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INSTRUCTION IN THE FIELD OF NAVAL STUDIES AT
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(M.A. THESIS)

Hakan İKİNCİ

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"Omnium rerum principia parva sunt"

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ÖZET

Bu yarı deneysel araştırmanın amacı, derlem odaklı kelime öğretiminin başlangıç ve orta seviye İngilizce eğitimi alan üniversite öğrencilerinin denizcilik terimlerini öğrenmesi ile anlamlı ilişki içerisinde olup olmadığının araştırılması ve öğrencilerin derlem kullanılarak uygulanan kelime çalışmaları hakkında görüşlerinin alınmasıdır. Bu bağlamda, Denizcilik İngilizcesi ile ilgili terimlerden oluşan bir derlem oluşturulmuştur. Nicel veri toplanması amacıyla oluşturulan öntest, sontest ve sekiz adet ara test öğrencilere birer hafta aralıklarla uygulanmıştır. Çalışma, Türkiye Cumhuriyeti sınırları içerisinde denizcilik eğitimi veren bölüm ve üniversitelerde eğitim gören öğrencilerle gerçekleştirilmiştir. Alanda daha önce yapılan çalışmalar genellikle derlem tabanlı dil eğitiminin dilbilgisi, yazma, ve konuşma becerileri gibi yapıları ile ileri seviyede İngilizce bilgisine sahip öğrenciler üzerinde etkisi olup olmadığını ölçmektedir. Bu nedenle yapılan araştırma kapsamında ayrıca, ara test sonuçlarının ön ve son test ile ilişkisinin olup olmadığına bakılıp, öğrencilerin derlem kullanarak kelime öğrenme ile ilgili görüşleri de alınmıştır. Çalışma kapsamında hazırlanan derlem öğrencilerle sürecin başında paylaşılmış ve süreç devam ederken gerekli çalışmalar yapılmıştır. Çalışmanın amaçlarına ulaşmak için, denizcilik terimlerini derlem yardımıyla öğrenen öğrencilerin sınav sonuçları, SPSS yardımı ile hem grup içinde, hem de bu terimleri derlem kullanmadan öğrenen öğrencilerin sınav sonuçları ile karşılaştırılmıştır. Bu çalışmanın sonuçları denizcilik terimlerini derlem tabanlı çalışmalar yoluyla öğretmenin, kelime öğreniminde başarıyı artırdığını ve öğrencilerin genel itibari ile derlem kullanarak kelime öğrenimi ile ilgili olumlu görüş belirttiğini göstermektedir.

Anahtar Kelimeler: derlem tabanlı dil öğretimi, denizcilik İngilizcesi, özel amaçlı dil öğrenimi**,** öğrenci görüşleri.

ABSTRACT

The quasi-experimental study presented in this paper primarily aims to research whether corpus-driven language instruction has a significant correlation with university level low proficiency students' performance of learning specific vocabulary related to the maritime field. The present study also aimed to evaluate whether there is a significant correlation between corpus use and vocabulary learning performance. Finally, the reflections of the participants were elicited in order to qualitatively evaluate their perceptions regarding corpus-driven vocabulary instruction at the university level. The quantitative data of the study was collected through a pre-test, eight progress tests, and a post-test. The progress tests were applied every week. The study was conducted with university level students attending schools with maritime departments in the Republic of Turkey. Previous studies in the field generally dealt with the investigation of whether corpus-driven instruction had any effects on advanced EFL students learning structures such as grammar, writing and speaking. In order to answer the research questions of the study, whether corpus-driven instruction had a significant correlation with vocabulary learning performance of low proficiency level students at universities related to the maritime was investigated. In addition, the results of the progress tests were compared with pre and post-test results in order to explore whether there was a significant difference among these aspects and the reflections of the students on corpus-driven instruction were elicited. The corpus created within the scope of this study was shared with the students and necessary steps for the study were taken. In order to analyze the data, the collected data were transferred to SPSS and the results were compared for both in-group and between groups factors. The results of this study indicate that teaching vocabulary for Maritime English through a corpus-driven instruction model has positive effects on successfully learning maritime related vocabulary and the students felt positively towards the inclusion of corpus in their studies.

Key words: corpus-driven language instruction, maritime English, language teaching for special purposes, student reflections.

LIST OF ABBREVIATIONS

ANOVA	: Analysis of Variance
DDL	: Data Driven Learning
EFL	: English as a Foreign Language
ESP	: English for Specific Purposes
FL	: Foreign Language
ICAME	: International Computer Archive of Modern English
IMLP	: International Maritime Language Program
IMO	: International Maritime Organization
IMLP	: The International Maritime Language Programme
KWIC	: Key Word in Context
L1	: First Language
L2	: Second Language
LOB	: Lancaster-Oslo-Bergen Corpus
MARCO	: Maritime Corpus
MELAB	: Michigan English Language Assessment Battery
SMCP	: Standard Marine Communication Phrases

