**	**0.92**
PART4_Q1_1A	**0.00**	**0.94**
PART4_Q1_3A	**0.00**	**0.94**
PART4_Q1_1B	**0.00**	**0.94**
PART4_Q1_4B	**0.00**	**0.94**
PART4_Q4_4A	**0.00**	**0.94**
PART4_Q5_1B	**0.00**	**0.94**
PART4_Q6_4A	**0.00**	**0.94**
PART4_Q6_3B	**0.00**	**0.94**
PART4_Q6_4B	**0.00**	**0.94**
PART4_Q7_4B	**0.00**	**0.94**
PART4_Q4_3A	**0.00**	**0.97**

The next comparison is between ESP Teachers and Subject Specialists. As can be seen in Table 65, out of 54 variables, 29 of them show a statistically significant difference and 25 variables are not statistically significant. When we take a look at and examine deeply the biography of those two kinds of participants, we can easily observe that ESP teachers in the study are almost all English-trained maritime English teachers, unlike Subject Specialists who are maritime-trained maritime English teachers. For that reason, based on their educational background, it might be

somewhat natural that on some issues (29 items) they share the same viewpoints about the practice and application of ESP knowledge, yet they also differ significantly on quite a lot of issues regarding the principles of ESP knowledge.

Table 66
ESP Teachers vs Professionals

Item No.	X^2	P-Value
PART4_Q4_2B	9.43	0.00
PART4_Q5_2B	8.66	0.00
PART4_Q5_4B	9.49	0.00
PART4_Q8_2B	14.17	0.00
PART4_Q8_3B	8.51	0.00
PART4_Q8_4B	12.8	0.00
PART4_Q6_2B	5.4	0.02
PART4_Q7_2B	**3.51**	**0.06**
PART4_Q1_4B	**1.91**	**0.16**
PART4_Q5_1B	**1.91**	**0.16**
PART4_Q6_4B	**1.91**	**0.16**
PART4_Q8_1B	**1.91**	**0.16**
PART4_Q1_1B	**0.94**	**0.33**
PART4_Q1_3B	**0.94**	**0.33**
PART4_Q7_1B	**0.94**	**0.33**
PART4_Q7_4B	**0.94**	**0.33**
PART4_Q4_6B	**0.72**	**0.39**
PART4_Q1_2B	**0.28**	**0.59**
PART4_Q5_3B	**0.28**	**0.59**
PART4_Q4_3B	**0.24**	**0.61**
PART4_Q4_1B	**0.14**	**0.69**
PART4_Q6_1B	**0.13**	**0.71**
PART4_Q4_5B	**0.03**	**0.84**
PART4_Q1_5B	**0.01**	**0.9**
PART4_Q7_3B	**0.01**	**0.91**
PART4_Q4_4B	**0**	**0.96**
PART4_Q6_3B	**0**	**0.96**

Concerning the comparison between ESP Teachers and Professionals, only 7 variables have a statistically significant difference contrary to 20 variables that do not show a significant difference. Here, the discrepancy between English-trained maritime English teachers and former seafarers is not that sharp. They did agree on most of the issues. Hence, it could be not wrong to assert that in most of the cases regarding the utilization of ESP knowledge, ESP teachers and Professionals (former seafarers) are of the same opinion.

Table 67
ESP Teachers vs Students

Item No.	X^2	P-Value
PART4_Q1_1A	14.91	0.00
PART4_Q1_3A	17.2	0.00
PART4_Q1_1B	12.18	0.00
PART4_Q1_2B	9.18	0.00
PART4_Q1_3B	12.71	0.00
PART4_Q1_4B	12.71	0.00
PART4_Q1_5B	8.19	0.00
PART4_Q4_1A	11.65	0.00
PART4_Q4_4A	20.2	0.00
PART4_Q4_2B	11.13	0.00
PART4_Q4_4B	10.73	0.00
PART4_Q5_1B	9.59	0.00
PART4_Q5_2B	6.83	0.00
PART4_Q5_3B	16.89	0.00
PART4_Q5_4B	13.93	0.00
PART4_Q6_1B	19.67	0.00
PART4_Q6_2B	15.71	0.00
PART4_Q6_3B	17.2	0.00
PART4_Q6_4B	19.59	0.00
PART4_Q7_1B	18.38	0.00
PART4_Q7_2B	16.81	0.00
PART4_Q7_3B	7.61	0.00
PART4_Q7_4B	20.82	0.00
PART4_Q8_1B	14.91	0.00
PART4_Q8_2B	12.88	0.00
PART4_Q8_3B	15.71	0.00
PART4_Q8_4B	17.42	0.00
PART4_Q4_2A	5.52	0.01
PART4_Q4_1B	6.61	0.01
PART4_Q4_5A	4.95	0.02
PART4_Q4_3A	**1.24**	**0.26**
PART4_Q1_2A	**0.71**	**0.39**
PART4_Q4_5B	**0.36**	**0.54**
PART4_Q1_5A	**0.15**	**0.69**
PART4_Q4_6A	**0.03**	**0.85**
PART4_Q4_6B	**0.02**	**0.87**
PART4_Q4_3B	**0**	**0.96**
PART4_Q1_4A	**0**	**0.99**

As observed in Table 67, the responses of ESP teachers and Students are compared. According to the results, it could be seen that most of the variables (30) show significance. There are only 8 items that do not show a statistically significant difference. It is apparent that on most of the issues related to the application of ESP knowledge, ESP teachers and students differ significantly. This might be attributed to the lack of ESP knowledge on the part of students as well as the mastership of ESP competency on the part of ESP teachers.

Table 68
Subject Specialists vs Professionals

Item No.	X^2	P-Value
PART4_Q4_2B	8.29	0.00
PART4_Q5_4B	8.23	0.00
PART4_Q8_2B	12.75	0.00
PART4_Q8_3B	10.27	0.00
PART4_Q8_4B	9.21	0.00
PART4_Q5_2B	5.82	0.01
PART4_Q7_2B	4.75	0.02
PART4_Q6_2B	**2.55**	**0.1**
PART4_Q4_6B	**1.8**	**0.17**
PART4_Q1_2B	**1.73**	**0.18**
PART4_Q1_4B	**1.73**	**0.18**
PART4_Q5_1B	**1.73**	**0.18**
PART4_Q5_3B	**1.73**	**0.18**
PART4_Q6_4B	**1.73**	**0.18**
PART4_Q4_3B	**1**	**0.31**
PART4_Q4_1B	**0.93**	**0.33**
PART4_Q1_1B	**0.85**	**0.35**
PART4_Q1_3B	**0.85**	**0.35**
PART4_Q4_4B	**0.85**	**0.35**
PART4_Q7_4B	**0.85**	**0.35**
PART4_Q1_5B	**0.77**	**0.38**
PART4_Q7_3B	**0.4**	**0.52**
PART4_Q4_5B	**0.31**	**0.57**
PART4_Q8_1B	**0.19**	**0.65**
PART4_Q6_1B	**0.01**	**0.89**
PART4_Q6_3B	**0.01**	**0.9**
PART4_Q7_1B	**0.01**	**0.9**

Out of 27 variables related to the comparison of Subject Specialists and Professionals, 7 items have a statistically significant value. On the contrary, 20 items do not show any significance level. From the results of the chi-square, we can see that there are just several issues that Subject Specialists and Professionals are not in agreement with. Professionals are of course familiar with the concept of ESP in one way or another, however, when we take into consideration that they graduated from their faculties years ago and when we keep in mind that ESP is an innovative and rapidly growing field within the area of English language teaching, then it might be rather usual and less than expected that Professionals have only 7 items which they do not concur with Subject Specialists.

Table 69
Subject Specialists vs Students

Item No.	X^2	P-Value
PART4_Q1_1A	13.57	0.00
PART4_Q1_3A	13.07	0.00
PART4_Q1_1B	11.08	0.00
PART4_Q1_2B	10.59	0.00
PART4_Q1_3B	11.56	0.00
PART4_Q1_4B	11.56	0.00
PART4_Q4_1A	10.59	0.00
PART4_Q4_4A	15.74	0.00
PART4_Q4_2B	9.78	0.00
PART4_Q4_4B	12.06	0.00
PART4_Q5_1B	8.71	0.00
PART4_Q5_3B	17.86	0.00
PART4_Q5_4B	12.17	0.00
PART4_Q6_1B	14.7	0.00
PART4_Q6_3B	17.2	0.00
PART4_Q6_4B	17.86	0.00
PART4_Q7_1B	14.12	0.00
PART4_Q7_2B	17.43	0.00
PART4_Q7_4B	18.99	0.00
PART4_Q8_1B	11.04	0.00
PART4_Q8_2B	11.54	0.00
PART4_Q8_3B	16.75	0.00
PART4_Q8_4B	13.22	0.00
PART4_Q5_2B	4.25	0.03
PART4_Q1_5B	4.07	0.04
PART4_Q4_5A	4.1	0.04
PART4_Q4_1B	3.78	0.05
PART4_Q7_3B	3.64	0.05
PART4_Q4_2A	**2.24**	**0.13**
PART4_Q1_2A	**1.52**	**0.21**
PART4_Q4_3A	**1.08**	**0.29**
PART4_Q4_6A	**0.58**	**0.44**
PART4_Q4_3B	**0.4**	**0.52**
PART4_Q1_4A	**0.36**	**0.54**
PART4_Q4_6B	**0.19**	**0.65**
PART4_Q1_5A	**0.19**	**0.66**
PART4_Q4_5B	**0.08**	**0.77**
PART4_Q6_2B	**0.04**	**0.82**

When we look at the comparison of Subject Specialists and Students, we could again see that most of the variables (28 variables) are below alpha value meaning that they have a statistically significant association. Additionally, there is not enough evidence to conclude that 7 variables are associated. This result is by and large similar to the comparison of ESP Teachers versus Students in which case they also have 30 significant and 8 non-significant variables. Correspondingly, based on the approaches to the principles of ESP, it appears that Subject Specialists have way more different thoughts than Students.

Table 70

Professionals vs Students

Item No.	X^2	P-Value
PART4_Q1_1B	10.4	0.00
PART4_Q1_2B	7.72	0.00
PART4_Q1_3B	10.94	0.00
PART4_Q1_4B	8.75	0.00
PART4_Q1_5B	9.28	0.00
PART4_Q4_4B	11.5	0.00
PART4_Q5_3B	15.55	0.00
PART4_Q6_1B	17.67	0.00
PART4_Q6_3B	18.21	0.00
PART4_Q6_4B	15.55	0.00
PART4_Q7_1B	16.77	0.00
PART4_Q7_2B	6.83	0.00
PART4_Q7_3B	7.4	0.00
PART4_Q7_4B	19.29	0.00
PART4_Q8_1B	10.9	0.00
PART4_Q4_1B	5.44	0.01
PART4_Q5_1B	5.74	0.01
PART4_Q6_2B	4.3	0.03
PART4_Q8_3B	**1.65**	**0.19**
PART4_Q4_6B	**1.31**	**0.25**
PART4_Q5_2B	**0.52**	**0.46**
PART4_Q4_3B	**0.31**	**0.57**
PART4_Q5_4B	**0.31**	**0.57**
PART4_Q8_4B	**0.27**	**0.6**
PART4_Q8_2B	**0.23**	**0.62**
PART4_Q4_5B	**0.15**	**0.69**
PART4_Q4_2B	**0.01**	**0.9**

The last chi-square analyses are between Professionals and Students. In these comparisons, 18 variables do show a statistically significant difference and 9 variables do not have a significant value or, to put it differently, they are not associated. This result is in a way a recurrent one since students, being less knowledgeable about ESP issues, have likewise little in common with Professionals.

All in all, when we look at the grand scheme of things, it could easily be seen that the observed deviations between GE Teachers and in some cases, students and other groups are mostly significant whereas the deviations between ESP Teachers, Subject Specialists, and Professionals are usually not significant or less significant.

For this reason, by taking into account overall chi-square results among all groups, it might not be wrong to assert or admit that there might be a specific type of knowledge unique to the teaching of ESP in EFL contexts.

Table 71
Comparison of All Groups

	Groups					
	GE Teachers	**ESP Teachers**	**Subject Specialists**	**Professionals**	**Students**	
PART4_Q4_5B	✓	✓	✓	✓	✓	ALL GROUPS
PART4_Q4_6B	✓	✓	✓	✓	✓	
PART4_Q4_3B	✓	✓	✓	✓	✓	
PART4_Q5_2B	✓	✓	✓	✓	✓	
PART4_Q8_4B	✓	✓	✓	✓	✓	
PART4_Q5_4B	✓	✓	✓	✓	✓	
PART4_Q5_3B	✓	✓	✓	✓	✓	
PART4_Q6_4B	✓	✓	✓	✓	✓	
PART4_Q4_1B	✓	✓	✓	✓	✓	
PART4_Q7_4B	✓	✓	✓	✓	✓	
PART4_Q7_3B	✓	✓	✓	✓	✓	
PART4_Q8_1B	✓	✓	✓	✓	✓	
PART4_Q6_1B	✓	✓	✓	✓	✓	
PART4_Q6_3B	✓	✓	✓	✓	✓	
PART4_Q7_1B	✓	✓	✓	✓	✓	
PART4_Q7_2B	✓	✓	✓	✓	✓	
PART4_Q8_2B	✓			✓	✓	THREE GROUPS
PART4_Q1_2B		✓	✓	✓		
PART4_Q1_4B		✓	✓	✓		
PART4_Q5_1B		✓	✓	✓		
PART4_Q1_1B		✓	✓	✓		
PART4_Q1_3B		✓	✓	✓		
PART4_Q4_4B		✓	✓	✓		
PART4_Q8_3B	✓			✓	✓	
PART4_Q1_4A		✓	✓		✓	
PART4_Q4_3A		✓	✓		✓	
PART4_Q1_2A		✓	✓		✓	
PART4_Q4_6A		✓	✓		✓	
PART4_Q1_5A		✓	✓		✓	
PART4_Q4_2B				✓	✓	TWO GROUPS
PART4_Q6_2A		✓	✓			
PART4_Q8_1A		✓	✓			
PART4_Q5_2A		✓	✓			
PART4_Q5_1A		✓	✓			
PART4_Q4_5A		✓	✓			
PART4_Q4_1A		✓	✓			
PART4_Q1_1A		✓	✓			
PART4_Q1_3A		✓	✓			
PART4_Q4_4A		✓	✓			
PART4_Q6_4A		✓	✓			
PART4_Q4_2A			✓		✓	
PART4_Q6_2B			✓		✓	

Table 71 includes 42 variables that do not show statistically significant differences across all groups. In other words, there is little to no discrepancy or deviation across the groups on the importance or non-importance of those 42 issues as regards the perception of ESP knowledge by considering their responses to those variables. Additionally, these 42 variables are arranged in a descending order meaning that the top 16 ones are agreed upon by all groups, following the mid-13 and the last 13, agreed upon by three and two groups respectively.

Table 72
Common Items

COMMON ITEMS										
	Item No.	**Question**	**Matching Items**	**Groups**					
				GE Teachers	**ESP Teachers**	**Subject Specialists**	**Professionals**	**Students**	
1	PART4_Q4_5B	how often is grammar skill used in the maritime profession?	NO MATCH / This issue did not come up during the interviews and was also not observed during the class observations.	✓	✓	✓	✓	✓	ALL GROUPS
	PART4_Q4_5A	how often is grammar skill used in your ESP courses?	NO MATCH						
2	PART4_Q4_6B	how often is vocabulary skill used in the maritime profession?	All reading passages particularly reading passage 1 and reading passage 3 include technical vocabulary about maritime English.	✓	✓	✓	✓	✓	
	PART4_Q4_6A	how often is vocabulary skill used in your ESP courses?	All reading passages particularly reading passage 1 and reading passage 3 include technical vocabulary about maritime English.						
3	PART4_Q4_3B	how often is listening skill used in the maritime profession?	Listening items 1 to 39.	✓	✓	✓	✓	✓	
	PART4_Q4_3A	how often is listening skill used in your ESP courses?	Listening items 1 to 39.						
4	PART4_Q5_2B	how important is it for your students to be able to write business letters in the maritime profession?	Part B, Items 37, 38, 39.	✓	✓	✓	✓	✓	

	PART4_Q5_2A	how important is it for your students to be able to write business letters in your ESP courses?	Part B, Items 37, 38, 39.					
5	PART4_Q6_4B	how important is it for your students to be able to read signs, rules, and notices in the maritime profession?	Reading Passage III, Items 21 to 26.	✓	✓	✓	✓	✓
	PART4_Q6_4A	how important is it for your students to be able to read signs, rules, and notices in your ESP courses?	Reading Passage III, Items 21 to 26.					
6	PART4_Q4_1B	how often is reading skill used in the maritime profession?	Reading Passage 1, Items 1 to 8.	✓	✓	✓	✓	✓
			Reading Passage 2, Items 9 to 20.					
			Reading Passage 3, Items 21 to 29.					
	PART4_Q4_1A	how often is reading skill used in your ESP courses?	Reading Passages 1, 2, and 3.					
7	PART4_Q8_1B	how important is it for your students to be able to introduce themselves and others in a variety of situations in the maritime profession?	This issue was discussed during the interviews and observed in detail during class observations and was also recorded in field notes.	✓	✓	✓	✓	✓
	PART4_Q8_1A	how important is it for your students to be able to introduce themselves and others in a variety of situations in your ESP courses?	This issue was observed in detail during ESP class observations and recorded in field notes.					
8	PART4_Q6_3B	how important is it for your students to be able to read manuals/product descriptions in the maritime profession?	Reading Passage 1, Items 1 to 8.	✓	✓	✓	✓	✓

	PART4_Q1_4B	how important is it for your students to be able to read manuals/instructions in the maritime profession?	Reading Passage 1 (Items 1 to 8) Reading Passage 3 (Items 21 to 29)						
	PART4_Q1_4A	how important is it for your students to be able to read manuals/instructions in your ESP courses?	Reading Passage 1 (Items 1 to 8) Reading Passage 3 (Items 21 to 29)						
9	PART4_Q1_2B	how important is it for your students to be able to read materials related to maritime issues in the maritime profession?	Reading Passages 1, 2, and 3.		✓	✓	✓		THREE GROUPS
	PART4_Q1_2A	how important is it for your students to be able to read materials related to maritime issues in your ESP courses?	Reading Passages 1, 2, and 3.						
10	PART4_Q5_1B	how important is it for your students to be able to write reports in the maritime profession?	Item 39.		✓	✓	✓		
	PART4_Q5_1A	how important is it for your students to be able to write reports in your ESP courses?	Item 39.						
11	PART4_Q1_1B	how important is it for your students to be able to understand spoken instructions in the maritime profession?	Listening Items 3,6,7,10,12,14,20, 22, 23,24,26,27,29,31,36,39.		✓	✓	✓		
	PART4_Q1_1A	how important is it for your students to be able to understand spoken instructions in your ESP courses?	Listening Audios 3,6,7,10,12,14,20, 22, 23,24,26,27,29,31,36,39						
12	PART4_Q1_3B	how important is it for your students to be able to engage in personal communication in the maritime profession?	This issue came up and was discussed during the interviews conducted with professionals and administrators.		✓	✓	✓		

	PART4_Q1_3A	how important is it for your students to be able to engage in personal communication in your ESP courses?	This issue was observed in detail during ESP class observations and recorded in field notes.						
13	PART4_Q4_4B	how often is speaking skill used in the maritime profession?	This issue came up and was discussed during the interviews conducted with workplace people and administrators.		✓	✓	✓		
	PART4_Q4_4A	how often is speaking skill used in your ESP courses?	This issue was observed in detail during ESP class observations and recorded in field notes.						
14	PART4_Q4_2B	how often is writing skill used in the maritime profession?	Part B, Items 37, 38, 39.				✓	✓	TWO GROUPS
	PART4_Q4_2A	how often is writing skill used in your ESP courses?	Part B, Items 37, 38, 39.						
15	PART4_Q6_2A	how important is it for your students to be able to read academic journals and publications in your ESP courses?	Reading Passage 1, Items 1 to 8.		✓	✓			
	PART4_Q6_2B	how important is it for your students to be able to read academic journals and publications in the maritime profession?	Reading Passage 1, Items 1 to 8.						

Out of those 42 items, some items have the same question roots but refer to a different context. For example:

PART4_Q6_2B how often is writing skill used in the maritime profession
PART 4_Q6_2A how often is writing skill used in your ESP courses

Since both variables are inquiring about the frequency of the same skill yet just for different contexts, it was deemed that it might be appropriate to label those kinds of all similar variables as common items (Table 72) and treat them as such for the sake of simplicity and practicality of viewing all of them in one chart.

Table 73
Separate Items

SEPARATE ITEMS										
	Item No.	**Question**	**Matching Items**	**Groups**					
				GE Teachers	ESP Teachers	Subject Specialists	Professionals	Students	
1	PART4_Q8_4B	how important is it for your students to be able to give a presentation in the maritime profession?	Scenarios for critical thinking, Items 37 and 38.	✓	✓	✓	✓	✓	ALL GROUPS
2	PART4_Q5_4B	how important is it for your students to be able to write projects in the maritime profession?	Assignment, Item 39.	✓	✓	✓	✓	✓	
3	PART4_Q5_3B	how important is it for your students to be able to write instructions in the maritime profession?	Item 38.	✓	✓	✓	✓	✓	
4	PART4_Q7_4B	how important is it for your students to listen to and understand instructions in the maritime profession?	Listening items 1 to 39.	✓	✓	✓	✓	✓	
5	PART4_Q7_3B	how important is it for your students to listen to and understand radio and television programs and other English media in the maritime profession?	Listening Item 6.	✓	✓	✓	✓	✓	
6	PART4_Q6_1B	how important is it for your students to be able to read weekly magazines in the maritime profession?	Reading Passage 2, Items 9-20.	✓	✓	✓	✓	✓	
7	PART4_Q7_1B	how important is it for your students to listen to and understand conversations in the maritime profession?	Listening Items 1,2,4,5,9,10,11,15,16,17,18,21,30,32,33,35,37,38.	✓	✓	✓	✓	✓	
8	PART4_Q7_2B	how important is it for your students to listen to and understand presentations and discussions in the maritime profession?	Listening Items 3, 7, 14, 23, 34	✓	✓	✓	✓	✓	
9	PART4_Q8_2B	how important is it for your students to be able to state an opinion about different topics in the maritime profession?	Items 37 and 38.	✓			✓	✓	THREE GROUPS
10	PART4_Q8_3B	how important is it for your students to be able to make requests (i.e. for further information or confirmation) in the maritime profession?	This issue was observed in detail during ESP class observations and touched upon in fieldnotes.	✓			✓	✓	

However, as regards the chi-square analyses results, there exist 10 variables (Table 73) that are unique, and which do not share any traits with others. Hence, they were categorized as separate items and treated as such. All in all, as it is demonstrated in Table 74, there are 15 common, 10 separate overall 25 variables that “Professional Knowledge of Maritime English Test” is supposed to build upon.

Table 74
All Items

ALL ITEMS										
				Groups						
	Item No.	Question	Matching Items	GE Teachers	ESP Teachers	Subject Specialists	Professionals	Students		
1	PART4_Q4_5B	how often is grammar skill used in the maritime profession?	NO MATCH / This issue did not come up during the interviews and was also not observed during the class observations.	✓	✓	✓	✓	✓	ALL GROUPS	
2	PART4_Q4_6B	how often is vocabulary skill used in the maritime profession?	All reading passages particularly reading passage 1 and reading passage 3 include technical vocabulary about maritime English.	✓	✓	✓	✓	✓		
3	PART4_Q4_3B	how often is listening skill used in the maritime profession?	Listening items 1 to 39.	✓	✓	✓	✓	✓		
4	PART4_Q5_2B	how important is it for your students to be able to write business letters in the maritime profession?	Part B, Items 37, 38, 39.	✓	✓	✓	✓	✓		
5	PART4_Q8_4B	how important is it for your students to be able to give a presentation in the maritime profession?	Scenarios for critical thinking, Items 37 and 38.	✓	✓	✓	✓	✓		
6	PART4_Q5_4B	how important is it for your students to be able to write projects in the maritime profession?	Assignment, Item 39.	✓	✓	✓	✓	✓		
7	PART4_Q5_3B	how important is it for your students to be able to write instructions in the maritime profession?	Item 38.	✓	✓	✓	✓	✓		
8	PART4_Q6_4B	how important is it for your students to be able to read signs, rules, and notices in the maritime profession?	Reading Passage III, Items 21 to 26.	✓	✓	✓	✓	✓		
9	PART4_Q4_1B	how often is reading skill used in the maritime profession?	Reading Passage 1, Items 1 to 8. Reading Passage 2, Items 9 to 20. Reading Passage 3, Items 21 to 29.	✓	✓	✓	✓	✓		

10	PART4_Q7_4B	how important is it for your students to listen to and understand instructions in the maritime profession?	Listening items 1 to 39.	✓	✓	✓	✓	✓	
11	PART4_Q7_3B	how important is it for your students to listen to and understand radio and television programs and other English media in the maritime profession?	Listening Item 6.	✓	✓	✓	✓	✓	
12	PART4_Q8_1B	how important is it for your students to be able to introduce themselves and others in a variety of situations in the maritime profession?	This issue was discussed during the interviews and observed in detail during class observations and was also recorded in field notes.	✓	✓	✓	✓	✓	
13	PART4_Q6_1B	how important is it for your students to be able to read weekly magazines in the maritime profession?	Reading Passage 2, Items 9-20.	✓	✓	✓	✓	✓	
14	PART4_Q1_4B	how important is it for your students to be able to read manuals/product descriptions in the maritime profession?	Reading Passage 1, Items 1 to 8. Reading Passage 3 (Items 21 to 29)	✓	✓	✓	✓	✓	
15	PART4_Q7_1B	how important is it for your students to listen to and understand conversations in the maritime profession?	Listening Items 1,2,4,5,9,10,11,15,16,17,18,21,30,32,33,35,37,38.	✓	✓	✓	✓	✓	
16	PART4_Q7_2B	how important is it for your students to listen to and understand presentations and discussions in the maritime profession?	Listening Items 3, 7, 14, 23, 34	✓	✓	✓	✓	✓	
17	PART4_Q8_2B	how important is it for your students to be able to state an opinion about different topics in the maritime profession?	Items 37 and 38.	✓			✓	✓	THREE GROUPS
18	PART4_Q1_2B	how important is it for your students to be able to read materials related to maritime issues in the maritime profession?	Reading Passages 1, 2, and 3.		✓	✓	✓		
19	PART4_Q5_1B	how important is it for your students to be able to write reports in the maritime profession?	Item 39.		✓	✓	✓		
20	PART4_Q1_1B	how important is it for your students to be able to understand spoken instructions in the maritime profession?	Listening Items 3,6,7,10,12,14,20, 22, 23,24,26,27,29,31,36,39.		✓	✓	✓		

21	PART4_Q1_3B	how important is it for your students to be able to engage in personal communication in the maritime profession?	This issue came up and was discussed during the interviews conducted with professionals and administrators.		✓	✓	✓		
22	PART4_Q4_4B	how often is speaking skill used in the maritime profession?	This issue came up and was discussed during the interviews conducted with workplace people and administrators.		✓	✓	✓		
23	PART4_Q8_3B	how important is it for your students to be able to make requests (i.e. for further information or confirmation) in the maritime profession?	This issue was observed in detail during ESP class observations and touched upon in fieldnotes.	✓			✓	✓	
24	PART4_Q4_2B	how often is writing skill used in the maritime profession?	Part B, Items 37, 38, 39.				✓	✓	
25	PART4_Q6_2A	how important is it for your students to be able to read academic journals and publications in your ESP courses?	Reading Passage 1, Items 1 to 8.		✓	✓			TWO GROUPS

If we take a closer look at those prominent 25 items in Table 74, it could be easily observed that apart from variable “PART4_Q4_5B” most of the variables have their matching items/equivalents in the final draft of the “Professional Knowledge of Maritime English Test”. The four variables (PART4_Q8_1B, PART4_Q1_3B, PART4_Q4_4B, PART4_Q8_3B) seem to not possess their matching items in the test; nonetheless, all those four issues either came up and were discussed during the interviews or observed in detail during ESP class observations. Thus, information obtained from those various sources was particularly utilized for writing test items to meet these needs. For this reason, these 4 variables could also be regarded as they have their matching items in the test. In other words, I’d be remiss if I did not mention that those issues were observed in classroom observations and discussed during the interviews.

The distribution of prominent 25 items obtained by chi-square analyses into language skills are as follows:

Table 75
Distribution of Items according to Language Skills

Skill	**Item No.**	**Total Nr.**
Vocabulary	2	1
Grammar	1	1
Reading	8, 9, 13, 14, 18, 25	6
Writing	4, 6, 7, 19, 24	5
Listening	3, 10, 11, 15, 16, 20	6
Speaking	5, 12, 17, 21, 22, 23	6

4. RESULTS

The purpose of this research is to look at professional knowledge that is specific to Maritime English teaching. Another goal of the research is to create a valid, accurate, and data-driven professional knowledge test to assess EFL instructors' specialized knowledge. This was accomplished through the development and employment of several instruments:

1. To administer to all stakeholders, five separate needs analysis questionnaires were devised. The number of items in the final versions of the questionnaires is as follows:

Table 76
Number of Items in the Final Versions of the Questionnaires

Questionnaires	**Demographic questions**	**Need analysis items**	**Open-ended suggestions**
ELT Teachers	6	50	9
ELT-ESP Teachers	7	64	9
Subject Specialists	6	63	9
Professionals	3	39	5
Maritime Students	2	50	6

2. Following that, significant features of ESP instruction (as determined by the questionnaires) were identified, and observation checklists incorporating these key points were created. To double-check the questionnaire findings, these observation checklists were utilized to observe a significant number of (20) ESP teachers.

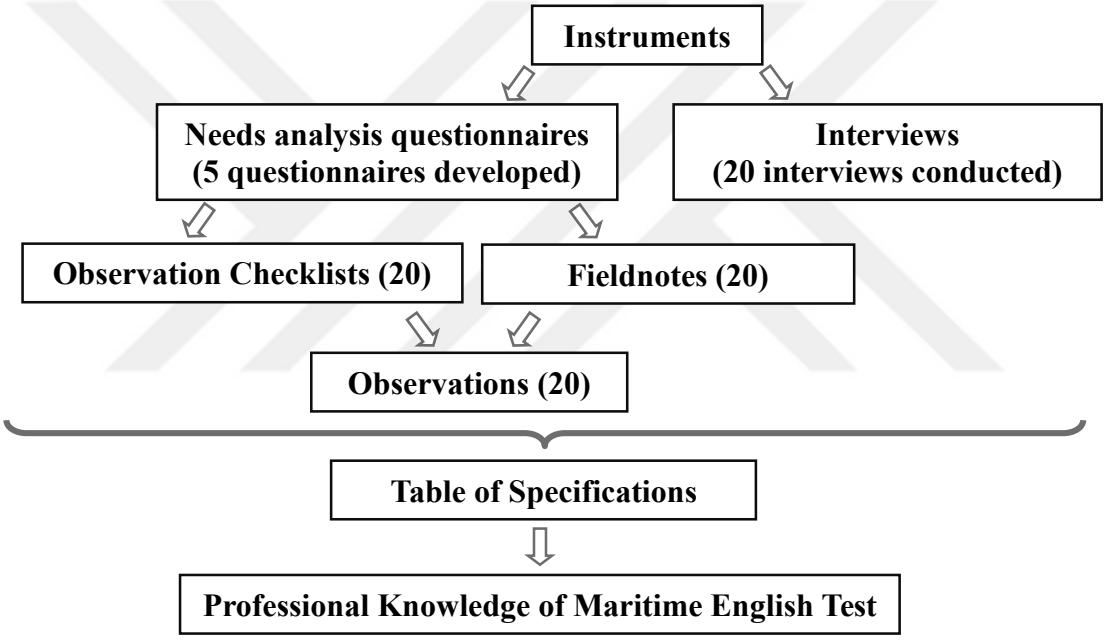
3. Field notes were also recorded throughout the observations,

4. and interviews were conducted with the same instructors, faculty administrators, and marine employers to assist authenticate the survey and observation data.

5. Lastly, the table of specifications for the Professional Knowledge of Maritime English Test was created using the information gathered from questionnaires, observation checklists, field notes, and interviews.

A comprehensive schematic representation of the development of Professional Knowledge of Maritime English Test is as follows:

Figure 18. A schematic representation of the development of professional knowledge of maritime English test



Finally, 52 listening comprehension items prepared in line with the maritime English section of the test were added. After these detailed processes, both parts of the test (including listening items) were pretested with 86 (52 participants for Part 1 and 34 participants for Part 2) participants and the entire test was organized into three major sections. Table 77 shows the final version of the Professional Knowledge of Maritime English Test for ESP Teachers before the main administration.

Table 77
Final Version of Professional Knowledge of Maritime English Test

Section 1 Maritime English Listening Comprehension	
Section 2 Maritime English	
Reading Passage 1	
	Part A Matching-Up Questions
	Part B Multiple Choice Questions
Reading Passage 2	
	Part A True-False Questions
	Part B Reference Questions
	Part C Multiple Choice Questions
Reading Passage 3	
	Part A Match-Up Questions
	Part B Multiple Choice Questions
Section 3 Pedagogical Knowledge	
	Part A Choose the Best Reaction to Scenarios
	Part B Write the Best Reaction to Scenarios
	Part C Completing the Assignment

The following part of the study demonstrates the results of the main administration of the final version of the test.

4.1 Main Administration of Professional Knowledge of Maritime Test

One of the aims of this study is to develop a valid, reliable, and data-driven professional knowledge test for ESP teachers. To this end, to answer the third research question,

> How competent are ESP teachers (teaching maritime English) in the newly developed Test of Knowledge for Specific Purposes?

the newly developed Professional Knowledge of Maritime English Test was administered to 64 ESP Teachers.

4.1.1 Main Administration of Listening Comprehension Items

Concerning initial analysis (pretesting), 2 items that showed no variance (items 26 and 33), and poorly correlated 6 weak items (items 2, 3, 9, 11, 18, and 24) were removed before the main administration. The poorly correlated 6 items were examined in detail. It was seen that there were many more items substituting their

function. In other words, there were other strong listening items addressing and measuring the very same needs as they do. Ultimately, 27 listening items were administered to 64 ELT-ESP teachers. Results of the classification of 27 items for 4 identified listening comprehension needs that they were intended to measure are as follows:

Table 78
Classification of Listening Comprehension Items (Main Administration)

Listening Comprehension Needs	**Items Addressing the Needs**
1. To listen to and understand instructions	1, 4, 5, 13, 15, 18, 20, 22, 24, 26
2. To listen to and understand conversations	2, 3, 7, 11, 16, 21, 25, 27
3. To listen to and understand radio and television programs	8, 9, 14, 17
4. To listen to and understand presentations and discussions	6, 10, 12, 19, 23

Next, exploratory factor analysis with orthogonal rotation was run to explore the underlying theoretical structure of the phenomena and to investigate whether different participants share the same pattern in the same test. The following table describes the rotated factor solutions for each item. Table 79 shows the rotated component matrix of 27 listening comprehension items.

Table 79
Rotated Component Matrix of Listening Comprehension Items

Rotated Component Matrix[a]

	Component			
	1	2	3	4
i1	,777			
i4	,747			
i5	,736			
i13	,833			
i15	,886			
i18	,763			
i20	,805			
i22	,828			
i24	,713			
i26	,783			
i2		,627		
i3		,729		
i7		,682		
i11		,744		
i16		,812		
i21		,667		
i25		,813		
i27		,810		
i8				,754
i9				,747
i14				,799
i17				,816
i6			,855	
i10			,813	
i12			,855	
i19			,802	
i23			,826	

As observed in Table 79, all items (27 items) loaded on 4 factors in total, and rotation converged in 5 iterations. 10 items (1, 4, 5, 13, 15, 18, 20, 22, 24 and 26) loaded on one factor, 8 items (2, 3, 7, 11, 16, 21, 25 and 27) loaded on factor 2, 5 items (6, 10, 12, 19 and 23) loaded on factor 3 and 4 items (8, 9, 14 and 17) loaded on factor 4. These factor loadings do match up with the theoretical framework as 4 listening comprehension needs were identified at the end of the needs analysis process. All the loadings are in harmony with the items in the theory thus no items have deviant behavior.

One of the most popular estimates of internal consistency is Cronbach's Alpha. Therefore, the alpha coefficient of reliability was calculated to measure how closely related the items are as a group. The alpha correlation coefficient of listening comprehension items was measured at 0.78. Table 80 shows Cronbach's Alpha value computed for 27 listening comprehension items used for the main administration of the listening part of the professional knowledge of maritime English Test.

Table 80
Cronbach's Alpha Score for Listening Comprehension Items

Cronbach's Alpha	N of Items
,78	27

Generally, an alpha of 0.7-0.8 signifies a good level of reliability. As it can be observed

For this reason, as Table 80 shows, listening comprehension items in the professional knowledge of maritime English test have a good level of internal consistency thereby a good level of reliability.

4.1.2 Main Administration of Reading Items

On reading comprehension items, 29 items in section 1 were administered to 64 ESP teachers.

Exploratory factor analysis with orthogonal rotation was run again, and the reliability was calculated. Table 81 describes the rotated factor solutions for 29 reading comprehension items.

Table 81
Rotated Component Matrix of Reading Comprehension Items

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
i1					,759
i2					,924
i3					,840
i4	,938				
i5	,795				
i6	,804				
i7	,953				
i8	,953				
i27	,937				
i28	,861				
i29	,750				
i9		,563			-,373
i10		,745			
i11		,728			
i12		,877			
i13		,840			
i18		,816			
i19		,841			
i20		,817			
i14				,909	
i15				,875	
i16				,971	
i17				,971	
i21			,874		
i22			,902		
i23			,872		
i24			,872		
i25			,850		
i26			,825		

As regards Table 81, it can be observed that all 29 items loaded on 5 factors. This EFA result of the main administration is compatible with 5 reading comprehension needs as the outcome is in line with 5 learning needs that were eventually identified according to the statistical result of the needs analysis process.

Furthermore, reliability was calculated to measure internal consistency. Table 82 describes Cronbach's Alpha values calculated for 29 reading comprehension items in section 1 reading part of the professional knowledge of maritime English test.

Table 82
Cronbach's Alpha Scores for Reading Comprehension Items

Cronbach's Alpha	N of Items
,784	29

As can be seen in Table 82, the alpha score of reading comprehension items was measured at 0.78 which indicates a good level of internal consistency and reliability.

4.1.3 Main Administration of Writing Items

3 scenario-based critical thinking and writing items in section 2 were administered to 64 ESP teachers. Responses to the items were analyzed through content analysis (Stemler, 2015). Regarding the first scenario-based item, out of 64 instructors, 58 of them understood the scenario correctly, made use of their maritime knowledge and pedagogical knowledge, and gave an appropriate answer. In the second one, 60 of them utilized their subject matter knowledge and pedagogical knowledge and reacted accurately to the scenario. The third scenario-based assignment/project item is the most challenging one. In this part, as participants are expected to internalize the case and put all their teaching experience related to

maritime English teaching into use, only 41 of them used the information in the scenario and completed the assignment.