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INTRODUCTION

Language, going back thousands of years, is one of the signs that humans are capable of using rather complex systems as a means of communication. Languages are free of the constraints of time in the sense that they can shed light upon past civilizations while also bearing the opportunity to carry cultural elements into the future generations of the same civilization. Languages have also been developing and changing themselves rapidly in the way they convey messages, while adapting to the needs of the contemporary time throughout history. Developments in languages are accompanied by improvements in technology, and with such improvements, tools that can keep large samples of data such as grammar, collocation, and other aspects of language, gained importance. In this vein, corpora that can be used to analyze and statistically present a language with its collocations either holistically or on a fragmental level became popular. Corpus is a collection of sets of words and sentences from a language with the idea of presenting data to users and scholars in order for them to be able to grasp how the language is used authentically. Whether to utilize corpora in language education to express support for students in gaining a rather broader perspective on the target language has been an issue of debate throughout the recent decades (Hunston, 2002). On the other hand, McEnery and Wilson (1997) state that although the first conference related to teaching and corpora arrived in 1992, corpora were primarily introduced into teaching in 1969. It was only after around 20 years that scholars in the field such as Stevens (1991) and Cobb (1997) began advocating that language taught in the classroom needs to be in close proximity to the language that is actually used by the native speakers of the target language. Nonetheless, corpora that are integrated into several aspects of language classes either directly through corpus-based activities or indirectly through texts, dictionaries, and textbooks in this period of time fill an important gap between the language of the learner and the language of the proficient speaker.

One of the reasons for this importance is the fact that vocabulary is a very essential part of comprehension in teaching and learning second language (L2) or foreign language (FL) (Folse, 2010). The same applies to the teaching and learning of

English for Specific Purposes (ESP) courses. Teachers are often not aware of the problems the learners face due to a lack of understanding of vocabulary sets surrounding the topic of instruction (Nesi, 2013). Consequently, in order to help L2, FL, and ESP learners alike, expediting the vocabulary acquisition process of the learners plays a key role. In this direction, corpus linguistics presents a valuable set of classroom applications that can be utilized by the teachers with the purpose of encouraging the students to delve into the authentic language through its lens.

In light of the facts above, the present study aims to examine whether corpus-driven approach to teaching vocabulary has a significant correlation with the university grade lower proficiency level EFL learners' ability to improve their knowledge of Maritime English in accordance with the Standard Marine Communication Phrases (SMCP). A specific corpus was created within the scope of the study with the aim of it being used as a source for the students to learn new vocabulary and improve their knowledge of Maritime English. In this regard, the students were applied a pre-test, eight progress tests, and a post-test. The collected data were analyzed via SPSS version 23 in order to determine whether the corpus-driven approach to vocabulary learning had any significant correlation with their performances. In addition, the pre-test and post-test mean values were compared to the eight progress test mean values in succession, in order to assess whether the performance of the students during the progress weeks differed from their performance at the end of the experiment. In order to answer these questions, repeated measures ANOVA, paired samples t-Test, and one-way ANOVA tests were applied to the data. Finally, the reflections of the students regarding the experiment process were elicited and evaluated in order to gain further insight about how the participants perceived the experiment.

CHAPTER 1

1. INTRODUCTION TO THE RESEARCH

The presentation of the current chapter aims to introduce the research, along with the description of problems that led the researcher to carry out the research, and in this vein, the importance of the research. In the last part, limitations and assumptions of the research are discussed.

1.1 BACKGROUND OF THE RESEARCH

Language, as a way of communication, is very crucial to social interactions. While communication within a social community is important, intercultural communication plays a much bigger role in today's world. In order to be able to understand and decipher different languages and the sociocultural messages behind phrases, one must spend more time on studying and analyzing the lexical and morphological aspects of the language. Although language can be used for many different aspects of communication such as speaking, writing, or using body language, namely sign-language, writing is exceptionally different than the others in the sense that it can allow feelings, ideas and information to be set on stone, or paper for that matter, only to be discovered by a third party possibly even after many years. Although in the past it was much more difficult to share information through written text, nowadays it has become a lot more feasible thanks to the advancements in technology and computers. With the help of the advanced technology, now even spoken language can be turned into written text conveniently and used as data to be analyzed in order to understand certain aspects of language use, such as regular patterns that have a subliminal meaning, although the language users may not be aware of the meanings while they are using the language via speaking (Sinclair, 1998).

Corpus linguistics is the study of analyzing large collections of 'real world' language use through computers and focuses on what is actually written or spoken rather than how language 'should be' used. Corpora are created and used in the field of language teaching not because they can tell us what we should teach and achieve, but because they can be used as a tool to make well-informed decisions on how to approach different aspects of language teaching while ensuring that we motivate these decisions more carefully (Gavioli and Aston, 2001). On the other hand, being aware