Next, by adhering to the principles of qualitative research, two different raters evaluated and graded the responses. Hence, to measure the extent of consistency among the raters, interrater reliability was tested. A percent agreement level of 76.22% was calculated which is considered a satisfactory level of reliability.

4.1.4 Main Administration of Pedagogical Content Knowledge Items

Concerning pedagogical content knowledge items, 7 items in section 2 were administered to 64 ESP teachers. Exploratory factor analysis with orthogonal rotation was carried out to calculate the factor loadings and it was observed that all 7 items loaded on 4 factors. Table 83 describes the rotated factor solutions for the main administration of pedagogical content knowledge items.

Table 83
Rotated Component Matrix of Pedagogical Content Knowledge Items

	Component			
	1	2	3	4
i30			,739	
i31			-,783	,322
i32	,816			
i33	-,730	-,467		
i34		,890		
i35				-,917
i36		-,379		,420

Indeed, 4-factor loadings do not match up entirely with the theoretical framework as each item was expected to measure distinct and specific knowledge types related to pedagogical content knowledge. For the main administration outcome, it seems that out of 7 items, four of them managed to measure the desired result and 3 items had deviant behavior, in other words, they measured identical knowledge types.

4.1.5 Correlations and Standard Deviations

Table 84
Correlations

	Reading	Listening	Pedagogical
Reading	1		
Listening	0.16	1	
Pedagogical	0.52	0.18	1

With respect to the results, there is a medium-level correlation between the success level in the maritime English test (reading part) and the pedagogical knowledge part of the test. Put it differently, an ESP teacher who attained a high score in the reading test also attained a high score in the pedagogical part or vice versa. The same relation applies to the listening-reading (r:0.16) and listening-pedagogical knowledge parts (r:0.18), however, for these parts the correlation levels are much lower.

Table 85
Means and Standard Deviations

	$\bar{x}$	Standard Deviation	Minimum Score	Maximum Score
Reading	23.53	4.67	11	29
Listening	14.79	5.02	8	27
Pedagogical	4.89	0.69	3	7

Content Knowledge Test (Reading Test) had a mean score of 23.53 and a standard deviation of 4.67. The Listening Comprehension Test had a mean score of 14.79 and a standard deviation of 5.02. Additionally, the Pedagogical Content Knowledge Test had a mean score of 4.89 and a standard deviation of 0.69. When we look at the standard deviations, a high standard deviation regarding RC and LC indicates that RC and LC scores are more spread out than the mean. In other words, values are spread out over a wider range.

The average is the same as the mean. Analyzing the mean scores for each test, even if the tests had a different number of questions, it could be concluded that ESP teachers scored better on RC and Pedagogical Knowledge tests on average. As we look at RC, RC scores are all good. Their knowledge is good. The correlation should be high. However, when we look at LC, this does not happen. Stated in other words, an ESP teacher getting 25 on RC, should typically get close to 25 on LC too. But this was not the case. The reason would be the inconsistency in the performance of the participants on LC knowledge. It means that those who were good at reading, some others were good at Listening but most of them are not good at Listening. Due to some logistics, some practice, and diversity of the Listening Comprehension, the correlation is very low. The discrepancy in the ranking of people decreases the correlation.

5. CONCLUSION

5.1 Overview of the Study

Teachers should know the subject they teach very well since it is essential for their performance in the classroom. The rationale is straightforward. If they don't know their subject well, they cannot help their students learn the content. However, just knowing a subject may be necessary but not sufficient for teaching. Certain contexts may require a particular form of knowledge different from the professional knowledge described first by Shulman (1987) and more recently delineated by Kumaravadivelu (2012). ESP is a vibrant and innovative area of language teaching and research today. Therefore, it would be remiss of an EFL/ESP teacher not to have a justifiable, well-defined framework for professional knowledge that s/he could utilize in different settings. Within this context, the present study undertakes the investigation of professional knowledge that is unique to Maritime English teaching. Another aim of the study is to develop a professional knowledge test by collecting data from the real stakeholders including [ESP teachers, EFL teachers, subject specialists, professionals, and students]. For this purpose, 423 participants from various shareholders were consulted to determine their needs for a specific type of knowledge through a cross-sectional survey consisting of 5 different questionnaires specific to each group. Also, data from observation checklists, field notes, and semi-structured interviews were collected and analyzed to bolster the quantitative results to achieve a fair assessment of the needs of ESP teachers. Next, the outcome of the needs analysis was used to prepare the table of specifications for the test of Knowledge for Specific Purposes. The newly developed test was then administered to 64 ESP instructors and the psychometric characteristics of the test were determined. Finally,

the present study outlined potential contributions of the findings for researchers and practitioners in the field and implications for teacher training programs.

5.2 Discussion

ESP is a dynamic and novel area of language teaching and research nowadays (Kırkgöz & Dikilitaş, 2018). It is built on the primacy of need and incorporates learners, language, and learning settings (Hutchinson & Waters, 1987). The underlying educational justification is straightforward. Language learning is more effective and more motivating if the program content is relevant to the learners' particular field of need or interest (Dörnyei, 2003; Nunan & Lamb, 1996). In other words, students study ESP because they must execute a task in English, not because of their interest in the language (Robinson, 1989). Their command of English needs to be high enough to enable them to reach a satisfactory level in their specialist subject studies (Edwards, 2000). As for their language teachers, it is not always enough to know something about the students for whom the course is intended. The ESP teacher in particular needs to be aware of and understand the subject matter (knowledge for specific purposes) to design an efficient program for ESP courses (Belcher, 2009; Dudley-Evans, 1993). In addition, high-quality instruction requires elaborate professional knowledge that extends well beyond basic principles such as engaging students in the classroom or allowing more student-directed activities (Hiebert et al., 2002; Wilson & Berne, 1999). Teachers who lack adequate professional knowledge tend to lack confidence in classroom settings (Loughran, 2012; Schleicher, 2018). They are unable to apply a coherent pedagogical approach, make informed decisions about their students' progress, struggle with the contents of the coursebook, and fail to cope with the mishaps in the course of teaching (Turner, 2013; Wilson & Berne, 1999). Under these circumstances, an EFL/ESP teacher would be well advised to

adequately master the necessary set of knowledge (specific professional knowledge) that would allow him/her to empower students and set them on a path to success. Over the past 30 years, researchers (Eraut, 2002; Goodson, 2003; König et al., 2016; Loughran, 2019) have used the term professional knowledge to refer to what teachers need to know and to relate it to the practice of teaching. However, the taxonomy put forward by Shulman (1986) more than three decades ago yielded an inconclusive understanding of the concept. Following the latest developments in the field and research, the TESOL association (2010) has offered a detailed and comprehensive model of teachers' professional knowledge. Though most of the frameworks (Ball et al., 2008; Gess-Newsome, 2015; Hofstetter & Schneuwly, 2009; Lindmeier, 2010; Magnusson et al., 1999) have demonstrated the components of professional knowledge in one way or another, they do not seem to propose a multidimensional model that would function in different settings. Besides, the literature review (Liakopoulou, 2011; Stronge, 2018) reveals that however differently the knowledge categories may be worded, the concepts they demonstrate are similar or connected and fail to include the expanding needs of learners. Considering the advances in the field (Farrell & Jacobs, 2020; Kirkgöz & Dikilitaş, 2018), diverse academic approaches in English language teaching (Bergmann & Sams, 2014; Zeichner & Liston, 2013), demands for specificity in particular domains (Farhady, 2014; Farhady, 1994, 2006; Farhady & Tavassoli, 2018; Hyland, 2002), and proposals for testing ESL proficiency in various contexts (Clapham, 2000; Farhady, 1991, 2005, 2012; Fulcher, 1999), it is evident that there have already been calls for experts to formulate an up-to-date and multidimensional representation of teachers' professional knowledge in order to meet the specific needs of learners in ESP and EAP settings.

In much the same way done for teachers' professional knowledge, many scholars attempted to formulate a framework for English for Specific Purposes. Basturkmen (2010), Belcher (2004, 2009), Carver, (1983), Dudley Evans (1998), Hyland (2002), Jordan (1998), Laborda & Litzler (2015), Robinson (1989), Strevens (1980), Widdowson (1983) and many others offered different models for ESP. All these models are related, in terms of themes and topics, to designated occupations or areas of study and offer individualized instruction devised to meet the learner's specific needs (Brunton, 2009). However, none of them has any reference to the teacher's professional knowledge either in their frameworks or in their specification of functions. To put it more explicitly, the linking component between teachers' professional knowledge and ESP has remained largely under-researched and lacked a solid, agreed-upon basis in the field. Only a few studies (Ball et al., 2008; Hill et al., 2008) have tested whether there is indeed a distinct body of identifiable professional knowledge for different subject areas. And, in this regard, English for Specific Purposes (ESP) is again a missing paradigm. Since ESP teachers cannot design a language course unless they know something about the students for whom the course is intended (Farrell & Jacobs, 2020, Stronge, 2018), it is necessary that they also master the Knowledge for Specific Purposes to qualify for teaching in the ESP world and cope with future expectations.

Taking into account the recent developments in ELT (Hall, 2017), as well as the learners' changing objectives and interests (Basturkmen, 2014), there seems to be a need to revise and modify our current models to include the missing component and to provide a sound and solid structure from which practitioners and researchers can benefit in their efforts to meet the learners' evolving requirements. In this sense, the extended hybrid framework for Knowledge for Specific Purposes, which has been

demonstrated comprehensively in this study, might provide a basis for the connection between Teacher's Professional Knowledge and ESP and may shed some light on the situation.

First and foremost, ESP has some features that can be identified as typical of exclusive use of context (Farhady, 1994; Hutchinson & Waters, 1987). As a matter of fact, selective, specific, and restrictive use of language (Basturkmen, 2010, Hyland, 2002) is the main reason for the development of ESP. However, these differences should not be allowed to obscure the far larger area of common ground (teacher's professional knowledge) that underlies all language use. That's why, in the newly suggested framework in the study, Knowledge for Specific Purposes constitutes just one of the components of a teacher's professional knowledge.

Secondly, teachers' subject matter knowledge and pedagogical knowledge are to a large extent complementary and interrelated (Geddis, 1993; Shulman, 1987). In tandem with this, distinct subjects such as ESP require the integration of content and pedagogy (pedagogical content knowledge) for efficient instruction (Arno-Macia & Mancho-Bares, 2015). In any case, it is unimaginable for a teacher to have no awareness of the coursebook, the curriculum, the regulations of the education system, and the state's role in education (Basturkmen, 2019). For all those reasons, the reduced version of Shulman's concept (1986) again serves as one of the underpinnings of the model suggested in the present study.

Thus, the proposed knowledge base of Understanding and Awareness of Subject Matter may well provide a foundation for the connection between Teacher's Professional Knowledge and ESP. That is, by acquiring knowledge about the linguistic analysis, contextual relevance, and community-specific communicative

events of the related subject area (Awareness & Understanding of the Subject Matter) (Hyland & Hamp-Lyons, 2002), the ESP teacher might have the opportunity to develop the knowledge necessary for teaching, reflect on his/her practices more and help his/her students to internalize knowledge accordingly. Eventually, it would be in the teachers' best interest to first master Knowledge for Specific Purposes before they move on their journey in the brave new world of ESP.

One of the very first components that professional knowledge involves is subject matter knowledge (Gess-Newsome, 2015). Subject matter knowledge is a necessary condition for efficient instruction within the classroom (Hashweh, 1987, Leinhardt & Smith, 1985). A thorough understanding of the subject matter, the procedures, the methodology, and the principles has a significant impact on the pedagogical choices made by the teachers in their decision-making process (Loewenberg Ball, Thames & Phelps, 2008). In the course of the study, the chi-square analyses performed after the needs analyses found a strong common ground among ESP teachers and Subject Specialists (maritime-trained maritime English teachers) regarding the practice and application of ESP knowledge. While this outcome indicates the existence of a specific type of knowledge unique to the teaching of ESP in EFL contexts as being highly likely, it also supports the studies of Weiss & Miller (2006), Wenglisky (2000), and Barge (2012) in that they also focus on the content to teach and refer to subject-matter knowledge as a key element of teacher's professional knowledge. In the same vein, Borg (2001) reported that teachers with a good command of content, (that is language proficiency for language teachers) would be able to engage in discussions about various points, providing clear and concise explanations to the students, instead of giving indirect answers to their questions. Indeed, quite a few research reports (Cochran, DeRuiter & King, 1993; Hill, Rowan & Ball, 2005; Rowan, Chiang &

Miller, 1997; Shulman, 1987) propose that teachers who have a solid knowledge of subject matter tend to reflect on their practices more and help their students to internalize knowledge accordingly.

In summary, awareness, and understanding of the subject matter, as it was observed in the form of mastering a specific type of knowledge in the study, constitute the core of the professional knowledge, which in turn influences the teacher's attitude and behavior in classroom settings (Zeidler, 2002).

Efficient teaching is also based on the teacher's ability to convey information to students in classroom settings (Stronge, 2018). For instance, Grossman (1990) argued that the teachers' familiarization with literature changed their approach to the texts. In the same vein, Wilson and Wineburg (1988) showed how fields of graduation and background knowledge of social science teachers influenced the way in which they represent their subjects to the students. And Ball (1990) highlighted that teachers trained in biology teach physics courses differently than do teachers trained in physics or in chemistry, which is proof that specific knowledge in a discipline interacts with a totally different subdiscipline and influences the teaching carried out in the classroom. Credited with popularizing the concept of "pedagogical content knowledge" (PCK), Shulman (1987) wrote extensively about the notion of a specialized body of knowledge that only teachers possessed that distinguished them from others who might know a subject well but had no opportunity to develop the knowledge necessary for teaching.

On that account, apropos of the outcome obtained in this study, it would also be desirable for an EFL/ESP teacher to have the necessary professional knowledge that s/he could utilize in ESP settings.

The correlation results signify further that the more pedagogical content knowledge ESP teachers have, the more reading comprehension, and listening comprehension knowledge they have. Some scholars (Hutchinson & Waters, 1987; Hüllen, 2012; Robinson, 1991) contend that if you are proficient, ESP wouldn't matter. Yet, it seems it does. Overall, the main conclusion that can be drawn from the analyses is that the more ESP-oriented you are, the better you are going to be at reading comprehension and listening comprehension of Maritime English.

With the latest advances in language teaching, efforts to develop a practice-based theory of content knowledge for teaching built on Shulman's (1986) notion of pedagogical content knowledge have certainly gained momentum (Kleickmann et al., 2013; Segall, 2004). As the concept of pedagogical content knowledge became well-known, a number of empirical results (Hill et al., 2004; Schilling, 2007) suggested that content knowledge for teaching is multidimensional. There are indeed differences in the breadth of what the term includes and what teachers need to know, but there is still room for debate on how content knowledge is used in the ESP context and how much subject knowledge an ESP teacher should possess for a confident approach to ESP subject matter (Basturkmen, 2019).

If we are to apply these findings to the teaching of English for maritime purposes, it is important to note that many international organizations that investigate maritime safety reports contain numerous examples of shipping accidents in which language misunderstandings put the vessel, the people on board, and the environment at risk (Bocanegra-Valle, 2010, 2013). Thus, for students to achieve a proficient command of the English language in general, and Maritime English in particular, there is a need for ESP teachers who have good professional knowledge but also specific professional

knowledge (Knowledge for Specific Purposes) other than the teacher's professional knowledge.

Because ESP focuses on teaching particular language and communication skills (Belcher, 2009; Hyland, 2002), most ESP course designs include a requirements analysis step in which the ESP instructor determines what specific language and skills the group of language learners will require (Bocanegra Valle, 2010). To establish and enhance the material for the ESP course, the potential ESP Maritime English instructor is expected to have an understanding of how language and abilities are employed in the target environment (Bocanegra Valle & Basturkmen, 2019). Therefore, only by having specific professional knowledge, could ESP Maritime English teachers pay greater attention to terminology, structure, and style.

Maritime English education has an essential role to play in bridging the gap between cultures and eliminating mistakes due to multicultural environments and communication difficulties resulting from crew members speaking different languages (Demydenko, 2010, James et al., 2018). Therefore, achieving a satisfactory level of specific professional knowledge by ESP Maritime English teachers could be vitally important to ensure successful language training and overcome language barriers that can cause accidents.

Teachers' professional knowledge is a topic that will continue to hold the experts' attention. So far, the research (Harris & Sass, 2007; Hill, Rowan & Ball, 2005; Rowan, Chiang & Miller, 1997; Moats & Foorman, 2003) affirms that there is a positive correlation between teacher's professional knowledge and learners' achievement at all proficiency levels. Most of these studies indicate and validate the influence of professional knowledge on the practice of teaching. There are a lot of

components and sub-components of the concept and there may be more categories emerging through more research conducted in the field. Nevertheless, most of the research on content knowledge and pedagogical content knowledge which are significant facets of professional knowledge remains on a descriptive level and the connection between knowledge and practice has remained thinly developed.

Given the fact that learners have diverse needs (Belcher, 2009), there might never be perfect teaching/learning materials that can be used anywhere, anytime, for the same level of students. Nonetheless, the teacher should have the appropriate professional knowledge to address his/her specific target learners (Loughran, 2019). Even if a teacher must use a textbook for some reason, s/he still has to adjust it with the target learners by using his/her very own professional knowledge (Bocanegra-Valle, 2010). Eventually, it is the teacher who makes everything from nothing.

Therefore, the power of the idea that teaching in every field requires a special kind of professional knowledge (Ball et.al., 2008; Cai et. al., 2020; Shulman, 1987; Wilson & Berne, 1999) is well worth considering and could be regarded a kind of manifestation that ESP, as an approach, involves its own professional knowledge, which has been mapped and measured in the present study.

5.3 Implications

Two significant implications can be drawn from the study. The first one is the fact that there seems to be a gap in establishing a strong connection between teachers' professional knowledge and ESP. There have already been calls for a multidimensional representation of teachers' professional knowledge (Farhady, 2014; Farhady & Tavassoli, 2018; Hyland, 2002). However, without setting up an empirical foundation, it would be difficult, yet not impossible, for an EFL/ESP teacher to meet

the growing needs of learners and to adapt to all circumstances in particular settings such as ESP and EAP. Then, there is the issue of expertise. In some contexts, ESP teachers might need a reasonable understanding of the specific discipline (which is difficult if not impossible to achieve for a language teacher) the students are involved in (Dudley-Evans & St John, 1998). It is precisely this additional role that has endowed ESP teachers with the denomination of *practitioners* (Robinson, 1991). For this reason, it is hoped that the coherent theoretical framework and the proposed knowledge base (understanding and awareness of subject matter) described in the study might well provide both for ESP maritime English teachers the opportunity to develop the necessary knowledge for teaching in different contexts, reflect on their practices more, revamp their curriculum, and help their students to internalize knowledge accordingly.

Another implication that can be drawn from the study is that there has been an obvious need to set up a novel Professional Knowledge of Maritime English Test given that the existing ones lack an empirical and data-driven approach to the testing of specific purposes knowledge of maritime English teachers, which is already considered an important component/dimension of content knowledge. Hence, ESP, as an approach, definitely deserves a specific professional knowledge test related to maritime English and therefore, my attempt at developing a data-driven, valid and reliable test to measure this specific dimension related to the professional knowledge of ESP teachers could be regarded as a valid albeit modest contribution to the ELT academic community in general and ESP teaching contexts in particular.

5.4 Applications

The findings can be used in the classroom to encourage creativity in ESP maritime English settings. Although theoretical knowledge is not the only component of a teacher's knowledge base (Verloop et al., 2001), it is a prerequisite for development to begin. It is hard to enhance concepts or issues if one does not understand them. As a result, ESP maritime English teachers can use this proposed knowledge base (understanding and awareness of subject matter) to create a nurturing and motivating classroom environment because it can provide teachers with a unique set of knowledge (for each subject) that cannot be obtained through other reflective tools. The allure of this new knowledge base could also be due to the advantages it offers to ESP maritime English teachers. Once the teachers master this knowledge base, they are expected to add merit to the design, development, and evaluation of maritime English curriculums at their respective universities, to better respond to their student's needs and to continually support the improvement/quality of ESP maritime English teaching and learning.

Furthermore, ESP maritime English teachers could benefit from the newly developed Professional Knowledge of Maritime English Test to make decisions concerning instructional practices and enhance teacher effectiveness. To that end, they can resort to content knowledge and teaching resources sui generis to ESP/maritime English to foster innovation and transformation of teaching in ESP settings. The new professional knowledge test could also serve as a good model to develop similar data-driven tests measuring other aspects of teachers' professional knowledge. Furthermore, based on the performance of the ESP maritime English teachers taking the test, officials from maritime faculties or the private sector could have the opportunity to employ ESP maritime English teachers who are professionally skilled

and educated in the respective field. Ultimately, it would always be in the best interest of EFL/ESP teachers if they take the role of facilitators to create a supportive learning environment on their journey in the uncharted land of ESP.

Last but not least, however well-intentioned they are, a significant number of ELT teachers in Turkey still perceive ESP as just a collection of business words and grammar for businessmen, hotel words and grammar for the hotel industry, and so on. In tandem with this, language teachers in Turkey by and large consider ESP as a special form of the language that involves a particular type of methodology and teaching material. Of course, the teachers' attitudes towards ESP do not depend solely on their judgments. There seem to be other peripheral factors such as institutional demands, students' needs, and the professional development of the teachers. For this reason, I believe that the recent developments in ELT training programs in Turkey improved the professional development of EFL teachers to some extent but unfortunately lagged behind in providing a satisfactory amount of awareness of ESP/EAP issues. Understood properly, ESP should be based primarily on principles of effective and efficient learning. Therefore, it could well be suggested that there is an urgent need to change the mindset regarding the correct interpretation of English for Specific Purposes not only by training the teachers, but also the administrators.

5.5 Suggestions for Further Research

Lastly, the findings of this study can also be used for the improvement of the quality of maritime English teaching at the target universities. Based on the research results, each area of study in ESP can emulate and build up its framework to foster interaction and create synergy within its respective ESP programs. Finally, a number of recommendations could be made for the target universities or those with similar contexts to enhance the effectiveness of teaching at their respective ESP programs.

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Appendix A: Observation Checklist Forms

Observation Checklist 1

ESP Teacher: Col M. K. E. Observer: Mert Topkaraoğlu

Date of Observation: Tuesday, 17.09.19 Length of Observation: 45 Minutes

Subject: Maritime English 3

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond		×	
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 2

ESP Teacher: Col A. K.

Observer: Mert Topkaraoğlu

Date of Observation: Thursday, 26.09.19

Length of Observation: 45 Minutes

Subject: Maritime English 2

Item No	Items	Observed	Unobserved	Comments
	Instructional Plan			
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
	Instructional issues and delivery	**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible		×	
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 3

ESP Teacher: Dr. S. S. Observer: Mert Topkaraoğlu

Date of Observation: Friday, 11.10.19 Length of Observation: 40 Minutes

Subject: Maritime English 1

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing		×	
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 4

ESP Teacher: M. Ö. Observer: Mert Topkaraoğlu

Date of Observation: Monday, 21.10.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session		×	
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension		×	
3	Providing specific instructional feedback	✓		

Subject: Maritime English 2

Observation Checklist 5

ESP Teacher: C. T. G. Observer: Mert Topkaraoğlu

Date of Observation: Monday, 21.10.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge		×	
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Subject: Maritime English 1

Observation Checklist 6

ESP Teacher: Assoc. Dr. M. Ç. Observer: Mert Topkaraoğlu

Date of Observation: Thursday, 24.10.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension		×	
3	Providing specific instructional feedback	✓		

Subject: Maritime English 2

Observation Checklist 7

ESP Teacher: Prof. Ö. A. Observer: Mert Topkaraoğlu

Date of Observation: Thursday, 24.10.19 Length of Observation: 40 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible		×	
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Subject: Maritime English 2

Observation Checklist 8

ESP Teacher: Dr.Y. A. Ö. Observer: Mert Topkaraoğlu

Date of Observation: Tuesday, 12.11.19 Length of Observation: 40 Minutes

Subject: Maritime English 3

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session		×	
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 9

ESP Teacher: G. K. Observer: Mert Topkaraoğlu

Date of Observation: Tuesday, 12.11.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge		×	
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Subject: Maritime English 1

Observation Checklist 10

ESP Teacher: A. E. Observer: Mert Topkaraoğlu

Date of Observation: Wednesday, 20.11.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning		×	
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Subject: Maritime English 1

Observation Checklist 11

ESP Teacher: M. B. Observer: Mert Topkaraoğlu

Date of Observation: Friday, 22.11.19 Length of Observation: 45 Minutes

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session		×	
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond		×	
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Subject: Maritime English 2

Observation Checklist 12

ESP Teacher: E. T. Observer: Mert Topkaraoğlu

Date of Observation: Wednesday, 27.11.19 Length of Observation: 45 Minutes

Subject: Maritime English 2

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 13

ESP Teacher: N. G. Observer: Mert Topkaraoğlu

Date of Observation: Wednesday, 27.11.19 Length of Observation: 40 Minutes

Subject: Maritime English 1

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge		×	
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Observation Checklist 14

ESP Teacher: Y. E. Observer: Mert Topkaraoğlu

Date of Observation: Monday, 25.11.19 Length of Observation: 45 Minutes

Subject: Maritime English 1

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible		×	
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension		×	
3	Providing specific instructional feedback		×	

Observation Checklist 15

ESP Teacher: U. A. Observer: Mert Topkaraoğlu

Date of Observation: Monday, 12.10.20 Length of Observation: 45 Minutes

Subject: Maritime English 2

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning		×	
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond		×	
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 16

ESP Teacher: S. Ö. Observer: Mert Topkaraoğlu

Date of Observation: Monday, 12.10.20 Length of Observation: 35 Minutes

Subject: Maritime English 2

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach		×	
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension		×	
3	Providing specific instructional feedback		×	

Observation Checklist 17

ESP Teacher: E. Ş. Observer: Mert Topkaraoğlu

Date of Observation: Thursday, 22.10.20 Length of Observation: 35 Minutes

Subject: Maritime English 1

Item No	Items	Observed	Unobserved	Comments
	Instructional Plan			
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)		×	
3	Connection between today's session to previous/future sessions	✓		
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
	Instructional issues and delivery	**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge		×	
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible		×	
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session	✓		
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Observation Checklist 18

ESP Teacher: N. Y.

Observer: Mert Topkaraoğlu

Date of Observation: Wednesday, 21.10.20

Length of Observation: 40 Minutes

Subject: Maritime English 3

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge		×	
2	Using a variety of tools (visuals, objects etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning		×	
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Observation Checklist 19

ESP Teacher: T. Y. Observer: Mert Topkaraoğlu

Date of Observation: Tuesday, 27.10.20 Length of Observation: 40 Minutes

Subject: Maritime English 2

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session		×	
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond	✓		
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback		×	

Observation Checklist 20

ESP Teacher: G. G. Observer: Mert Topkaraoğlu

Date of Observation: Tuesday, 27.10.20 Length of Observation: 35 Minutes

Subject: Maritime English 3

Item No	Items	Observed	Unobserved	Comments
Instructional Plan				
1	Presenting overview of the ESP session	✓		
2	Planning different ways of grouping students as to coursebook (peer to peer, rotational, randomly mixed up, etc.)	✓		
3	Connection between today's session to previous/future sessions		×	
4	Presenting topics in a logical sequence	✓		
5	Fostering student-centered approach	✓		
Instructional issues and delivery		**Observed**	**Unobserved**	**Comments**
1	Level of command, interest, and enthusiasm for the subject matter/knowledge	✓		
2	Using a variety of tools (visuals, objects, etc.) to make input comprehensible	✓		
3	Providing multiple examples to foster active learning	✓		
4	Monitoring & Adjusting Pace & Timing	✓		
5	Allowing enough time for students to reflect on and respond		×	
	Review & Assessment	**Observed**	**Unobserved**	**Comments**
1	Summarizing the main points of the ESP session		×	
2	Checking for comprehension	✓		
3	Providing specific instructional feedback	✓		

Appendix B: Field Notes

Field Note 1

MKE – Field Note 1, Tuesday, 17/09/19 08:30

8:30 – Class begins.

8:33 - Teacher writes instructions for class on smartboard while students open their coursebooks.

8:35 - Teacher gives oral instructions for today's unit "Mine Warfare Ships".

8:40 - Silence – reading comprehension ensues.

8:45 – Teacher provides multiple examples to foster learning. He narrates his working experience on TCG Sokullu Mehmet Pasha which is a Rhein-type mine warfare ship.

8:50 – Teacher checks with a student about why he is not reading and circulates to see how other students are doing. He tells students to do comprehension and true/false exercises.

8:55 – Students finished with the reading task look up at the teacher.

9:00 – Teacher takes up answers for the reading task students are working on. He highlights key vocabulary on a smartboard.

9:05 – Teacher tells students to reread the passage, pay attention to the highlighted phrases and write their example sentences.

9:08 – Teacher assists one student to set up example sentences and understand phrases.

9:10 – Teacher tells students to listen to a conversation between an officer and an operator.

9:15 – Students listen again and act out the dialogue from the same activity.

9:13 – Teacher circulates room and helps individual students who are having difficulties in their roleplaying.

9:16 – Students use the same conversation to write a summary of a mine neutralization operation.

9:18 – Not all students finished the activity. The teacher tells students to prepare it in detail for the next class.

9:20 – Teacher concludes the class

Field Note 2

AK – Field Note 2, Thursday, 26/09/19 13:30

13:30 – ESP Maritime English 1 session begins.

13:33 - The teacher greets the students and asks how they are today. He gets a little bit amazed because of the low participation rate of the students. (Only 6 students attend the session).

13:35 - Teacher gives oral instructions for the related unit in the ESP coursebook.

13:40 – Students seem to be more interested in their mobile phones and classmates than the textbook itself and the instructions.

13:42 - Silence – Some students are having a hard time finding the related unit and the page. It is obvious that some of them have not come prepared.

13:45 – Teacher conducts kind of a grammar-translation method to teach the unit to the students.

13:50 – He reads the text by himself and explains it sentence by sentence.

13:55 – He uses the target language for communication, but he feels obliged to give the Turkish translations of most of the vocabulary instead of providing students the autonomy to work in pairs and guessing the meanings by themselves.

14:00 – Silence – reading comprehension ensues.

14:03 - Silence continues as students read.

14:04 – Students are finished with the reading task.

14:05 - Some students get totally disoriented (they cannot find the related reading task and follow the activities).

14:08 – Teacher checks answers for the reading passage students are working on.

14:09 – Teacher tells students to go back to the unit to do the writing task (resume template).

14:13 – Teacher helps one of the students to find the related page and do the activity.

14:17 – Silence – students are filling out the resume template.

14:20 – Teacher assigns the writing task as homework and tells them that he is going to check it thoroughly the next session. Teacher concludes the session.

Field Note 3

SS – Field Note 3, Friday, 11/10/19 10:30

10:30 – ESP Maritime English 2 session begins.

10:33 – Teacher gives instructions for the class while students are opening their Career Paths: Navy coursebook.

10:35 – Teacher tells students to read the passages about “Seamanship: Mooring” and “Seamanship: Anchoring”.

10:37 - Students engage in reading tasks by comparing both.

10:45 - Silence – reading comprehension ensues.

10:50 – Silence

10:53 – Teacher takes up answers for the reading comprehension activities and circulates to see how each student is doing.

11:00 - Teacher tells students to go back to the unit and look at the picture illustrating “Ship Structure: Exterior”.

11:05 – Teacher starts to explain the subject-specific vocabulary step by step.

11:10 – Students are following and most of them are taking notes into their notebooks and books.

11:13 – Teacher forms small groups for career-specific dialogues integrated into the related unit.

11:15 – Teacher instructs the students to work on the example and practice with their classmates in the groups.

11:17 - Teacher monitors and helps individual students who are having difficulties in role-playing.

11:18 – Students continue to practice the dialogues.

11:19 – There is not enough time for the next activity. Teacher assigns the following guided writing exercise as homework.

11:20 – Teacher concludes ESP session.

Field Note 4

MÖ – Field Note 4, Monday, 21/10/19 10:30

10:30 - ESP Maritime English 2 session begins.

10:33 – ESP Practitioner greets the students and asks how they are. He summarizes the key points of the previous session and reminds them to study and do their homework daily.

10:35 – Practitioner gives instructions for the related unit: Career Paths: Navy Coursebook Unit 4. He tells them to scan the passage about "Destroyers and Frigates".

10:40 - Students engage in reading task.

10:43 – Practitioner plays the audio on the smart board for the true (T) or false (F) statements.

10:45 – Students enthusiastically do the exercise. Upon teacher's instruction, they match the definitions to the correct terms and fill in the blanks.

10:55 – Practitioner circulates and checks if each student is correctly doing the activities. He specifically assists some of them who ask for verification.

11:00 – Students listen to the conversation between two officers. While they are listening, the practitioner writes some nautical vocabulary on the smartboard.

11:04 – Students do the comprehension questions one at a time. Practitioner tells them to crosscheck the answers with their pairs.

11:09 – Practitioner demands students to roleplay the same activity with their pairs.

11:14 – He circulates the class while students are practicing.

11:15 – Practitioner instructs students to focus on a writing activity about a POS mission. They are supposed to complete the notes by using the conversation from Task 5.

11:18 – Practitioner chooses randomly and tells students to read their notes. Other students listen and raise their hands.

11:20 – He instructs students to revise the vocabulary in the whole unit and come prepared for the next session.

11:21 – Practitioner concludes the session.

Field Note 5

CTG – Field Note 5, Monday, 21/10/19 09:30

9:30 – ESP Maritime English 3 session begins.

9:33 - ESP Practitioner greets the students. He asks how they are. He then asks two students to tell the whole class about the key points they learned in the previous session. [One of the students cannot manage to explain adequately].

9:35 – Practitioner (as a warm-up) starts asking questions about how it is possible to find where you are and where to go on open seas.

9:40 – Practitioner gives oral instructions for Unit 9: Navigation: Elements of Navigation

9:45 - Students engage in the online reading task and matching exercise.

9:50 - Silence – reading comprehension ensues.

9:55 – Silence -

9:56 – Practitioner takes up answers for the comprehension and matching-up exercises. In the meantime, he circulates and assists some of the students who are struggling to find the answers.

10:00 – Most of the students find out the right answers and finished with the activities. They look at the practitioner.

10:04 – Practitioner skips the next activity (word bank: fill in the blanks) and opens the speaking activity on the smartboard.

10:05 – He assigns two different dialogues to each pair of students and instructs them to act out.

10:08 – Speaking exercise ensues.

10:14 – Students switch roles and continue to act out the dialogues.

10:18 – Speaking activity – Practitioner, contented with the ongoing enthusiasm, feel obliged to intervene and give instructions for the last activity (writing) of the related unit.

10:19 – Unfortunately, no time left for the students to complete the writing activity (emergency course change).

10:20 – Practitioner concludes the session.

Field Note 6

MÇ – Field Note 6, Thursday, 24/10/19 14:30

14:30 – ESP Maritime English 2 session begins.

14:33 – ESP teacher greets students and asks how they are doing. Some students complain about the exam week, voicing their concerns about the busy schedule and not having enough time for anything.

14:35 – Teacher advises them not to procrastinate and do things daily.

14:38 - Teacher gives oral instructions for reading task in Merchant Navy Coursebook (Unit:13 Weather). He talks about how storms affect shipping operations and asks students what types of weather conditions seamen face.

14:45 - Students engage in reading task (weather reports).

14:50 - Silence – reading comprehension ensues.

14:55 – Silence [Students are doing the "fill in the blanks exercise" upon teacher's instruction.]

15:00 – Teacher takes up answers and circulates to see how other students are doing. Students are very eager to answer the questions. Looks like they like the passage and the activities.

15:05 – Teacher continues to talk about shipping operations in bad weather conditions. One of the students asks a specific question (anchoring and mooring in stormy weather), teacher eschews answering the question. [Most likely, he does not have that subject-specific professional knowledge as an ELT graduate].

15:10 – The teacher, looking confused, maneuvers and gives instructions for the listening activity.

15:15 – Students are listening to a conversation between a shipowner and a captain.

15:17 – They are listening again, this time, completing the conversation.

15:20 – Students are acting out the roles with their partners.

15:21 – Bell rings, there is not enough time for the last writing activity (crew memo feedback form). The teacher assigns it as homework and tells the students to review the vocabulary they learn today. Teacher concludes the session.

Field Note 7

ÖA – Field Note 7, Thursday, 24/10/19 10:30

10:30 – ESP Maritime English 3 session begins.

10:33 – ESP teacher greets the students. Because of an ongoing open sea training, there are only 12 students present in the class.

10:35 – Teacher starts to talk about some exterior parts of a ship above/below the waterline while students are opening the related unit from their Merchant Navy Coursebook.

10:40 – ESP teacher, as a subject specialist, looks very confident and knowledgeable about the parts of a ship and the nautical terms. Most of the students participate in the discussion before the teacher tells them to read the chapter from a seaman's guide.

10:45 - Students engage in an online reading task.

10:50 - Silence – Students are reading the sentence pairs to choose which word best fits each blank.

10:53 – Teacher takes up answers while students rush to answer the questions.

10:55 – Teacher seems much delighted by the high participation of students. He moves on to the next activity.

11:00 – Listening activity – Students are listening to a conversation between two students and completing the blanks.

11:05 – Teacher circulates and assists two students who seem disoriented.

11:10 – Teacher skips the speaking activity and gives instructions for the writing part.

11:15 – Silence – Students are supposed to fill out a diagram as regards the parts of a ship.

11:17 – Teacher circulates room to see if each student engages in.

11:18 – Teacher individually assists some of the students who are raising their hands.

11:20 – Two students volunteer to read aloud their diagrams. Teacher listens to them.

11:21 – Teacher tells the students to study the interior parts of a ship and prepare for the next unit.

11:22 – Teacher concludes the session.

Field Note 8

YAÖ – Field Note 8, Tuesday, 12/11/19 14:30

14:30 – ESP Maritime English 2 session begins.

14:33 – Teacher greets the students and asks if they are tired because of their ongoing open sea training. Most of them verbalize that even if they are extremely busy and tired, they are happy to get hands-on practice on ships.

14:35 – Teacher talks about cargo and container ships. He asks students how to load and discharge cargo. Only two students volunteer to speak out, the others remain silent.

14:40 – Students are looking at the poster and engaging in reading the related chapter about "Container Ships".

14:45 – Silence – Reading comprehension ensues. Some students are already finished with reading.

14:50 – Teacher narrates his experience with container ships. Students fervently listen to him.

14:52 – Teacher initiates a listening activity regarding an exchange of information about a cargo checklist between a ship and shore official.

14:55 – Silence – Students are filling out the forms.