of and able to use specific sets of vocabulary in fields of operation such as military, aviation, and maritime is crucial for various reasons. Both parties need to have a clear understanding of the messages they convey and receive, while being able to also act on them. In maritime for example, communication problems alone are found to be the cause of almost half of all marine accidents while miscommunication contributes to almost all of the accidents in the sea (John, Brooks, Wand, and Schriever, 2013; Möckel, Brenker, and Strohnschneider. 2014). The type of communication in terms of Maritime English referring to the crew navigating the ship as a team is the *Bridge team communication.* The system of this communication is important, because ship crews are generally formed with members from various national and cultural backgrounds. Moreover, ship captains communicate with shore services, tugboats, other vessels, and crew members in various parts of the ship over radio. In cases where no other common language is present, the International Maritime Organization stipulates that the lingua franca the crew members use is English. Given the importance and vast amount of communication for safe operation, it is crucial that the students of such a field become experts of the terminology and language beforehand. In this regard, Nesi (2013) states that ESP practitioners may not have a clear understanding of the messages conveyed and language used in the field unless they practice exploratory corpus research in order to further the knowledge in the field, allowing for a wider perspective in understanding and making new discoveries in the language used by ESP students, paving the way to changes in the content of future courses and being able to instruct the future crew members of the ships accurately. Hence, teaching specific vocabulary sets for specific purposes can be one of the different and essential aspects of teaching language.

In this current research, the researcher aimed to create and use a specific corpus in order to analyze whether the in-class use of corpora can be beneficial to university level students who are learning English while also being lectured on the use of maritime terminology with the help of a specific corpus containing vocabulary items used in the maritime terminology.

1.2 STATEMENT OF THE PROBLEM

The problems that are aimed to be dealt with in this research include the overall difficulties of students in Turkey related to vocabulary learning, especially the terminology related to *specific* fields of operation. The specific fields of operation

include business, aviation, maritime, international affairs, law, and so on. Students tend to learn vocabulary related to daily life endeavors much easier, because they can relate to them more easily, or because these aspects of the language have been the focus point in their language education for many years. The problem with learning specific vocabulary in the aforementioned areas of expertise can also be observed via the tailored courses created by institutions, universities, and language courses in the country. Courses aimed to teach Business English, Aviation English, and many other fields of operations, can be seen in the billboards of the previously mentioned institutions. This situation becomes much direr when the institution needs to teach its students crucial vocabulary related to the field they study in. However, time restrictions and the need to follow the curriculum laid out by the institutions tie the hands of the teachers in such cases. Therefore, the teachers report having to resort to direct word or sentence translations in cases where the students ask about collocations. Additionally, as Nesi (2013) states, this issue can be quite problematic in ESP education due to the fact that the teachers themselves may be lacking the proper information to conjugate uses of certain vocabulary or field-related terminology.

Research (John, Brooks, and Schriever, 2017; Reguzzoni, 2006; Valle and Portela, 2012) shows that there is a very limited amount of studies which compiled corpora for the purpose of being used by people working in the maritime field and the source materials in terms of corpora and concordancers in the field that are in-line with the SMCP are almost non-existent. The few corpora created are also focused on how specific groups of people use the terminology, while not going into too much detail, and instead of a general and more applicable public. In order to assist students and academics in the field of maritime studies, the researcher aimed to create a specific corpus in-line with two very important sources that contain all of the standard phrases that are obliged to be used at sea by the International Maritime Organization (IMO). The sources in this regard, the International Maritime Language Programme (IMLP) and Standard Marine Communication Phrases (SMCP) were used as the source materials during the preparation of the corpus and whether corpus-driven instruction had an effect on vocabulary learning was explored.

1.3 SIGNIFICANCE OF THE RESEARCH

Navigational and safety communications are an indispensable part of the maritime world. The language used in communications from ship to shore and vice versa, ship to ship and on-board ships, must be precise and without errors in order to prevent any kind of confusion and danger. This is especially important due to the increasing number of international vessels in the seas. The prominence of crystal-clear comprehension in maritime communications heralds a new era where crews need to be fluent in English, as it was deemed to be the international language at sea by the International Maritime Organization. Corpus linguistics may prove useful in this case due to the fact that it is concerned largely with how language is used – even more so in special cases like maritime communications. However, to the knowledge of the researcher, although there are studies such as that of John et al. (2017), Reguzzoni (2006), and Valle and Portela (2012), which are related to creating a specific corpus, there are no studies in the field that investigate whether teaching maritime related terminology with the help of a specific corpus has any significant effect on the vocabulary learning performance levels of students in the field of maritime.

Furthermore, studies in the literature (Koosha and Jafarpour, 2006; Mudraya, 2006; Sun, 2007) have generally focused on the L2 vocabulary learning performance of intermediate or advanced proficiency level students; this research will investigate whether a corpus-driven approach can be effective on the vocabulary learning performance of low proficiency level EFL learners at the university level and whether the findings of previous studies in the field also apply to students with lower proficiency levels. Therefore, the present research can be considered as a prime example for studies that examine whether the use of a corpus-driven approach has any significant effects on the vocabulary learning performance of university level learners of English with low proficiency.

1.4 DEFINITIONS OF TERMS

The following terms are used in this research extensively:

Corpus: A large collection of authentic texts that are kept in a digital format and representative of the naturally occurring language (Boulton, 2016).

Corpus-driven approach: Using corpus as the main driving aspect of teaching a target language. In other words, helping to convert language data from texts into information that can be used as a source material to teach language in context (Hanks, 2013).

Data-driven Learning: In this approach, learners have direct access to language data and become their own researchers, inducing on the rules by referencing the data (Johns (1990).

Maritime English: Language used in the field of maritime by seafarers, officers, captains, seamen, and shore services personnel with the purpose of communicating to navigate the operations relative to the vessels and directing the sea traffic.

IMO: International Maritime Organization, which is responsible of the framework and all regulations to be applied to vessels on the sea and at shore.

SMCP: Standard Marine Communication Phrases, the book compiled by IMO in order to determine phrases and commands to be used in every aspect of maritime communication.

1.5 LIMITATIONS AND ASSUMPTIONS

The present research had certain limitations, time restriction being one of them. Due to the fact that the academic calendar of the maritime institution where the research took place was programmed to include only 12 weeks as part of the semester, the researcher was able to perform corpus-driven instruction, pre-test, progress tests, and the post-test in a time window of ten weeks. Another limitation is that there were only one control group and one experimental group, limiting the total amount of

participants to 52. This was partly due to the hectic schedule at the institution on top of different periods of study schedules of the students.

The students who participated in this research did so voluntarily and their scores on the tests did not have any implications on their grades. Therefore, the researcher assumed that all of the 52 students gave their best performance whenever it was possible.

In this chapter, the introduction, background, purpose and significance of the research were presented along with the statement of the problem. In the following chapter, the related literature will be reviewed.

CHAPTER 2

2. REVIEW OF THE RELATED LITERATURE

In this research, the primary aim is to explore whether a corpus-driven approach to vocabulary instruction has a significant correlation with the maritime vocabulary learning performance of lower proficiency level EFL learners. On the other hand, whether there is a significant difference between the results of pre and post-tests when compared to the progress test results was also explored within the framework of the research. Finally, the research aimed to elicit students' reflections on using corpus to learn specific vocabulary. In line with these aims, a description of the background of corpus linguistics, along with the applications of corpora will be explored in this chapter. This exploration will be followed by the controversies among linguists regarding whether corpora can be useful in terms of language teaching and learning. In the final part, previous studies in the field that are related to the utilization of corpora in language teaching, ESP education, and Maritime English will be summarized and presented alongside a brief exploration of Data-Driven Learning.

2.1 BACKGROUND TO CORPUS LINGUISTICS

Corpus linguistics and its applications, despite criticisms, have come a long way since the discovery of the Amarna letters in 1887 (Morris, 2006). Although at the time the field had yet to be established and the name Corpus was not coined, the tablets depicted a historical period of Egypt of around 30 years. Written in Babylonian, the tablets described the interactions between Egypt, Hittites, Babylonians, and several others. The tablets are now considered to be the first steps towards a linguistic understanding of language, and in this sense, the corpus linguistics field in which, several scholars began to study. Another remarkable discovery, that of Rosetta Stone, was made in 1799 by French soldiers under the command of Napoleon who were building a fort in Egypt (Schoville, 2001). History was literally set in stone and its discovery opened up a whole new era for linguists due to the fact that it was recognized as the first and oldest written multinational and multilingual treaty. Callimahos (2004), in a now-unclassified NSA article, describes this discovery and its effects as a "brilliant piece of cryptanalysis and one of the greatest linguistic achievements of the 19th century" due to the fact that it helped linguists of the time to comprehend and

translate the Egyptian hieroglyphs (Callimahos, 2004: 1). One of the intriguing facts about Rosetta Stone is the multilingual aspect of it. Three texts written on the stone were almost identical, however, two of them were repetitions of the Greek version in "the writing of the speech of god" and in "the writing of the books" that were used to label the hieroglyphic and demotic texts (Callimahos, 2004: 3). The fact that old Greek was still a spoken language at the time of discovery helped understanding hieroglyphs and demotic texts to a greater extent. The decipherment took an effort of numerous scholars from various fields over two decades, from 1799 to 1822, and helped the linguistic understanding of the early languages immensely (Schoville, 2001).

Around the end of the 19th century, philologists began to compare languages. Their aim was to work with real language data in order to discover which languages had common words and systems. Ferdinand De Saussure (1916), recognized as the founder of general linguistics, set a distinction between thought and language (*langue*) as the social demonstration of speaking (*parole*) in *Cours de linguistique générale*. He argued that language is a demonstration of speech that occurs as a result of the thought process which in turn allows language, a system of symbols, to exist. In other terms, this distinction means that one may use a finite amount of means (*langue*) they possess in order to create an infinite amount of different sets of meaning (*parole*) (Hewson, 1976). In the scope of this theory, the speaker is not limited by the amount of words at their disposal, but on the contrary, can use them to create a wide array of new utterances. This distinction may be considered as an important milestone for the establishment of corpus linguistics due to the fact that corpus linguistics deals with what *is* said, rather than what should be said.