14:57 – Most students ask subject-specific/off-unit queries (handling of special cargo, cargo transfer, spilling, etc.). Teacher circulates and answers them.

15:00 – Teacher continues with the speaking activity. He divides the class into two. One group represents shore, the other ship. They prepare a conversation about an imaginary cargo transfer.

15:05 – Students are busy with studying their roles – They are writing and rehearsing.

15:10 – Rehearsing ensues.

15:15 – Pairs act out their roles respectively in front of the class.

15:20 – The speaking activity continues. This time, students switch roles.

15:22 – Students seem to have enjoyed the activity. Teacher looks contented.

15:23 – Not enough time for covering the writing activity. Teacher concludes the session.

Field Note 9

GK – Field Note 9, Tuesday, 12/11/19 10:30

10:30 – ESP Maritime English 1 session begins.

10:32 – ESP Teacher greets the students. He recaps the key points and the vocabulary of the previous session and asks students where they are in their projects which some students hesitate to answer.

10:35 –Teacher gives oral instructions for the unit teaching "steering gear" in ships and tankers.

10:40 – As a warm-up, teacher asks students their opinions about how ships navigate.

10:45 – Teacher circulates the class to encourage them to speak out. Some students come up with definitive full answers while the majority remain silent or utter only one or two words.

10:50 – Students engage in reading a "memo" as regards giving steering commands.

10:55 – Teacher opens a YouTube video on the smartboard and tells students to take notes.

11:00 – Silence – Students watch the video. The footage demonstrates how helmsman relies upon visual references, a magnetic and gyrocompass to steer a steady course.

11:05 – Teacher circulates and asks questions about the video to enhance learning.

11:10 – Teacher takes up answers about the reading passage. Three students ask subject-specific additional questions about the video. Teacher successfully answers every one of them. It is obvious that he has a good command of subject matter.

11:15 – Teacher instructs students to listen to the conversation between a master and a helmsman. The audio does not function. He tries multiple times to play it but to no avail.

11:18 – Teacher skips that activity. He instructs students to imagine and write a conversation between a master and a helmsman. He jots down key vocabulary on the smartboard and tells them that they can make good use of the key vocabulary while constructing their conversation.

11:23 – It is already three minutes overdue, but the teacher does not give up. Maybe I am the reason he is not giving in. He may be feeling embarrassed about not covering the whole unit while I am observing.

11:24 – Nonetheless, he chooses two pairs to act out the dialogues. He concludes the session.

Field Note 10

AE – Field Note 10, Wednesday, 20/11/19 11:30

11:30 – ESP Maritime English 2 session begins.

11:33 – Teacher greets the students. He asks them how they react/help if any one of their workers gets injured on a ship. Three students raise their hands and express their opinions.

11:40 – Teacher gives oral instructions for the article about "First Aid Guide".

11:45 – Silence – Reading comprehension ensues.

11:50 – Silence – Students match the phrases with the definitions.

11:55 – Teacher circulates to see if each student does the activity successfully. Three students cannot match the phrases with the definitions. Teacher assists them.

12:00 – Teacher writes keywords on the smartboard. He highlights them and wants the students to give the definitions. Afterward, he writes example sentences and checks on whether students manage to comprehend.

12:05 – Teacher chooses one of the students and tells her to read the sentence pairs in the next activity.

12:10 – Teacher shows an infographic describing first aid. He illustrates the process step by step. Students seem to enjoy the infographic so much. Even if the ones that look sleepy, participate in the session. The teacher manages to attract attention by using visuals effectively.

12:15 – He tells students to listen to the conversation describing health conditions on ships. He plays the audio.

12:18 – Students take notes. They are filling out the missing parts in the conversation.

12:20 – For the writing activity, the teacher instructs the students to create a first aid feedback form by using the vocabulary they learn today.

12:23 – Silence – Students are thinking and writing.

12:24 – Teacher circulates to see if each student engages in the activity. He tells them to come to the next session with their final draft.

12:25 – Teacher concludes the session.

Field Note 11

MB – Field Note 11, Friday, 22/11/19 09:30

9:30 – ESP Maritime English 1 session begins.

9:33 – The classroom is crowded today. ESP teacher greets the students and asks how they are. He then goes directly to the smartboard and opens a YouTube video. It is a video of departments and divisions in the luxury cruiser Queen Mary 2.

9:35 – Silence – Students are eagerly watching the video.

9:40 – Video stopped. The teacher starts to talk about his work experience in a cruiser sailing from Italy to Morocco. Students listen zealously. It is apparent that they are so much interested.

9:45 – Teacher instructs them to open unit 11 from their coursebooks and read the passage about "Ship Organization: Departments and Divisions".

9:50 – Silence – Reading comprehension ensues.

9:55 – Silence – Students are matching up the phrases.

10:00 – Teacher takes up answers. Most students volunteer.

10:05 – Teacher continues to narrate his experience in a cruiser. Curious students ask off-topic questions. The teacher patiently answers them. Students look very attentive.

10:10 – Teacher divides students into three groups. They will act out a hypothetical conversation in the communications department of a transatlantic cruiser.

10:15 – Speaking activity – Students are busy studying for their roles.

10:20 – Due to time limitations, the teacher allows the ones who are already done to perform their roles.

10:23 – 3 different group of students perform their roles. Looks like they use the key vocabulary correctly and they comprehend the chapter well.

10:24 – No time for the remaining ones to perform. The teacher cannot touch upon the writing activity either. He tells students that he listens to their performance next session and he assigns the "writing activity" as homework.

10:24 – Teacher concludes the session.

Field Note 12

ET – Field Note 12, Wednesday, 27/11/19 10:30

10:30 – ESP Maritime English 3 session begins.

10:32 – ESP Practitioner greets the students. He asks them how they are and why some of the students are absent today. Students say that these students have duties for the upcoming ceremony.

10:35 –Practitioner gives oral instruction for chapter 5 “Ships: Submarines”.

10:40 – For the warm-up, the practitioner asks students which movies they have watched about submarines and what their favorite submarine movie is. All at once, the sleepy and peaceful atmosphere in the classroom has turned into a passionate and noisy one. Students come up with a variety of answers ranging from the classics “Das Boot” to the more recent ones like “Hunter Killer.

10:45 – Upon ensuring the necessary excitement, the practitioner instructs the reading passage and the comprehension questions.

10:50 – Silence – Reading comprehension ensues.

10:55 – Practitioner takes up answers. All students are attentive. They like the chapter.

11:00 – Students are filling in the blanks in the reading extract that demonstrates different types of (guided-missile submarine, a nuclear-powered submarine, etc.).

11:05 – Practitioner circulates and asks questions about different components of submarines to enhance learning. As a naval academy graduate, he seems very comfortable since some prankish students are throwing challenging questions at him.

11:10 – Practitioner opens the audio on the smartboard. Then, he plays YouTube videos. Students watch footage between a line officer and an engineer in an attack submarine.

11:15 – Practitioner instructs students to act out the dialogue with a partner.

11:18 – Silence – Students are working on their dialogues.

11:19 – Students perform their roles. They switch roles when the practitioner tells them to do.

11:23 – Not enough time left for the writing activity. The practitioner tells students to revise the vocabulary for the current chapter and come prepared for the following unit on Thursday. He concludes the session.

Field Note 13

NG – Field Note 13, Wednesday, 27/11/19 09:30

09:30 – ESP Maritime English 1 session begins.

09:33 – Teacher greets the students and asks how they are. Most of the students express that they are busy because of the projects. He tells them it is important to set up their schedule in advance and stick to it.

09:35 – Teacher asks the class how it is possible to communicate on ships without the help of radios or electronic devices. Some students (the ones that come prepared for the class) volunteer to answer. The teacher takes up answers and gives a short explanation.

09:40 –Teacher gives oral instructions for the unit about "visual communication".

09:45 – Silence – Reading Comprehension ensues.

09:50 – Teacher circulates the class to see if students engage in the activity. He opens the audio (for the same passage) and instructs students to listen.

09:55 – Silence – Students are completing the comprehension questions,

10:00 – After taking up answers, the teacher opens an internet website showing various semaphore flags. He wants students to write their names and surnames by using semaphore flags.

10:05 – Students like the activity so much. They enthusiastically try to write their names. It is a bit noisy in the classroom because most of them get help from their partners.

10:10 – Teacher chooses randomly and checks on if they learn the flags. He is happy that students are very willing.

10:15 – Teacher skips the writing activity. He directly moves along to the listening activity where students are supposed to listen to a conversation between two officers.

10:20 – Audio is playing – Students are marking the statements as true (T) or False (F).

10:22 – Teacher narrates his experience of using visual signals on a ship. He tells them there could be emergencies that students are to use signals effectively on ships. He gives specific examples to support his case.

10:23 – He instructs them to study and memorize flags. He gives writing activity as an assignment. Teacher concludes the session.

Field Note 14

YE – Field Note 14, Monday, 25/11/19 14:30

14:30 – ESP Maritime English 1 session begins.

14:33 – ESP teacher greets students and asks how they are doing. Some of them say they are OK and some of them say they are tired. The teacher just tells them they are military students, and they should have gotten used to the busy schedule by now.

14:35 – As a warm-up, the teacher asks students how they think the military personnel keeps up their daily living on ships, how a ship navigates, how potable water is provided, and so on.

14:38 – Out of 22, 3 or 4 students give satisfactory answers. The rest remains silent.

14:45 – The teacher goes to the smartboard and opens a video of the unit on "Ship Systems". He gives oral instruction to watch the video and answer the accompanying questions.

14:50 - Silence – Students are watching the video.

14:55 – Silence [Students are doing the comprehension questions].

15:00 – Students volunteer. Teacher takes up answers and circulates to see how other students are doing. Students are very enthusiastic to answer the questions. Looks like they like the video about ship systems.

15:05 – Teacher continues to talk about ship systems, this time propulsion, mooring, and compressed air systems. One student asks for a saltwater system and the other one about a drainage system. The teacher explains with multiple examples and tells one of his memoirs about a failed potable water system.

15:10 – Teacher gives instructions for the speaking activity. He divides the class into groups and gives each one a different scenario about ship systems. Students have different roles (navigation officer, engineer, sailor, etc.) in each group and they are supposed to act out their roles.

15:15 – Silence – [Students are working on their roles]

15:17 – The teacher assists two groups who have difficulty in identifying and allocating the roles.

15:20 – Three groups successfully act out their roles. The teacher waits for the other ones.

15:21 – Bell rings. The teacher tells the remaining groups to finalize their work for the next session.

Field Note 15

UA – Field Note 15, Monday, 12/10/20 14:30

14:30 – ESP Maritime English 2 session begins.

14:33 – Teacher greets the students and asks how they are. He tells students they have a guest today and introduces me to the class. As this is the last course of the day, most students look a little bit tired.

14:35 – Teacher starts to talk about command structure in military vessels. He asks students if they know the military organizations on ships. Some students volunteer to answer, others remain silent.

14:40 – Teacher opens a video of the unit on the smartboard. He tells them to take notes while watching.

14:45 – Silence – Students are watching the video.

14:50 – Teacher randomly asks comprehension questions. Some students cannot answer. The teacher goes to the smartboard, highlights key vocabulary, and starts the same video again.

14:55 – This time, comprehension is done and dusted. The teacher gives oral instructions for the speaking activity. He groups students and assigns different roles within each group. Students are expected to communicate according to scenarios such as a distress call, position of ships, time to complete a course, etc.

15:00 – Silence – Students are working on their roles (Executive Officer (XO), Senior Watch Officer, etc.).

15:05 – Students perform their roles in groups. Teacher interrupts and assists when students are stuck.

15:10 – Teacher seems to be not satisfied with the performance of some scenarios. He gives specific instructional feedback as regards vocabulary and context.

15:15 – Teacher gives multiple examples about his experience on ships. Students are interested. Teacher opens another video, this time from a movie called “U-571” and tells students to pay attention to the communication among the departments.

15:20 – Teacher summarizes the main points of the session.

15:22 – He assigns the writing activity “Describing someone’s record” as homework.

Field Note 16

SÖ – Field Note 16, Monday, 12/10/20 10:30

10:30 – ESP Maritime English 3 session begins.

10:32 – Teacher greets the students. First things first, He summarizes the key points of the previous lesson and checks understanding. Then, he starts to talk about new types of ships that are recently built and put into the inventory of Naval Forces.

10:35 –Teacher asks students what they know about the LHD type of aircraft carrier TCG Anadolu that is expected to be completed in 2020. Most students volunteer to voice their opinions. Some can give detailed information about the prospective ship.

10:40 – Teacher gives oral instructions for unit 5 "Aircraft: Parts of an Aircraft".

10:45 – Silence – Reading Comprehension ensues. Students are also working on true (T) or false (F) statements.

10:50 – Teacher takes up answers and circulates to see if each student engages in the activity. He then starts a video showing the construction process of the light aircraft carrier TCG Anadolu. Students are more than attentive and happy about the video.

10:55 – Silence – Students are watching the construction stages of an aircraft carrier.

11:00 – Teacher shows multiple exams on the smartboard to foster learning.

11:05 – He then divides the class into groups. Each group is tasked with working on different parts of an aircraft and presenting it to the class.

11:10 – Teacher circulates and assists groups who are having difficulties in preparing their part. In the meantime, some students ask many subject-specific questions (electronic warfare, unmanned aerial vehicles, etc.) about aircraft carriers. He gives sufficient and detailed responses to each of them.

11:15 – Groups are presenting their respective aircraft parts and departments to the class. Other students listen and ask questions at the end of each presentation.

11:18 – Teacher only intervenes when one group is unable to answer the questions.

11:19 – He gives specific instructional feedback and ensures students comprehend.

11:22 – He reviews the key vocabulary of the unit and tells students to revise it in their working hour. He assigns writing activities as homework and concludes the session.

Field Note 17

EŞ – Field Note 17, Thursday, 22/10/20 09:30

9:30 – ESP Maritime English 2 session begins.

9:33 - ESP Practitioner greets the students. He then summarizes the previous lesson and asks two students to tell the main points.

9:35 – He sets up a connection between today's session (Cargo Handling & Storage) to previous session (Loading & Discharging).

9:40 – Practitioner starts to talk about different kinds of cargo and asks students how they think vehicles, petrol, explosives, etc. are handled and transported. Some students volunteer and speak out.

9:45 – H opens a video on the smartboard. The video is showing how a variety of cargo (live cargo, dusty goods, grain) is loaded on a ship and transported. Students look more than interested.

9:50 - Silence – Students are watching and taking notes.

9:55 – Practitioner takes up answers for the comprehension questions. He then opens audio regarding a radio communication between a chief engineer and a shore official. Students are expected to comprehend what the conversation is mainly about.

9:57 – Practitioner circulates to see if students engage in the activity.

10:00 – After listening two times, some students complain they miss some points, so the practitioner plays it a third time. At the same time, he circulates and assists some students.

10:05 – Students have many difficulties in understanding radio communication. The practitioner is aware of that.

10:08 – Practitioner goes to the smartboard and write the key vocabulary that takes place in the radio communication. He wants students to prepare their version with their partners and act out.

10:12 – Silence – Activity ensues.

10:18 – Practitioner circulates in the classroom and checks understanding. He gives specific instructional feedback to some pairs.

10:21 – Some pairs volunteer to act out their conversation. They are pretty good. Unfortunately, not every pair is that successful in roleplaying their dialogue.

Field Note 18

NY – Field Note 18, Wednesday, 21/10/20 10:30

10:32 – ESP Teacher greets the students. Approximately half of the students are absent today because of their duties in the upcoming ceremony. Firstly, the teacher sums up the important points from the previous session and asks students if they have any questions. Nobody raises their hand.

10:35 –Teacher gives oral instructions for today's chapter "Damage Control". He asks students what kind of precautions they would take in case of a fire on the ship. He wants them to tell these stage by stage.

10:40 – Three students volunteer and give accurate answers. Others remain silent.

10:45 – Teacher makes mention of a small fire accident he experiences while he is working on a Cruise ship. Students listen carefully.

10:50 – Teacher starts a video showing a fire accident on a cruise ship.

10:55 – Silence – Students watch a YouTube video. The footage demonstrates how a fire-fighting unit successfully extinguishes a fire.

11:00 – Teacher checks understanding by asking comprehension questions. Then, he does the matching-up exercise with the whole class.

11:05 – Teacher divides the class into groups. Everyone has different roles in the group. One student is tasked with a damage control unit, the other is a firefighter, etc.

11:10 – Silence – Students work on a hypothetical emergency. They write down and memorize their roles.

11:15 – Teacher circulates to see if each group engages in the activity. Some students in the groups ask detailed subject-specific questions. Teacher gives specific instructional feedback.

11:18 – Students act out their roles. Some groups perform well but most of them get stuck. Realizing this, the teacher goes to the smartboard and gives multiple examples to foster learning.

11:20 – Teacher encourages some groups to act out their work again. This time, their performance is better.

11:23 – Teacher opens footage (compartmentalization) on YouTube to enhance learning.

11:24 – Not enough time to discuss the video. Teacher concludes the session.

Field Note 19

TY – Field Note 19, Tuesday, 27/10/20 09:30

9:30 – ESP Maritime English 1 session begins.

9:33 – The classroom is crowded today. First, the teacher asks students how they are. Then, he refers to the previous ESP session "Military Discipline & Uniforms" and checks their comprehension. Afterward, as a warm-up, he starts to talk about shipboard duties such as painting, maintenance, and preservation.

9:35 – Teacher gives oral instructions for a unit about "Shipboard Duties".

9:40 – Silence – Reading comprehension ensues.

9:45 – Teacher says there is a saying in the Navy: "If it moves, salute it; if it doesn't, paint it". It is comical but it reflects a serious truth. As the saying suggests, the teacher tells the students that one of the most common duties is painting. Students like it and get the gist of the topic.

9:50 – Teacher takes up answers. He then goes on to the smartboard and opens a video.

9:55 – Silence – Students watch the video and mark the statements as true (T) or false (F).

10:00 – Teacher takes up answers. He then writes key vocabulary on the smartboard and chooses students to give definitions.

10:05 – Teacher looks he has the appropriate level of subject knowledge for the topic in the chapter. He initiates audio.

10:10 – Student listen to a conversation between a seaman and an officer. Teacher circulates to see if students engage in the activity (choosing the correct answers). He plays it a second time since some students cannot make it.

10:15 – Teacher tells students to act out the same activity. One of the students would talk about maintenance tasks, the other one would suggest proper methods and materials needed.

10:20 – Due to time limitations, the teacher keeps the speaking activity short and moves on to the writing activity. He divides students into groups and gives instructions for completing the sample "Ship's Maintenance Log".

10:23 – 4 different group of students read out their logs. Looks like they master the necessary vocabulary.

10:24 – No time for the remaining ones to read out their work. Teacher concludes the session.

Field Note 20

GG – Field Note 20, Tuesday, 27/10/20 14:30

14:30 – ESP Maritime English 2 session begins.

14:33 – There are approximately 22 students in the classroom. Firstly, teacher asks two students to tell what they learn from the previous session. Students try to summarize the main points.

14:35 – Teacher appreciates the students. He tells students that the Navy accesses shores all around the world and mooring to a pier is not always possible. He asks what happens in such circumstances.

14:40 – Students who come prepared volunteer and voice their opinions. Teacher encourages others to speak out.

14:45 – Teacher gives oral instructions for unit "Seamanship: Anchoring".

14:50 – Silence – Reading comprehension ensues.

14:55 – Students mark true/false statements. Some students ask subject-specific questions about anchoring (ground shackles, being aweigh, and hawsepipe). The teacher just answers ground shackles and maneuvers not to answer other concepts. He tells them to watch the video.

15:00 – Teacher starts a video showing the steps in anchoring.