Saussure's theory was vigorously opposed by the renowned American syntactician Noam Chomsky (1965). His main argument was that competence rather than performance is the central factor that should be explained by a theory of language. In this theory, he laid out a new perspective that the speaker has an abstract knowledge and ability to distinguish between what is grammarly correct and incorrect in their language even in the case that they have never heard that particular sentence before (McEnery and Hardie, 2013). Due to the aforementioned division between competence and performance, Chomsky (1965) emphasized that performance may not be considered as an indication of competence, since the amount of sentence structures a person can create is not dependent on the infiniteness of means to do so. Meanwhile,

he also claimed that corpus data cannot be very meaningful as a consequence of the fact that the number of sentences in a given language can be infinite and corpus data can only demonstrate a finite number of sentences in its data, while also analogizing that physicians do not videotape everything that is happening around the world in order to improve the science of physics (Andor, 2004). This analogy can be considered as an inadequate example since there, in fact, are entire fields of science such as astronomy and geology that heavily rely on collected data. Furthermore, Chomsky (1965) added that language that occurs naturally should not be considered as a sign of competence since it is filled with errors and ungrammatical forms which do not represent the true form of language and the ability of the speaker to perform the said language. He argued that the ability to use language lies in the mind rather than brain and linked this argument to French philosopher Descartes' theory that animals were automated machines incapable of using language for reasons other than voicing their impulses while only a human mind was capable of learning and using languages in order to convey their messages (Chomsky, 1966; Harrison, 1992; Sullivan, 1977). Descartes' theory, on the other hand, was in line with Port-Royal *Grammar* which was written by monks Antoine Arnauld and Claude Lancelot in the 1600's, articulating that language needs to be understood as an expression of thought, while also stating that the ability to reason is universal and separate from language, therefore languages must be universal. This way of thinking led to the theory of Universal Grammar which Chomsky (1986) put forward, stating that UG may be regarded as a "characterization of the genetically determined language faculty" and an alternative way of thinking to replace generative grammar (Chomsky, 1986: 3). He theorized that the human mind at a very young age is equipped with a Language Acquisition Device (LAD) which allows the acquisition of language and all languages share the same basic principles which makes grammar universal. As a linguist, Chomsky tends to adhere to the rationalism rather than empiricism in the sense that his theory of innatism is influenced by Immanuel Kant's ideology that reason and rationality are the fundamental sources of information (Barman, 2014). Kant argued that one does not need to be taught how to distinguish solid from liquid, as one would have *a priori*, the innate knowledge of the said distinction. One of the criticisms against Chomsky's theory of a Universal Grammar was by Mitchell and Myles (1998) who concluded that researchers in favor of UG mainly dealt with competence rather than the performance aspect of language

and had no intention to reveal how people acquired a second language. In another notable criticism by Evans and Levinson (2009), it was stated that most cognitive scientists spoke European languages or structurally very similar languages; thus, missed the bigger picture that not all languages are similar in their core.

Corpora are based on empirical data rather than rational data and Chomsky's (1986) criticisms regarding corpora not being able to represent languages as a whole stem from the idea that there is an infinite amount of possible sentence structures while a finite amount of data depicting it existed in the studies being carried out in the field. However, corpus analysis data does not require to contain every single bit of information related to language in order to be qualified as a viable research tool; on the contrary, it just requires a representative sample of the language (McEnery and Hardie, 2013). In fact, what Chomsky was criticizing vigorously had already been in motion as a different concept in the previous decades. Skinner (1958) believed that group-based traditional instruction was flawed and the creation of *teaching machines* could prove to be useful in allowing the students to use the machines to study and perform self-tests individually instead of studying and taking tests in a group work environment. In this model, the content was arranged in small steps and these steps lead the learner from simple tasks to more complicated tasks in a controlled manner. The students were then asked questions and received the correct answers immediately upon answering. Therefore, this method was called *programmed instruction* and the intriguing feature of these machines was that the learner could not peek ahead and see the correct answer before actually answering the question. In this regard, the learning machines showed similarities to the implementation of corpora into classrooms in the sense that they also allowed students to discover new aspects of language while also being able to test themselves autonomously. Therefore, it can be stated that autonomous learning and testing was materialized during the 1960s, in a very similar fashion to what is performed through corpus-driven instruction in the contemporary era. However, the state of the debates caused corpora studies to be neglected for almost two decades, during which, prominent advancements were made nonetheless. Corpus linguistics, a once frowned upon and highly criticized subdivision of linguistic research slowly became more popular, although it was not until the 1980s that it was more visible that corpus linguistics could influence language teaching and learning immensely (Carter and McCarthy, 1988).

Corpus linguistics related studies were carried out by scientists in the field either individually or as groups and these scholars were in contact through an organization named International Computer Archive of Modern English (ICAME), founded in the 1970s (Leech and Johansson, 2009). This organization provided an important ground for researchers in the field to practically illuminate the field of corpus linguistics, causing a rapid development in the number of studies related to the field. The organization was also a key factor in the success of the Brown Corpus (Brown University Standard Corpus of Present-Day American English) which was constructed by Henry Kucera and Nelson Francis in 1964 at Brown University in the USA (Baker, Hardie and McEnery, 2006). One of the important features of the Brown Corpus was that its construction began on the computer and it included texts from pieces published in books in 1961 (Burgess and Livesay, 1998). The Brown Corpus contained a collection of one million words in total, consisting of 500 text samples that were 2,000 words each. The sampling frame of the Brown Corpus influenced other corpora around the world; the Lancaster-Oslo-Bergen Corpus, which was created to serve both for studies of British English and for comparisons with American English (Greenbaum and Nelson, 1996), similarly included 500 text samples, 2,000 words each, and from pieces written in British English (Johansson et. al., 1978, as cited in Beale, 1985); and the Lancaster Corpus of Mandarin Chinese (Xiao and McEnery, 2004) was compiled with the same instruments for Mandarin. Although Brown University is an American institution and the strongest criticisms regarding corpus linguistics were voiced in the US, Brown Corpus was a front runner in the field, influencing other corpus related studies in Europe (McEnery and Hardie, 2013).

In spite of the fact that the Brown Corpus was the most influential of its time, it was not the first Corpus in the field of linguistics. Randolph Quirk founded the Survey of English Usage (SEU) in 1959 at University College London (UCL) (McEnery and Hardie, 2013). The reason that Brown Corpus had a head start is due to the fact that it was created in the digitalized form since the beginning while SEU was stored on file cards and upon the technological advancements, transferred over to the computers, merged with the Survey of Spoken English (SSE) and renamed to the London-Lund Corpus of Spoken English (LLC) (Svartvik and Greenbaum, 1990). Upon computerization, the LLC contained around one million words of British English that were analyzed grammatically. Brown and LOB corpora were being utilized as a

means for comparisons between two major national standards of English, although they were limited to only printed English. Resources to be used as a ground for comparisons between the spoken English in the United States and Britain were required. Hence, Greenbaum (1991), with the help of Charles Meyer created the project for the International Corpus of English (ICE) in order to provide ways and means for comparative studies of English in countries in which English is either the official first or additional language. A list of 18 countries including the USA, New Zealand, and South Africa joined the project (Greenbaum and Nelson, 1996), helping it become the largest corpus for the comparative study of varieties of English (McEnery and Hardie, 2013). The creation of London-Lund Corpus, the Santa Barbara Corpus of Spoken American English, and the British National Corpus mark the beginning of Corpora of spontaneous speech becoming popular. With this popularity, grammar of spoken English was also up for debate. Brazil (1995) argued for a linear grammar of speech, stating that grammar is not sentence-oriented and does not care about tree-style parsing. McCarthy (1998) similarly pointed out how the grammar of speech can differ in accordance with context while it can also be influenced by the relationship between the interlocutors. Therefore, it is valuable to state again that corpus linguistics is such a field that takes into consideration the context and possible influence of sociolinguistic aspects of language in an "as is" state while deriving information regarding how language is used rather than how it should be used and analyzing the provided data.

2.2 CORPORA AND LANGUAGE EDUCATION

Despite the recent attention on corpus linguistics, there is a scarcity in studies that investigate whether, to what extent or under which circumstances corpus-driven instruction can actually be beneficial in teaching second or foreign language. Corpus linguistics related studies had an influence on a wide variety of studies related to language research, however, studies in the nineteen-sixties were affected by the shift from empirical studies to studies related to the mental processes behind language acquisition. At a time when also the computerized corpora were just being built, this shift meant that the climate in the field of linguistics was not ready for empirical methods offered by corpus linguistics (Leech, 1998; Sinclair, 2004). In addition, Kennedy (1998) argued that the possible effects of corpus-driven instruction were

found more interesting by scholars in the field only after lexical and phraseological structures received more attention. The next section will present some of the limited number of previous research that have integrated the corpus-driven approach into language teaching.

In one of the pioneering studies for corpus use in language teaching, Stevens (1991) conducted a small-scale study with 25 undergraduate science students in which case the students first received training on how to navigate an off-line corpus for one to two hours. The corpus for the study was derived from the course books used for many different subjects such as biology, geology, physics, and chemistry. In addition, the corpus included spoken English transcriptions related to the same subjects. Students and instructors navigated through the corpus on the DOS operating system. The exercises for the study included gap-filling exercises testing the vocabulary items that appeared in the corpus. Results indicated a slightly better performance upon receiving the corpus treatment. Although Stevens' study merits mention due to the fact that it is one of the pioneering studies in corpus application to language teaching, the limited sample size and little amount of practice prior to the exercises falls short in terms of a genuine experimental study.

Another study integrating corpus linguistics into vocabulary learning was that of Cobb (1997). In the study, Cobb aimed to assess whether sharing vocabulary items along with context through a hands-on corpus study and over several weeks would result in the students having a better grasp of novel contexts. In this vein, Cobb developed a lexical tutor which was used to present new vocabulary to a total of 100 Arabic-speaking students who were taking intensive English in order to study English subjects in the following years. The lexical tutor was also armed with a tracker that recorded all of the interactions the students made with it. The corpus used in the study, "Pet-200", included 10,000 words, compiled from the reading materials of the students. There were two versions of the corpus, with and without a concordancer, and the students used them alternatively over the course of 12 weeks. The results indicated that the students' performance scores were increasing over the weeks; and especially so, when they used the version with the concordancer. However, what Cobb describes in terms of an on-line concordancing in comparison to the off-line version in Stevens's study involves on-screen presentation of a limited number of concordance lines, which are not initiated by a request of the student, but are included regardless of any requests.