15:05 – Same students repeat the questions however teacher moves on to the matching-up exercise.

15:10 – Teacher allows enough time for students to reflect on and respond. Then, he randomly places students into pairs. One student is a seaman on the bridge, the other is a seaman on the forecastle.

15:15 – Students are preparing their hypothetical conversation about weighing anchor.

15:20 – The ones who finish early act out their dialogues with a partner.

15:22 – Teacher circulates and assists when it is necessary. Students seem to have enjoyed the activity.

15:23 – Teacher assigns the next activity (weighing anchor report) as homework. Teacher concludes the session.

Appendix C: Approval of Ethics Committee

YEDİTEPE ÜNİVERSİTESİ BEŞERİ VE SOSYAL BİLİMLER ETİK KURULU KOMİSYONU

18.02.2021 TARİHLİ
15/2021 No'lu TOPLANTI KARARLARI

11) Yeditepe Üniversitesi, Eğitim Bilimleri Enstitüsü İngiliz Dili Eğitimi Doktora Programı öğrencilerinden Mert Topkaraoğlu'nun "Assessing Professional Knowledge of ESP Teachers/Özel Amaçlı İngilizce Öğretmenlerinin Mesleki Bilgisinin Ölçülmesi) başlıklı araştırmasının Beşerî Bilimler etik standartlarına uygunluğu Yeditepe Üniversitesi Beşerî ve Sosyal Araştırmalar Etik Kurulu tarafından değerlendirilmiş ve onaylanmıştır.

Prof. Dr. Suat ANAR

Etik Kurul Komisyon Başkanı

İletişim Fakültesi, Gazetecilik Bölümü

Prof. Dr. Servet BAYRAM

Eğitim Fakültesi, Bilgisayar ve Öğretim Teknolojileri Öğretmenliği Bölümü

Prof. Dr. Sultan ÜZELTÜRK

Hukuk Fakültesi, Hukuk Bölümü

Prof. Dr. Ayla ERSOY

Güzel Sanatlar Fakültesi, Sanat Yönetimi Bölümü

Prof. Dr. Saffet BABÜR

Fen Edebiyat Fakültesi, Felsefe Bölümü

Prof. Dr. Zeynep Aslı ALICI

Ticari Bilimler Fakültesi, Uluslararası Finans Bölümü

Prof. Dr. Mehmet BAYRAKTAR

Fen Edebiyat Fakültesi, Antropoloji Bölümü

Appendix D: Informed Consent Forms

Informed Consent Form for Questionnaires

I agree to participate in a study that investigates the professional knowledge and the quality of ESP currently implemented at a number of Maritime Faculties respectively. I am aware that my responses will be kept anonymous and my name will not be used in the reports.

Name : _____

Signature : _____

Date : _____

The Researcher

Mert Topkaraoğlu

Lecturer, Navy Commander

Naval Academy, Heybeliada Campus

34973 Heybeliada/Adalar

İSTANBUL

The Study Advisor

Dr. Hossein Farhady
PhD TEFL Program
Graduate School of Educational Sciences
34755 Ataşehir
İSTANBUL

Consent Form for In-Person Interview

In signing this document, I am giving my consent to be interviewed as part of a research study being conducted by Mert Topkaraoğlu, a Ph.D. student from Yeditepe University. The information I share in the interview will help the researcher to investigate the professional knowledge and the quality of ESP programs currently implemented at a number of Maritime Faculties.

I understand that I will be interviewed at a time convenient to me in this academic year of 2019. The interview will take about 30 minutes to complete and it will be tape-recorded.

I understand that I only need to say what I feel comfortable in saying.

I understand that participation is voluntary, and I have been informed that I may withdraw during the interview process without negative consequences or penalties to me by informing the researcher.

I understand that all information will be kept confidential. My name will not be identified in any reports or presentations. Anonymity will be secured by the use of pseudonyms for teachers in all forms of project dissemination. Data (audiotapes and transcripts) will be kept locked in a secure location accessible only to the researcher. The data will be used in the study and will be destroyed after the research is completed.

I understand that the results of this study may be published in journals and that some direct quotes from my interview may be used. However, my name will not be identified in any quotes.

I HAVE CAREFULLY READ THE INFORMATION ABOVE AND UNDERSTOOD THIS AGREEMENT.
I AGREE TO PARTICIPATE IN THE PROJECT UNDER THE CONDITIONS DESCRIBED ABOVE.

Participant Name: _____
(Please write clearly)

Participant Signature: _____

Date: _____

Appendix E: An invitation to the Doctorate Study about English for Specific Purposes

Mert TOPKARAOĞLU
Öğretmen Yarbay
Milli Savunma Üniversitesi Deniz Harp Okulu Heybeliada Yerleşkesi

Sayın İlgili,

Özel amaçlı İngilizce öğretimi (ESP- English for Specific Purposes) üzerine doktora tezi çalışmamı hazırlamaktayım. Tezimi ilgilendiren kısa bir anketimi doldurarak araştırmama destek olmanızı rica ediyorum. Katılımınız gönüllülük esasına dayalıdır. Tezimde özel amaçlı İngilizce öğretimi bağlamında denizcilik İngilizcesini kapsayan mesleki bilgi araştırılmaktadır.

Bu araştırma aynı zamanda; öğretim üyesi/öğretim görevlisi, öğrenim gören öğrenciler/mezunlar, ders materyalleri gibi birçok farklı alandan bilgi toplayarak veri güdümlü, denizcilik İngilizcesi öğretimine özel mesleki bir bilgi testini geliştirmeyi amaçlamaktadır. Çalışmanın sonuçları bu alanda görev yapan öğretim üyeleri ve görevlilerinin eğitim müfredatlarını olumlu yönde geliştirmelerine imkân verebilecektir. Kimliğiniz ve ankete verdiğiniz cevapların hiçbir şekilde paylaşılmayacağını, sadece projenin amaçları doğrultusunda kullanılacağını taahhüt ederim.

Değerli geribildirimlerinizin projenin başarısına çok önemli katkıları olacağı inancını taşımaktayım. Bu hususta kurumunuzda yüz yüze bir görüşme yapabilmem adına randevu vermenizi istirham ederim.

Ankete internet üzerinden erişilebilmektedir. Sorun yaşandığında lütfen Google Chrome veya farklı bir internet tarayıcısında açmayı deneyiniz.

Desteğiniz için teşekkür ederim.

Saygılarımla.

Mert TOPKARAOĞLU
Öğretmen Yarbay

Milli Savunma Üniversitesi Deniz Harp Okulu Heybeliada Yerleşkesi K. lığı
34973 Heybeliada, Adalar, İstanbul

Mert TOPKARAOĞLU
Öğretmen Yarbay
Milli Savunma Üniversitesi Deniz Harp Okulu Heybeliada Yerleşkesi

Dear Colleague,

I am a doctoral student at Yeditepe University and currently conducting a study on English for Specific Purposes (ESP) and would like to invite you to participate by responding to this web-based survey. More specifically, this study undertakes the investigation of professional knowledge that includes the requirement of ESP teaching.

In addition, this study is designed to develop a data-driven professional knowledge test through collecting data from multiple information sources including teachers, students, and the coursebook materials.

The findings of this study may also help teachers to make informed decisions for the program development. It will take approximately 10 minutes to complete this survey. Your participation in this research is voluntary. Your identity will be anonymous, and all your responses will be kept confidential and used for this study only.

Your valuable feedback will make a significant contribution to the success of this study. On this matter, I would like to have an appointment to pay a visit to your institution for discussing the study.

If you have any problems accessing the survey on the internet, please try opening the survey via Google Chrome or any other web browser.

Thank you very much for your cooperation.

Mert TOPKARAOĞLU
Lecturer, Navy Commander

Naval Academy
National Defense University
Heybeliada Campus
34973 Heybeliada, Adalar, İstanbul

1.Denizcilik fakültelerinde öğrenim görmekte olan öğrencilere yönelik anket

Questionnaire for Students:

https://forms.gle/qCCZBZhyVSsfjR4x9

2. Denizcilik İngilizcesi dersi veren İngilizce öğretmenlerine yönelik anket

Questionnaire for English Language Teachers (Teaching ESP):

https://forms.gle/C1758Dmu1pbjws9XA

3. Denizcilik Fakültelerinin İngilizce hazırlık okullarında görev yapan İngilizce öğretmenlerine yönelik anket (Denizcilik İngilizcesi dersine girmeyenler, Genel İngilizce öğretenler)

Questionnaire for ELT Teachers :

https://forms.gle/DbAB3TTUJBMhJR3k8

4. Alan Uzmanları (İngilizce öğretmenliği mezunu olmayıp denizcilik İngilizcesi dersini veren öğretim üyeleri/öğretim görevlilerine yönelik anket)

Questionnaire for Subject Specialists:

https://forms.gle/d2Kwyze7zWeyTxSaA

5. Mezunlar (Denizcilik Fakültesi mezunu yönetici, akademisyen, Gemi Kaptanı, Başçarkçı vs. yönelik anket

Questionnaire for Graduates:

https://forms.gle/cJHfrCroAhsC8jAm7

Appendix F: Questionnaire for English Language Teachers

This questionnaire is prepared to collect information about the quality of ESP programs currently implemented at a number of Maritime Faculties. It is not designed to evaluate the students' achievement or the teachers' effectiveness. Feel free not to sign your name if you do not want to.

Please check the option ☒ or circle the number that most closely corresponds to your opinion or provide clear answers for open-ended questions.

PART I: Background Information

1. I am teaching students from _____ department/s.

□ Marine Engineering Operations

□ Naval Architecture and Marine Engineering

□ Shipbuilding and Ocean Engineering

□ Maritime Transportation Management Engineering

□ Maritime Business Management

□ Ship and Yacht Design

□ Others

2. How long have you been teaching at the School of Foreign Languages?
For _____ years.

3. Major:
□ ELT (English Language Teaching) □ Linguistics □ Translation

□ Literature □ Others (please specify): _____

4. Degree:

□ Bachelor's □ Master's □ Doctoral Candidate/Doctorate

5. How long have you taught General English at universities/colleges:
□ Under 6 years □ 6 to 10 years

□ 11 to 15 years □ More than 15 years

6. What courses are you currently teaching?

_____

_____

Please turn the page

PART II: Language Needs of Students and Teachers

For question 1, please refer to the scale in the table and circle the number that most closely corresponds to your opinion.

1. In your opinion, how important is it for your students to be able to perform the following tasks in English?

		in your English language courses				in the maritime profession			
STATEMENT / SCALE		not at all important	not so important	important	very important	not at all important	not so important	important	very important
A	To understand spoken instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	To read materials related to maritime issues	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	To engage in personal communication	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	To read manuals/instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
E	To write business letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to do in English,
in your English language courses:

_____

_____

in the maritime profession:

_____

_____

2. What minimum level of English do you think your students need to be successful in their profession?

□ C2 Proficient
□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate

Please turn the page

For question 3, please refer to the scale in the table and circle the number that most closely corresponds to your opinion.

3. In your opinion, how often is each of the following language skills used in your English language courses and the maritime profession?

LANGUAGE SKILLS	in your English language courses				in the maritime profession			
	never	**rarely**	**usually**	**always**	**never**	**rarely**	**usually**	**always**
Reading	1	2	3	4	1	2	3	4
Writing	1	2	3	4	1	2	3	4
Listening	1	2	3	4	1	2	3	4
Speaking	1	2	3	4	1	2	3	4
Grammar	1	2	3	4	1	2	3	4
Vocabulary	1	2	3	4	1	2	3	4

For questions 4-7, please refer to the scale below and circle the number that most closely corresponds to your opinion.

4. In your opinion, how important is it for your students to be able to write each of the following in English in your English language courses and the maritime profession?

		in your English language courses				in the maritime profession			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Reports	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Business Letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Projects	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
E	Emails	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to write in English,
in your English language courses:

_____

_____

in the maritime profession:

_____

_____

Please turn the page

5. In your opinion, how important is it for your students to be able to read each of the following in English <u>in your English language courses and the maritime profession?</u>

		in your English language courses				**in the maritime profession**			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Weekly magazines	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Academic journals and publications	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Manuals/product descriptions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Signs, rules, and notices	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to read in English,

<u>in your English language courses:</u>

_____

_____

<u>in the maritime profession:</u>

_____

_____

6. In your opinion, how important is it for your students to listen to and understand each of the following <u>in your English language courses and the maritime profession?</u>

		in your English language courses				**in the maritime profession**			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**Very important**
A	Conversations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Presentations and discussions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Radio and television programs and other English media	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please turn the page

Please specify other points that you think are important for your students to be able to listen to in English,
in your English language courses:

_____

_____

in the maritime profession:

_____

_____

7. In your opinion, how important is it for your students to be able to perform the following tasks in your English language courses and the maritime profession?

		in your English language courses				**in the maritime profession**			
STATEMENT / **SCALE**		**not at all important**	**not so important**	**important**	**Very important**	**not at all important**	**not so important**	**important**	**Very important**
A	Introducing oneself and others in a variety of situations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Stating opinion about different topics	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Making requests (i.e. for further information or confirmation)	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Giving a presentation	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

8. Do you think your students will have proficiency in English to follow the English-based content courses (English for Specific Purposes courses) after they complete the preparatory class?

□ Yes □ No

If your answer is no, please explain your reasons:

_____

_____

Please turn the page

9. If you had the opportunity, what recommendations would you like to make in the current English language program at the Preparatory School?

_____
_____
_____
_____

Could you please sign your name to indicate that you filled out the questionnaire?

Signature

THANK YOU FOR YOUR COOPERATION…

Appendix G: Questionnaire for English Language Teachers (Teaching ESP)

This questionnaire is prepared to collect information about the quality of ESP programs currently implemented at a number of Maritime Faculties. It is not designed to evaluate the students' achievement or the teachers' effectiveness. Feel free not to sign your name if you do not want to.

Please check the option ☒ or circle the number that most closely corresponds to your opinion or provide clear answers for open-ended questions.

PART I: Background Information

1. I am teaching students from _____department/s.

□ Marine Engineering Operations

□ Naval Architecture and Marine Engineering

□ Shipbuilding and Ocean Engineering

□ Maritime Transportation Management Engineering

□ Maritime Business Management

□ Ship and Yacht Design □ Others

2. How long have you been teaching at the Maritime Faculty?

For _____ years.

3. Major:
□ ELT (English Language Teaching) □ Linguistics □ Translation

□ Literature □ Others (please specify): _____

4. Degree:

□ Bachelor's □ Master's □ Doctoral Candidate/Doctorate

5. How long have you taught General English at universities/colleges:
□ None □ Under 6 years □ 6 to 10 years

□ 11 to 15 years □ More than 15 years

6. How long have you taught English for Specific Purposes at universities/colleges:
□ Under 6 years □ 6 to 10 years

□ 11 to 15 years □ More than 15 years

7. What courses are you currently teaching?

_____

Please turn the page

PART II: Field Knowledge in ESP Teaching and Learning

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	Teaching ESP is demanding for me				
2	There are specific methods and approaches for teaching ESP				
3	It is necessary to include subject matter in the content of an ESP course				
4	An ESP teacher must be knowledgeable in content areas of ESP				
5	Teaching at the Maritime Faculty helps teachers to obtain knowledge of Maritime English				

PART III: ESP instructional issues & Delivery

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	There is a wide range of ESP teaching resources				
2	Current ESP materials give students the language proficiency necessary for their disciplines				
3	Teachers are given opportunities to make appropriate changes in ESP materials to meet the specific needs of their students				
4	Midterms and finals are the primary means for assessing the language ability of ESP students				
5	Teachers are not concerned about the current textbooks and materials in use at the faculty				

Please turn the page

PART IV: Language Needs of Students and Teachers

For question 1, please refer to the scale in the table and circle the number that most closely corresponds to your opinion.

1. In your opinion, how important is it for your students to be able to perform the following tasks in English?

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		not at all important	not so important	important	Very important	not at all important	not so important	important	Very important
A	To understand spoken instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	To read materials related to maritime issues	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	To engage in personal communication	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	To read manuals/instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
E	To write business letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other skills that you think are important for your students to be able to do in English,
in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

2. What minimum level of English do you think your students need to follow your ESP courses?

□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate
□ A2 Elementary

Please turn the page

3. What minimum level of English do you think your students need to be successful in their profession?

□ C2 Proficient
□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate

For question 4, please refer to the scale in the table and circle the number that most closely corresponds to your opinion.

---

4. In your opinion, how often is each of the following language skills used in your ESP courses and the maritime profession?

LANGUAGE SKILLS	**in your ESP courses**				**in the maritime profession**			
	never	**rarely**	**usually**	**always**	**never**	**rarely**	**usually**	**always**
Reading	1	2	3	4	1	2	3	4
Writing	1	2	3	4	1	2	3	4
Listening	1	2	3	4	1	2	3	4
Speaking	1	2	3	4	1	2	3	4
Grammar	1	2	3	4	1	2	3	4
Vocabulary	1	2	3	4	1	2	3	4

For questions 5-8, please refer to the scale below and circle the number that most closely corresponds to your opinion.

---

5. In your opinion, how important is it for your students to be able to write each of the following in English in your ESP courses and the maritime profession?

		in your ESP courses				**in the maritime profession**			
STATEMENT / **SCALE**		**not at all important**	**not so important**	**important**	**Very important**	**not at all important**	**not so important**	**important**	**very important**
A	Reports	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Business Letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Projects	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please turn the page

Please specify other points that you think are important for your students to be able to write in English,
in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

6. In your opinion, how important is it for your students to be able to read each of the following in English in your ESP courses and the maritime profession?

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**Very important**	**not at all important**	**not so important**	**important**	**Very important**
A	Weekly magazines	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Academic journals and publications	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Manuals/product descriptions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Signs, rules, and notices	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to read in English,
in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

Please turn the page

7. In your opinion, how important is it for your students to listen to and understand each of the following <u>in your ESP courses and the maritime profession?</u>

		in your ESP courses				**in the maritime profession**			
STATEMENT / **SCALE**		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Conversations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Presentations and discussions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Radio and television programs and other English media	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to listen to in English,
<u>in your ESP courses:</u>

_____

_____

<u>in the maritime profession:</u>

_____

_____

8. In your opinion, how important is it for your students to be able to perform the following tasks <u>in your ESP courses and the maritime profession?</u>

		in your ESP courses				**in the maritime profession**			
STATEMENT / **SCALE**		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Introducing oneself and others in a variety of situations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Stating opinion about different topics	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Making requests (i.e. for further information or confirmation)	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Giving a presentation	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

9. If you had the opportunity, what recommendations would you like to make in the current ESP program at the Maritime Faculty?

_____

_____

_____

10. Would you like to participate in an interview to clarify any issues that might not be covered in this survey? Your contribution is highly appreciated. Put a check (✓) in the corresponding space.

A) Yes _____ B) No _____

If <u>yes</u>, please provide your contact details along with a preferred time for receiving calls and sign your name.

<u>Signature</u>

THANK YOU FOR YOUR COOPERATION…

Appendix H: Questionnaire for Subject Specialists

This questionnaire is prepared to collect information about the quality of ESP programs currently implemented at a number of Maritime Faculties. It is not designed to evaluate the students' achievement or the teachers' effectiveness. Feel free not to sign your name if you do not want to.

Please check the option ☒ or circle the number that most closely corresponds to your opinion or provide clear answers for open-ended questions.

PART I: Background Information

1. I am teaching students from _____department/s.

□ Marine Engineering Operations

□ Naval Architecture and Marine Engineering

□ Shipbuilding and Ocean Engineering

□ Maritime Transportation Management Engineering

□ Maritime Business Management

□ Ship and Yacht Design

□ Others

2. How long have you been teaching at the Maritime Faculty?

For _____ years.

3. Major:

□ Maritime Transportation Management Engineering

□ Marine Engineering □ Others (please specify): __

4. Degree:

□ Bachelor's □ Master's □ Doctoral Candidate/Doctorate

5. How long have you taught ESP at universities/colleges:

□ Under 6 years □ 6 to 10 years

□ 11 to 15 years □ More than 15 years

6. What courses are you currently teaching?

_____

Please turn the page

PART II: Field Knowledge in ESP Teaching and Learning

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	I feel motivated to teach ESP classes				
2	There are specific methods and approaches for teaching ESP				
3	It is necessary to include subject matter in the content of an ESP course				
4	An ESP teacher must be knowledgeable in content areas of ESP as well as language				

PART III: ESP instructional issues & Delivery

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	There is a wide range of ESP teaching resources				
2	Current ESP materials give students the language proficiency necessary for their disciplines				
3	Teachers are given opportunities to make appropriate changes in ESP materials to meet the specific needs of their students				
4	Midterms and finals are the primary means for assessing the language ability of ESP students				
5	Teachers are not concerned about the current textbooks and materials in use at the faculty				

Please turn the page

PART IV: Language Needs of Students and Teachers

For question 1, please refer to the scale below and circle the number that most closely corresponds to your opinion.

1. In your opinion, how important is it for your students to be able to perform the following tasks in English?

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		not at important	not so important	important	very important	not at all important	not so important	important	very important
A	To understand spoken instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	To read materials related to maritime issues	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	To engage in personal communication	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	To read manuals/instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
E	To write business letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to do in English,

in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

2. What minimum level of English do you think your students need to follow your ESP courses?

□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate
□ A2 Elementary

3. What minimum level of English do you think your students need to be successful in their profession?

□ C2 Proficient
□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate

Please turn the page

For question 4, please refer to the scale below and circle the number that most closely corresponds to your opinion.

4. In your opinion, how often is each of the following language skills used in your ESP courses and the maritime profession?

LANGUAGE SKILLS	**in your ESP courses**				**in the maritime profession**			
	never	**rarely**	**usually**	**always**	**never**	**rarely**	**usually**	**always**
Reading	1	2	3	4	1	2	3	4
Writing	1	2	3	4	1	2	3	4
Listening	1	2	3	4	1	2	3	4
Speaking	1	2	3	4	1	2	3	4
Grammar	1	2	3	4	1	2	3	4
Vocabulary	1	2	3	4	1	2	3	4

For questions 5-8, please refer to the scale below and circle the number that most closely corresponds to your opinion.

5. In your opinion, how important is it for your students to be able to write each of the following in English in your ESP courses and the maritime profession?

		in your ESP courses				**in the maritime profession**			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Reports	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Business Letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Projects	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to write in English,
in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

Please turn the page

6. In your opinion, how important is it for your students to be able to read each of the following in English <u>in your ESP courses and the maritime profession?</u>

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		not at all important	not so important	important	very important	not at all important	not so important	important	very important
A	Weekly magazines	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Academic journals and publications	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Manuals/product descriptions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Signs, rules, and notices	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for your students to be able to read in English,
<u>in your ESP courses:</u>

_____

_____

<u>in the maritime profession:</u>

_____

_____

7. In your opinion, how important is it for your students to listen to and understand each of the following <u>in your ESP courses and the maritime profession?</u>

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		not at all important	not so important	important	very important	not at all important	not so important	important	very important
A	Conversations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Presentations and discussions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Radio and television programs and other English media	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please turn the page

Please specify other points that you think are important for your students to be able to listen to in English,
in your ESP courses:

_____

_____

in the maritime profession:

_____

_____

8. In your opinion, how important is it for your students to be able to perform the following tasks in your ESP courses and the maritime profession?

		in your ESP courses				**in the maritime profession**			
STATEMENT / **SCALE**		**not at all important**	**not so important**	**important**	**very important**	**not at all important**	**not so important**	**important**	**very important**
A	Introducing oneself and others in a variety of situations	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	Stating opinion about different topics	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	Making requests (i.e. for further information or confirmation)	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	Giving a presentation	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

9. If you had the opportunity, what recommendations would you like to make in the current ESP program at the Maritime Faculty?

_____

_____

_____

10. Would you like to participate in an interview to clarify any issues that might not be covered in this survey? Your contribution is highly appreciated. Put a check (✓) in the corresponding space.

A) Yes _____ B) No _____

If yes, please provide your contact details along with a preferred time for receiving calls and sign your name.

Signature

THANK YOU FOR YOUR COOPERATION…

Appendix I: Questionnaire for Professionals (Graduates/Workplace People)

This questionnaire is prepared to collect information about the quality of ESP programs currently implemented at a number of Maritime Faculties. It is not designed to evaluate the students' achievement or the teachers' effectiveness. Feel free not to sign your name if you do not want to.

Please check the option ☒ or circle the number that most closely corresponds to your opinion or provide clear answers for open-ended questions.

PART I: Background Information

1. Which department did you graduate from?

□ Marine Engineering Operations

□ Naval Architecture and Marine Engineering

□ Shipbuilding and Ocean Engineering

□ Maritime Transportation Management Engineering

□ Maritime Business Management

□ Others

2. When did you graduate?

In _____

3. How long did you work at sea?

_____ year/s.

Please turn the page

PART II: Teaching Methods and Strategies Used in the ESP Program

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	The teaching methods used by the ESP teachers developed my ability to communicate effectively in my profession/job				
2	My ESP teachers encouraged me to engage in dialogue with my peers in the classroom				
3	My ESP teachers encouraged me to solve my language problems both in and out of class				
4	My ESP teachers integrated subject matter content into the classroom, e.g., they used topics related to our majors (e.g., maritime transportation engineering or marine engineering)				
5	My ESP teachers made use of language learning strategies (Guessing, Memorization, and Creating Mental Links) that help us learn more effectively in the ESP program				

PART III: Textbooks and Materials Used in the ESP Program

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	The use of teaching aids such as posters, flashcards, audio/visual materials, computers, and blackboards helped me learn more effectively in the ESP program				
2	Most of the topics of my courses throughout the ESP program were related to my major				
3	The exercises used in the textbooks promoted communication skills that were necessary for my major and future profession(s)				
4	The reading materials helped me improve my reading skills specific to my major				
5	The listening materials helped me improve my listening skills specific to my major				
6	The writing materials helped me improve my writing skills specific to my major				

Please turn the page

PART IV: Language Needs of Students and Teachers

For question 1, please refer to the scale in the table and circle the number that most closely corresponds to your opinion.

1. In your opinion, how important is it for you to be able to perform the following tasks in English?

	STATEMENT / **SCALE**	**not at all important**	**not so important**	**important**	**very important**
A	To understand spoken instructions	**1**	**2**	**3**	**4**
B	To read materials related to maritime issues	**1**	**2**	**3**	**4**
C	To engage in personal communication	**1**	**2**	**3**	**4**
D	To read manuals/instructions	**1**	**2**	**3**	**4**
E	To write business letters	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to do in English <u>in your profession:</u>

_____

_____

2. What minimum level of English do you think you need to be successful in your profession?

□ C1 Advanced

□ B2 Upper-Intermediate

□ B1 Intermediate

□ A2 Elementary

Please turn the page

For question 3, please refer to the scale below and circle the number that most closely corresponds to your opinion.

3. In your opinion, how often is each of the following language skills used in your profession?

LANGUAGE SKILLS	**never**	**rarely**	**usually**	**always**
Reading	1	2	3	4
Writing	1	2	3	4
Listening	1	2	3	4
Speaking	1	2	3	4
Grammar	1	2	3	4
Vocabulary	1	2	3	4

For questions 4-7, please refer to the scale below and circle the number that most closely corresponds to your opinion.

4. In your opinion, how important is it for you to be able to write each of the following in English in your profession?

STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**
A	Reports	**1**	**2**	**3**	**4**
B	Business Letters	**1**	**2**	**3**	**4**
C	Instructions	**1**	**2**	**3**	**4**
D	Projects	**1**	**2**	**3**	**4**
E	Emails	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to write in English in your profession:

_____

_____

Please turn the page

5. In your opinion, how important is it for you to be able to read each of the following in English in your profession?

		in the maritime profession			
STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**
A	Weekly magazines	**1**	**2**	**3**	**4**
B	Academic journals and publications	**1**	**2**	**3**	**4**
C	Manuals/product descriptions	**1**	**2**	**3**	**4**
D	Signs, rules, and notices	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to read in English in your profession:

_____

_____

6. In your opinion, how important is it for you to listen to and understand each of the following in your profession?

STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**
A	Conversations	**1**	**2**	**3**	**4**
B	Presentations and discussions	**1**	**2**	**3**	**4**
C	Radio and television programs and other English media	**1**	**2**	**3**	**4**
D	Instructions	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to listen to in English in your profession:

_____

_____

Please turn the page

7. In your opinion, how important is it for you to be able to perform the following tasks in your profession?

STATEMENT / SCALE		not at all important	not so important	important	very important
A	Introducing oneself and others in a variety of situations	**1**	**2**	**3**	**4**
B	Stating opinion about different topics	**1**	**2**	**3**	**4**
C	Making requests (i.e. for further information or confirmation)	**1**	**2**	**3**	**4**
D	Giving a presentation	**1**	**2**	**3**	**4**

8. Do you have any suggestions about the English language instruction specific to the needs of the students at the Maritime Faculty?

_____

_____

9. Would you like to participate in an interview to clarify any issues that might not be covered in this survey? Your contribution is highly appreciated. Put a check (✓) in the corresponding space.

A) Yes _____ B) No _____

If yes, please provide your contact details along with a preferred time for receiving calls and sign your name.

Signature

THANK YOU FOR YOUR COOPERATION…

Appendix J: Questionnaire for Students

This questionnaire is prepared to collect information about the quality of ESP programs currently implemented at a number of Maritime Faculties. It is not designed to evaluate the students' achievement or the teachers' effectiveness. Feel free not to sign your name if you do not want to.

Please check the option ☒ or circle the number that most closely corresponds to your opinion or provide clear answers for open-ended questions.

PART I: Background Information

1. What is your department?

☐ Marine Engineering Operations (Gemi Makineleri Işletme Mühendisliği)

☐ Naval Architecture and Marine Engineering (Gemi İnşaatı ve Gemi Makineleri Mühendisliği)

☐ Shipbuilding and Ocean Engineering (Gemi ve Deniz Teknolojisi Mühendisliği)

☐ Maritime Transportation Management Engineering (Deniz Ulaştırmaİşletme Mühendisliği)

☐ Maritime Business Management (Denizcilik İşletmeleri Yönetimi)

☐ Ship and Yacht Design (Gemi ve Yat Tasarımı)

☐ Others:_____

2. Have you attended the English preparatory class?

□Yes □ No

Please turn the page

PART II: Teaching Methods and Strategies Used in the ESP Program

indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	Our classes are usually dominated by a continuous talk from the teachers				
2	In the classroom, our ESP teachers ask us to work in small groups to encourage us to participate in classroom discussion				
3	Our ESP teachers integrate subject matter content into the classroom e.g., they used topics related to our majors (e.g., maritime transportation management or marine engineering)				
4	In class, our ESP teachers encourage us to solve our learning problems (e.g., reading and writing)				
5	Our ESP teachers make use of language learning strategies (Guessing, Memorization, and Creating Mental Links) that help us learn more effectively in the ESP program				

PART III: Textbooks and Materials Used in the ESP Program

Please indicate to what extent you agree with each of the statements below by checking the number ☒ that closely corresponds to your opinion.Please

	QUESTION STATEMENT / SCALE	1 strongly disagree	2 disagree	3 agree	4 strongly agree
1	The use of teaching aids such as posters, flashcards, audio/visual materials, computers, and blackboards help me learn more effectively in the ESP program				
2	Most of the topics of my courses throughout the language program are related to my major				
3	The exercises used in the textbooks promote communication skills that are necessary for my major and future profession(s)				
4	The reading materials help me improve my reading skills specific to my major				
5	The listening materials help me improve KG KG my listening skills specific to my major				
6	The writing materials help me improve my writing skills specific to my major				

Please turn the page

PART IV: Language Needs of Students and Teachers

For question 1, please refer to the scale below and circle the number that most closely corresponds to your opinion.

1. In your opinion, how important is it for you to be able to perform the following tasks in English?

		in your ESP courses				in the maritime profession			
STATEMENT / SCALE		not at all important	not so important	important	very important	not at all important	not so important	important	very important
A	To understand spoken instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
B	To read materials related to maritime issues	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
C	To engage in personal communication	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
D	To read manuals/instructions	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
E	To write business letters	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to do in English,
in your ESP courses:

_____

_____

in your profession:

_____

_____

2. What minimum level of English do you think you need to be successful in your profession?

□ C1 Advanced
□ B2 Upper-Intermediate
□ B1 Intermediate
□ A2 Elementary

Please turn the page

For question 3, please refer to the scale below and circle the number that most closely corresponds to your opinion.

3. In your opinion, how often do your teachers teach each of the following language skills in your ESP courses and how often is each of the following language skills used in your profession?

LANGUAGE SKILLS	**in your ESP courses**				**in the maritime profession**			
	never	**rarely**	**usually**	**always**	**never**	**rarely**	**usually**	**always**
Reading	1	2	3	4	1	2	3	4
Writing	1	2	3	4	1	2	3	4
Listening	1	2	3	4	1	2	3	4
Speaking	1	2	3	4	1	2	3	4
Grammar	1	2	3	4	1	2	3	4
Vocabulary	1	2	3	4	1	2	3	4

For questions 4-7, please refer to the scale below and circle the number that most closely corresponds to your opinion.

4. In your opinion, how important is it for you to be able to write each of the following in English in your profession?

STATEMENT / SCALE		**not at all important**	**not so important**	**important**	**very important**
A	Reports	**1**	**2**	**3**	**4**
B	Business Letters	**1**	**2**	**3**	**4**
C	Instructions	**1**	**2**	**3**	**4**
D	Projects	**1**	**2**	**3**	**4**
E	Emails	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to write in English in your profession:

_____

_____

Please turn the page

5. In your opinion, how important is it for you to be able to read each of the following in English in your profession?

STATEMENT / SCALE		not at all important	not so important	important	very important
A	Weekly magazines	**1**	**2**	**3**	**4**
B	Academic journals and publications	**1**	**2**	**3**	**4**
C	Manuals/product descriptions	**1**	**2**	**3**	**4**
D	Signs, rules, and notices	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to read in English in your profession:

_____

_____

6. In your opinion, how important is it for you to listen to and understand each of the following in your profession?

STATEMENT / SCALE		not at all important	not so important	important	very important
A	Conversations	**1**	**2**	**3**	**4**
B	Presentations and discussions	**1**	**2**	**3**	**4**
C	Radio and television programs and other English media	**1**	**2**	**3**	**4**
D	Instructions	**1**	**2**	**3**	**4**

Please specify other points that you think are important for you to be able to listen to in English in your profession:

_____

_____

Please turn the page

7. In your opinion, how important is it for you to be able to perform the following tasks in your profession?

STATEMENT / SCALE		not at all important	not so important	important	very important
A	Introducing oneself and others in a variety of situations	**1**	**2**	**3**	**4**
B	Stating opinion about different topics	**1**	**2**	**3**	**4**
C	Making requests (i.e. for further information or confirmation)	**1**	**2**	**3**	**4**
D	Giving a presentation	**1**	**2**	**3**	**4**

8. Do you think you have proficiency in English to follow the English-based content courses?

□ Yes □ No

9. If you had the opportunity, what recommendations would you like to make in the current language program at the Maritime Faculty?

_____

_____

_____

_____

Could you please sign your name to indicate that you filled out the questionnaire?

Signature

THANK YOU FOR YOUR COOPERATION…

Appendix K: Interview Protocol for the Faculty Members

1. How long have you been working as a ____ teacher/faculty member etc.?
2. What courses do you teach?
3. What does maritime English (education) in maritime faculties mean to you?
4. What is your institution's stance on maritime English education?
5. How would you evaluate the maritime English education in your faculty relative to other maritime faculties?
6. In your opinion, for what purposes do deck officers and marine engineers need Maritime English in their profession?
7. Which English language skills (reading, writing, listening, and speaking) do you think are most necessary for them?
8. What level of English language proficiency do you expect from them?
9. Do you think the English language proficiency of the students who graduated from the Maritime Faculty is sufficient? If not, why?
10. In which language skills they are sufficient/insufficient?
11. What would you think if students are allowed to have more English language instruction, either before they go into their departments or during their studies?
12. Do you think it would be more helpful for students to learn English through the technical knowledge and specialized vocabulary of their profession?
13. Optional wrap-up question: Do you have any suggestions that you think would be helpful about the English language instruction at the Maritime Faculty?

Appendix L: Interview Protocol for the Professionals from the Maritime Sector

1. How long have you worked/been working as a Captain/Chief engineer etc.?

2. How did English language proficiency play a role in your career?

3. In your opinion, for what purposes do deck officers and marine engineers need maritime English in their profession?

4. Which English language skills (reading, writing, listening, and speaking) do you think are most necessary for them?

5. What is your company's stance on English language proficiency?

6. Do you ask prospective applicants to take an English language proficiency exam before hiring them?

7. Do you think the English language proficiency of the personnel who graduated from Maritime Faculties is sufficient? If not, why?

8. In which language skills they are sufficient/insufficient?

9. What would you think if students are allowed to have more English language instruction, either before they go into their departments or during their studies?

10. Do you think it would be more helpful for students to learn English through the technical knowledge and specialized vocabulary of their profession?

11. Optional wrap-up question: Do you have any suggestions that you think would be helpful about the English language instruction at the Maritime Faculties?

Appendix M: Professional Knowledge of Maritime English Test

Professional Knowledge of Maritime English Test

Section 1: Listening Comprehension

Audio 1

1. What happened to the tanker?
   a. It hit the coast
   b. It spilled feedstock
   c. It broke down

Audio 1

2. Where did the accident take place?
   a. Just off the Finnish coast
   b. Just off the Spanish coast
   c. Just off the French coast

Audio 2

3. What do they expect the weather conditions to be like when they reach Port Elizabeth?
   a. Weather conditions will get worse
   b. Weather conditions will get better
   c. Weather conditions will stay the same

Audio 3

4. What does the Chief Engineer order the 4TH Engineer to do immediately?
   a. To bring a lot more
   b. To put the rags in the engine room
   c. To remove the collecting tins

Audio 3

5. Why should the oily rags be put in a special container?
   a. They can cause a crack
   b. They can cause a fire
   c. They can cause a leakage

Audio 4

6. What was the cause of the collision?
   a. The officer of the watch couldn't see both vessels
   b. There was heavy weather at the time of the collision
   c. The bridge equipment wasn't working correctly

Audio 5

7. Where did the fire start?
   a. In the workshop
   b. In the watch officer's cabin
   c. In the engine room

Audio 5

8. How did the fire start?
   a. By a crack
   b. By a leakage
   c. By a spark

Audio 6

9. Where did the pirate attack happen?
   a. Off the coast of Somalia
   b. Off the Seychelles
   c. Off West Africa

Audio 7

10. What is the Chief Officer's recommendation for difficult problems?
    a. They should never ask stupid questions
    b. They should share their concerns and ask for help.
    c. Their training will prepare them for all situations.