Therefore, it is safe to say that these two studies can be put into the category of studies which indicate that using corpus materials in language teaching can be beneficial.

Todd (2001) investigated induction, use of concordances and self-correction in a language teaching context. Participants of the study consisted of 25 science and engineering postgraduate students enrolled in pre-intermediate and intermediate levels of an English support course. The students were required to induce on grammar rules through the use of a concordancer of their own choice and apply these inductions on their writing. Todd stated that although there was no significant relationship between the ability to induce valid patterns from the concordancers and apply their inductions on their writings, a very strong correlation (r_{pbi} = .76; p<.001) between induction and the ability to self-correct shows that students were able to induce valid patterns and make use of these patterns through concordancing.

In a study to determine whether bilingual parallel corpora were effective in vocabulary learning, Chujo, Utiyama and Miura (2006) used a Japanese-English bilingual parallel corpus on beginner level EFL learners. The significance of this study stems from the fact that it differs from other previous studies which investigated corpora use with advanced level language learners. Chujo et al., used a Japanese-English parallel corpus to prepare corpus-driven vocabulary activities and combined it with a multilingual concordancer in order to research the similarities and differences between Japanese and English. The study aimed to investigate whether the use of corpus would be beneficial for the students and whether they would get used to using it. Seventy-two beginning level students who were studying to become engineers in universities in Japan participated in the study. Data Driven Learning (DDL) activities were a part of the study and the students were provided with key words in several tasks. The researchers wanted the students to use the parallel corpus to understand patterns in both languages and find similarities and differences between them. The study's findings indicated that beginner level EFL learners used the concordancer without problems and the bilingual concordancing tool fostered vocabulary learning.

In an attempt to learn about the reflections of students regarding corpus use along with the difficulties they face in terms of writing, Yoon and Hirvela (2004) conducted a study with a total of 23 students from different majors, 8 of which were enrolled in an intermediate level ESL writing course and the remaining 15 students were enrolled in the advanced level course. The students received instruction first, and

were then asked to construct prototype strings that they would be able to decide whether they wanted to use in order to enhance their writing skills. After using the database on their own in order to deal with problems related to vocabulary, students shared their research results with the researcher. Majority of the students reflected that they found corpus use beneficial for improving their vocabulary use and finding the meaning of words they came across. Yoon and Hirvela stated that the students in the intermediate group found the activity to be more useful in comparison to the students in the advanced group. The activity was found to be also useful in improving the students' ability to know where and how to put words in context, also helping them gain more confidence in their L2 writing in general.

In another study, Farr (2008) reported on the reflections and attitudes of Student Teachers (STs) regarding corpus use in language classrooms. In the study, she collected data from a total of 28 STs through the use of questionnaires. Majority of the participants were from countries with an English-speaking background and they were attending an MA program in Ireland. The study included data collected over 12 weeks, where they also spent approximately 15-20 hours of class time per semester on corpus related activities. The selection of corpora included the British National Corpus (BNC), American National Corpus (ANC), Corpus of Spoken Professional English, the ICAME collections, the Limerick Corpus of Irish English (L-CIE), and several other online corpora. She concluded that STs showed an overwhelmingly positive approach towards the use of corpora while also noting that the STs expressed having faced difficulties regarding software. On the other hand, the participants showed a critical awareness instead of blind adaptation of the implications of corpus use. The most intriguing data to be gathered from this study was that even native speakers of English were fascinated by the use of corpora in the classroom and stated that they felt enthusiastic about being able to correct their mistakes.

Just as in general English, language use and collocations play a very important role in communication carried out in fields such as aviation, military, maritime, and the navy. In the following part, previous studies regarding the use of corpora in teaching English for Specific purposes will be discussed.

2.2.1 Corpora and ESP Education

Studies regarding corpora use in language education paved the way for studies of corpora in ESP, and potential relevance of corpus related studies in ESP is well-acknowledged (Dudley-Evans and St. Johns 1998). Corpus linguistics, besides informing researchers, has other valuable applications in terms of language teaching in classrooms. Several scholars (Aston, 2001; Connor and Upton, 2004; Flowerdew, 2001; Nesi, 2013; Römer, 2011) state that the inclusion of corpora within the L2 and ESP education can be very beneficial due to the fact that these tools allow learners to develop the skills to grasp parts of language use they would not be able to grasp, if they were not presented with a corpus. There is, however, a distinction. Corpora can be divided into two categories as general and specialized corpora. General corpora can be used to form an idea regarding the global behavior of vocabulary items and for academic purposes such as creating textbooks or dictionaries, along with EFL/ESL purposes, while specialized corpora in contrast, can be used to understand how languages, vocabulary, and collocations are used in specific circumstances regarding the language (Tribble, 1990). This understanding regarding how language is used in specific contexts plays an important role in many fields of expertise and learning a language in the way the native speakers, or more importantly, the experts of it speak in these different areas with specific purposes can be quite beneficial. On the other hand, the use of authentic language allows learners to observe the real way the target language is used, and more so in specific fields. Bennett (2010), in support of this view, emphasizes that corpora are an indispensable tool for ESP. On the other hand, Boulton (2012) notes that corpora studies for general purposes cannot satisfy the needs of ESP and there is a scarcity in terms of corpora for ESP while the resources for general English are innumerable and this likely stems from the fact that corpora for ESP are dependent on the researchers. Another point made by Boulton (2012) is that small ESP corpora are more appropriate to be used extensively to highlight the way English is used for special purposes for the reason that they are easy to create and can bring specific aspects of ESP into the foreground, due to being limited to the aforementioned specific aspects of the language. The ease of creating corpora also enables learners and teachers to be able to learn and teach through the data itself.