Audio 7

11. What should the new crew do if they come across a problem?
    a. They should talk about it with the Captain
    b. They should talk about it with the Chief Officer
    c. They should talk about it with their colleagues

Audio 8

12. When will the second engineer sign off the ship?
    Micro listening skill: Stating opinion or ideas about different topics
    a. Don't know
    b. Earlier today
    c. Till his contract ends

Audio 8

13. Why can't the 2ND Engineer leave the ship?
    a. His contract with the company continues
    b. His replacement had an accident
    c. The company replaced the vessel

Audio 9

14. What did the crew form on seafarer's last vessel?
    a. Self-study English group
    b. An English-speaking club
    c. An English video film club

Audio 9

15. Where will the company's free English lessons take place?
    a. At home port
    b. At sea
    c. At messroom

Audio 10

16. What's causing the smell on board?
    a. A fruit on board brought by crew
    b. Dried fish stored by some passengers
    c. Personal hygiene problems by some crew members

Audio 11

17. Where were the 14 survivors picked up from?
    a. From a capsized yacht
    b. From a capsized life raft
    c. From a capsized coastguard vessel

Audio 12

18. For how long does the Chief Engineer want to shut down the engine?
    a. An hour
    b. More than two hours
    c. For a few minutes

Audio 13

19. What are the requirements for the US visa?
    a. Passport, one photo, seaman's book
    b. Two photos and passport
    c. Seaman's book, passport, two photos

Audio 13

20. What is the crew manager going to arrange?
    Micro listening skill: Emphasizing a point to indicate important information
    a. A seaman's book
    b. An interview
    c. A meeting

Audio 14

21. What is the focus of the Captain's talk?
    a. To show that armed attacks are steadily increasing
    b. To show that armed attacks can be dangerous
    c. To state that enough is being done to reduce attacks

Audio 14

22. How will the Captain start his talk?
    a. By focusing on a specific case
    b. By illustrating the solutions using statistics
    c. By showing the data about the density of armed attacks

Audio 15

23. How did the cook cut himself?
    a. He cut himself on the knife that was in the sink
    b. He slipped and fell on the knife
    c. He used a blunt knife for cutting

Audio 16

24. How did he cut himself?
    a. When he was using a tool
    b. When he fainted
    c. When he was shaving

Audio 17

25. What deficiencies were found on the bridge?
    a. The paper for the echo sounder was missing
    b. Outdated charts were not removed from the table
    c. The fire extinguisher wasn't in the right place

Audio 18

26. What do they have for dessert?
    a. Ice cream
    b. Pancakes with caviar
    c. Pudding

Audio 18

27. What problem does the cook have with the Captain's request?
    a. He doesn't have the caviar
    b. He's very busy
    c. He doesn't have enough staff

Professional Knowledge of Maritime English Test

Section 2 : Maritime Content Knowledge

Reading Passage I

Tugs



Tugs are highly versatile vessels with many specialized designs. Certain tugs are tasked with moving barges, helping large ships to maneuver towing vessels, salvaging and firefighting. Nonetheless, tugs may be classified into three classes: inland, coastal, or ocean-going tugs. In all cases, a tug is defined as a vessel which assists another by applying external force to it.

This external force may be applied directly, in which pull is applied by the tug's engines and propulsion. It may also be applied indirectly, in which pull is maintained by the flow of water around the tug. At higher speeds, a tug's direct pull is less effective and indirect towing is more practical.

Tugs are commonly designed to have high thrust and a small form to facilitate movement alongside other vessels, they are highly maneuverable and very stable. The type of propulsion on a tug is a point of variance in tug design.

Typically, tugs have a shaft and propeller system, whether nozzled or open. The propellers are either fixed or controllably pitched, or with steerable nozzles/vertical axis propellers. Such tugs push with the bow and tow with the stern. These tugs have a standard stern and are known as Conventional Tugs.

Contrastingly, some tugs have twin azimuthing propellers in the stern, which has a cut-away design. These propellers, also fixed or controllably pitched, are nozzled and can turn independently of each other – improving maneuverability. The main winch is forward, they push with the bow and tow over the bow as well. These are known as Stern Drive Tugs.

On the other hand, Tractor Tugs have an unusual hull form: propulsion (azimuthing or vertical axis propellers) are underneath the hull and closer to midships. They are typically found about a third of the bow length away from the

bow. They also feature a skeg for greater stability, which is aft. They both tow over and push with the stern.

Most tug operations take place at low speed. However, escort tugs may move at faster speeds, and are used when tankers or other vessels carrying hazardous cargo may require assistance steering. At higher speeds, the weather, and geographic and hydrographic hazards such as shallows or wrecks are especially dangerous. Using the right number, size and power of tugs is also important.

Such escort tug operations may involve free-running tugs, which run ahead of the ship, or made-fast tugs, which are connected to the vessel by slack or taut lines.

The benefit of free running operations over made-fast operations is that neither the vessel nor tugs are endangered in normal circumstances, though in an emergency connecting the vessel to tugs may be difficult.

Reading Passage I Part A (Questions 1-3)

Match the descriptions (a-g) with the appropriate tug types (1-3) and write the correct letter in the boxes next to the corresponding tug type. Select two descriptions that fit every type of tug.
There is ONE EXTRA option.

Types of Tugs	***Descriptions***
1. Conventional Tugs ☐☐	A. Equipped with fixed propellers, single or twin screw and single rudders with fixed nozzles
2. Stern Drive Tugs ☐☐	B. Fitted with two azimuth thrusters in nozzles at the stern and with bow tunnel thrusters
3. Tractor Tugs ☐☐	C. The propulsion units are placed far ahead of the towing point, close to the pivot point thereby producing a large turning momentum
	D. Good steering ability, especially as a standard stern tug
	E. Towing winches are often fitted forward
	F. Reduced directional stability, particularly in open waters
	G. Stable and efficient in pushing from backward

Reading Passage I Part B (Questions 4-8)

Choose the correct letter (a, b or c) that best completes each item and write it in the box provided next to each item.

4. A Tug is generally defined as a vessel that:

	A. assists barges **B.** maneuvers salvage boats **C.** pushes or pulls others

5. Stern Drive tugs:

	A. tow with the stern **B.** tow and push with the bow **C.** tow and push with the stern

6. A Tractor Tug's propulsion may be found

	A. at the rear of a ship **B.** in the middle of the vessel **C.** in its cut-away stern

7. The disadvantage of free-running operations is:

	A. it is harder to make-fast in an emergency **B.** it is more dangerous at higher speeds **C.** it may require more assistance steering

8. Escort tugs are used:

	A. at faster speeds only **B.** in bad weather **C.** when there is trouble steering

Reading Passage II

The Sea Empress Grounding



The Western Mail's front page on the morning of Friday, February 16, 1996, woke the country up to the stark fact that much of Pembrokeshire's stunning coastal scenery was in danger of being destroyed by a tide of black sludge. "A huge anti-pollution operation was launched last night after a super tanker ran aground off West Wales, threatening the country's worst-ever environmental disaster," ran the front-page story. "More than 6,000 tonnes of oil spewed into the sea when the 300-metre-long Sea Empress hit rocks and punctured its oil tanks. "As emergency agencies from across Britain rushed to the scene, it was not known whether incoming tides would flood the Pembrokeshire coastline with crude oil, devastating the environment."

The story had people across the nation, and beyond, hoping the damage could be limited. And for a while it seemed that it could. But disastrous weather that weekend, coupled with a great deal of bad luck, conspired to create Wales' most ecologically catastrophic disaster. By the following week, the full scale of the massive slick had become apparent, with miles of coastline engulfed in sticky poison, and thousands of sea birds, as well as countless other marine life, wiped out. The breaking news of the Western Mail that Friday alerted the country to what would unfold over the following weeks and prompted hundreds of volunteers to ready themselves for the clean-up and wildlife salvation operation, which proved crucial.

Ironically, one of the last people to see that prescient situation report was the man at the centre of the mayhem - harbourmaster Mark Andrews. He said, "I was so directly involved in dealing with it that I really had no time to think of anything else." We knew we had a crippled tanker, but we thought we had it under control. "Then the weather and everything that happened at the weekend made it disastrous. "It was only after we got it on to the jetty the next week that

it really sunk in." By the time Mark had time to see a copy of the paper, the scale of the slick was vast. He recalled, "I looked at the paper and it was a very sobering moment. It brought me to tears. "It was a defining moment. I had known how bad the situation was but seeing the pictures I realised the scale of it - the tanker, with the tugs surrounding it and oil all over the place. All the emotion was just released."

It was just after 8pm on February 15 that the Sea Empress first ran aground trying to get into Milford Haven Harbour. More than 6,000 tonnes of oil were initially lost when the tanker re-floated later that evening on a new tide. Tugs kept the Empress afloat all day on Friday, but strong winds during the night grounded her again, and more oil was lost. Tugs lost control during a storm on Saturday, with two cables snapping, leaving the tanker held by just one cable. On Sunday, a Chinese super-tug arrived to help, but the ship ran aground again amid more stormy weather that brought with it 10ft waves. On Monday, the Empress found itself backed 400 yards on to rocks due to a huge tide. It was badly breached along the hull, and huge amounts of crude oil flooded into the sea at low tide. And so, by Tuesday, an estimated third of the 120,000-tonne cargo had been lost. For the next week, the remaining oil was pumped out of the tanker, but huge spillage continued. The ship resumed service nearly two months later after £20m repairs, but the cost to the coastline was incalculable, with thousands of birds killed.

Ten years on, wildlife has largely returned to normal along the Pembrokeshire Coast. But for many of those who read the headlines on February 16, 1996, and those who lived through the disaster, the memories linger. Ominously, Gordon James of Friends of the Earth believes the terrible situation could have been even worse had conditions been slightly different. "We were extremely 'lucky' because the wind helped push the oil out to sea and the birds hadn't yet come back to the islands," he said. "A massive effort was put in by everyone cleaning it up. I do not want to see anything like it ever again."__

Reading Passage II Part A (Questions 9-13)

Read the following items and check **T** for True, **F** for False and **N** for Not Mentioned. Justify your choice by writing one or two sentences in the spaces provided for each item.
(1 point for correct choice, 1 point for justification)

9. The total cost of the cleanup operation was approximately £60 million.

True ☐ False ☐ Not Mentioned ☐

Justification:……

10. All the cables holding the tanker snapped during the storm.

True ☐ False ☐ Not Mentioned ☐

Justification:……

11. Some of the cargo was deliberately left in the tanker to keep it stabilized.

True ☐ False ☐ Not Mentioned ☐

Justification: ……

12. Thanks to the wind, clean-up operations were successful.

True ☐ False ☐ Not Mentioned ☐

Justification: ……

13. Breaking news activated full scale salvage operations.

True ☐ False ☐ Not Mentioned ☐

Justification: ……

Reading Passage II Part B (Questions 14-17)

To whom or to what do the underlined words refer? Answer using words as they appear in the text.

14. And for a while it seemed that <u>it</u> could (line 14)

……

15. "…. but we thought we had <u>it</u> under control (line 24)

……

16. …. during the night grounded <u>her</u> again (line 34)

……

17. "A massive effort was put in by everyone cleaning <u>it</u> up (line 49)

……

Reading Passage II Part C (Questions 18-20)

Choose the best answer (a, b or c) and write it in the box provided next to each item.

18. All of the following are characteristics of the disaster EXCEPT _____.

☐

A. indirect towing

B. massive slick

C. poor weather

19. According to paragraph 4, which of the following is True of Sea Empress oil spillage?

☐

A. Crude oil was lost because of the poor towing ability of the tugs

B. Cracking of the cables broke the stability of the vessel leading to oil spillage

C. Miscalculation of the effects of the tidal stream ended up with ruptures and huge cargo loss

20. The author's tone in the text is …

☐

A. encouraging

B. enlightening

C. entertaining

Reading Passage III

Vessel/Cargo Damage Report

Accident occurred at (place) or en route from (place) to (place): en route from Hull to Newport							
Type of Damage: Hull damage to starboard side aft							
Draft Fore:	9.00	**Draft Aft:**	10.00	**Consignee:** not applicable			
Course:	220	**Speed:**	5	**Sea:**	Rough	**Wind:**	8

DETAILS OF DAMAGE TO VESSEL/CARGO

Today at approximately 1500 several stern alarms sounded on the bridge, the stern thruster alarms among them as well as fire alarms, which indicated a fire in the stern thruster space. The Officer on Watch ordered crew to check the source of the noise.

Upon investigation by the second mate and ratings it was discovered that water was entering the stern thruster space. Further inspection found a large hole on the starboard side. The dimensions were approximately 250 x 350 mm. No immediate action was taken, and the second officer reported back to the bridge team.

We are presently adjusting our trim and have activated the stern thruster bilge pumps as countermeasures. Water ingress has been slowed by the use of wooden plugs.

Although we suspected that the cause of the damage is the starboard anchor, which may have broken free, we could not check this due to heavy weather. We waited for the situation to improve before taking further action.

After several hours, the weather cleared, and we were able to conduct a preliminary check by 2100. The preliminary check has shown that the starboard anchor lashings were loose, and the forward guillotine bar was down but the aft guillotine bar was up. The lashing was otherwise satisfactory and the brake fully tight.

The starboard anchor was found to be paid out to approximately one shackle length. There is significant impact damage to the starboard outer hull, around the stern thruster room and void space. This seems to have caused the water to flow intothe stern thruster space and has likely therefore affected the electrical components there, including the thruster motor andequipment, and the fire pump.

This was the probable trigger of the fire alarms at 1500.

We are bringing the vessel around at slow ahead presently, with the intention of checking the hull and machinery further, and to allow ballast adjustments. On an unrelated note, we regret that we are unable to communicate via satellite phone at the moment. This is due to an ongoing software problem.

Despite the uncertainty of our situation, we anticipate a delay of between 1-2 days. Our arrival at POD Newport should therefore be made on time, by increasing our speed to 10-12 knots.

Reading Passage III Part A (Questions 21-26)

*Match the statements with their sources (Second Mate and Ratings, The Officer on Watch, Bridge Team). Tick **one** correct option for each of the following statements.*

Whose opinion?	**Second Mate and Ratings**	**Officer on Watch**	**Bridge Team**
21. Fire alarms at aft are beeping. Go check the source of the noise.	☐	☐	☐
22. There is water ingression at stern thruster space	☐	☐	☐
23. There is a hole of approximately 250 x 350 mm. on the starboard side.	☐	☐	☐
24. Trim is adjusted, and stern thruster bilge pumps are activated as counter measures.	☐	☐	☐
25. There is no communication via satellite phone due to an ongoing software problem.	☐	☐	☐
26. Arrival at Newport could be possible by increasing the speed to 12 knots.	☐	☐	☐

Reading Passage III Part B (Questions 27-29)

Choose the best answer (a, b or c) and write it in the box provided next to each item.

27. What was the possible cause of the alarms on the bridge?

☐

A. Ballast adjustments

B. Bilge pumps

C. Starboard anchor

28. The preliminary examination showed that:

☐

A. Lashings were loosened to one shackle length

B. Stern thruster bilge pumps were not functioning

C. The brake and the lashings were broken.

29. What corrective action was taken?

☐

A. Bilge pumps were activated

B. Starboard anchor lashings were loosened

C. Thruster motor was activated

Section 3: Pedagogical Knowledge

Part A (Questions 30-36)

Choose the Best Reaction (a, b or c) to the Given Scenarios and write it in the box provided next to each item.

30. As part of a writing assignment, an ELT teacher asked a maritime student to write a persuasive essay on the use of onboard communication systems on naval vessels. The student instead turned in a paragraph describing the communication systems. The ELT teacher is surprised because the instructions to give an opinion were very clear. The ELT teacher is going to ask the student to redo the assignment. What would be the best advice the ESP teacher can give to the ELT teacher in this situation?

☐

A. Teach the student the definition of persuasion through direct instruction.

B. Ask the student to look at another student's work as an example.

C. Provide the student with modal sentence frames with persuasive language forms.

31. An EFL teacher (General English teacher) works with ESP teachers in a maritime faculty to help them plan personalized instruction for maritime students that are based on students' levels of English language proficiency. To best achieve this goal, the ESP teachers should be aware of each student's relative strengths and needs in which areas?

☐

A. receptive and expressive vocabulary knowledge

B. speaking, listening, reading, and writing domains

C. verbal and nonverbal cognitive skills

32. A new EFL teacher has asked an experienced ESP teacher to observe his/her instructions during several lessons and provide feedback on his/her teaching. These classroom observations are likely to be most beneficial if the new EFL teacher takes which of the following actions before the classroom observations occur?

- **A.** identifying for the experienced ESP teacher specific aspects of his/her instructions, such as classroom discussions, that s/he has particular concerns about
- ☐ **B.** explaining to his/her students ahead of time the purpose and intended outcomes of the observations
- **C.** providing the experienced ESP teacher with an overview of his/her students' current achievement levels, interests, and behavior patterns

33. The results of an English language proficiency test of a maritime student shows that he is at the elementary level of language ability. However, after two weeks in class, the ESP teacher observes that the student has some more advanced language skills. What is the best action for the ESP teacher to take in order to gather further information on this student's language skills?

- **A.** asking the student to describe which level of English he feels comfortable using within each skill/domain.
- ☐ **B.** giving the student the same language proficiency test again to confirm the original scores.
- **C.** collecting language samples or student work samples that demonstrate ability level in each skill.

34. An ESP teacher holds regular class meetings with maritime students. The teacher always begins these meetings by giving individual students an opportunity to appreciate the efforts or achievement of a classmate or to thank a classmate for assistance with a difficult or challenging task. Beginning class meetings in this way is most likely to have which of the following results?

- A. promoting students' self-monitoring of their own behavior/learning
- ☐ B. building a supportive and caring classroom community/environment
- C. understanding students' high expectations for learning

35. An ESP teacher is planning lessons for a new maritime English unit. The ESP teacher can best ensure the effectiveness of these lessons by considering which of the following questions first?

☐ **A**. What is the fairest and most efficient way to evaluate students' achievement of unit objectives?

B. Which unit activities are best completed individually, and which activities are best done in a group?

C. What background knowledge and experience do students already have with regard to the unit topic?

36. A significant challenge for teachers in using essay exams to assess student learning is that such exams:

☐ **A**. are ineffective in measuring certain types of thinking skills.

B. tend to encourage guessing in student responses.

C. are difficult to score fairly and objectively.

Part B (Questions 37-38)

Write the <u>Best</u> Reaction to the Given Scenarios.

37. You serve on a cruise ship as a chief engineer, and the cruise line you work for organizes guided tours for a small group of visitors. You just had the broken fuel pumps replaced and the faulty cylinder heads fixed before setting off to the voyage. You are taking some cadets to the engine control room to see how the mega ship's engines have been set up. You must make sure that no one touches anything. It is a life and death matter for you. So, you say:

_____
_____
_____
_____
_____

38. You are the Captain of a container ship. You have recently realized that one of the crew under your command is often late for his shift. You know that he may have some family problems. You want to make sure that he and his life are going well. So, you politely ask:

_____
_____
_____
_____
_____

Part C (Question 39)

Use the information below to complete the assignment that follows.

39. The students in your class are intent on gaining a position as Captains or Engineers in Arkas Shipping and Transport company, which in their case would mean succeeding in your ESP course. For your part, you want to build these students' identities as competent language users, "opening minds a bit', and introducing them to the creative potential of the English language. The head of the department is adamant that you use the same textbook that the other teachers in the department are using for this course. Despite your colleague's enthusiasm for that textbook, you continue to feel that this textbook does not portray a balanced picture of your subject as it exists in today's world. Furthermore, the students clearly lack the cultural capital to be able to understand the texts without your detailed support.

Given the necessity of continuing to use this particular textbook, what can you do to make your ESP course more inclusive (in terms of material/syllabus design) and how can you help your students get a more balanced view of the subject you teach?

_____
_____
_____
_____
_____