For instance, in the study of Connor, Davis and DeRycker (1995) which can be used as an example to gain insight on how specific grammar and word choice can

indicate politeness in the business world, along with how important they are in order to be hired, the researchers analyzed a total of 74 job application letters written in Flemish and English in order to collect data regarding correctness and clarity. The results indicated that typical US (English) applicants produced less mistakes while writing more, when compared to the speakers of Flemish. Furthermore, applicants from the US provided more supporting arguments for their applications while also discussing benefits for both parties, but were not as direct in asking for an interview as their counterparts of Flemish descent.

In a small-scale study, Weber (2001) used a concordancer and genre-based approach to essay writing. The participants of the study consisted of 20 law students. At first, the participants were asked to identify structural characteristics of essays written in a legal manner, then to use a concordancer in order to explore the connection between generic structures and certain lexical items, and finally to write a short essay integrating the structural elements they had identified. Weber concluded that using this method of study gave the students a much clearer idea of writing essays along with the ability to explain legal reasonings very well. Furthermore, Weber reported that identifying some structural characteristics of these legal essays and their possible lexical correlations with the help of concordancers may be considered as a boost for the language learners.

A very comprehensive study in terms of corpora use in ESP was conducted by Gavioli (2005), in which she identified the advantages and use cases of corpora within ESP classrooms. Her study was based on two small corpora that were collected for material design: a medical corpus that was created through the collection of research papers in six subfields, and a corpus consisting of economic-political texts, with the aim to help students familiarize themselves with issues regarding the European Community. Gavioli stated that using small corpora may, in some cases, be difficult due to the fact that they include a small percentage of parts related to the issue they deal with. However, she also added that using corpora in ESP was important because she considered this field to be a "particularly suitable area for corpus-based teaching and learning" (Gavioli, 2005: 14). Her idea of using corpora in ESP builds on the notion of students being their own researchers, language analysts, explorers of corpora using concordancers, while they are guided through the process of data analysis regarding the matters they are about to focus on.

2.2.1.1 Corpora and Maritime English

Previous corpus related studies in the field of Maritime English are quite recent, and have mainly investigated whether it was possible to compile corpora to be used by seafarers, how to accomplish such a task, and the comparison of the bridge team communication with the native speakers' language use outside of the nautical field. No studies in the field were found to be investigating whether corpus-driven ESP instruction for Maritime English was effective for students in the maritime field.

In a preliminary study in the field, Reguzzoni (2006) compiled a small pedagogic corpus of English for maritime studies consisting of reading texts to be used in an Italian maritime school. The texts that made up the corpus were selected by the school teachers in terms of their 'fitness to the learning purpose' and covered a range of materials such as glossaries of marine technology terms, manuals, professional reviews, and technical specifications. The corpus included 51,823 running words and the words it included were discovered to be also included in a variety of other ESP fields. Reguzzoni noted that polysemies and homonyms were very frequent in Maritime English, while also arguing that the common words in Maritime English take on meanings and roles different from the ones they have in general English. Therefore, she added, it may lead to questionable results if these words are labeled as field specific, or unique, due to the fact that the specific meanings are only used in the target speech community. This may, in some cases, pose a threat to the learners due to them being too familiar with the common meanings of the words. She concluded that further studies into corpora and Maritime English were necessary in order to establish a clearer understanding of the field due to the fact that the research regarding corpora and Maritime English was "surprisingly limited, and practically *non-existent*" (Reguzzoni, 2006: 1).

In another study, Valle and Portela (2012) compiled a small corpus of English for External Communications in Maritime Settings (ECOMARS), involving a collection of naturally occurring samples of English language spoken in communications at sea between ships, and ships and shore services. Before the compilation of the corpus, the researchers boarded several ships and recorded the spoken language in communications between ships. On the other hand, in order for the communication between ship and shore services to be included in the study, the coordination center shared their ship communications with the researchers. The corpus

contained 985 communicative instances spoken by a total of 231 different speakers. The researchers explained that the purpose of the compilation of ECOMARS was to present a corpus to enable seafarers to observe how the 'authentic' language at sea is used. Valle and Portela argued that the study may be accepted as a primary example of corpus use with Maritime English, while also emphasizing the authenticity of the language used in the corpus.

In a more recent study, John et al. (2017) researched the ESP communications by non-native speakers of Maritime English and the language used outside of the nautical field in order to compare the structural peculiarities of the two. The comparison was performed via data sampling with the Brown Corpus and Vienna Corpus and a corpus created using phrases from SMCP. A total of 23 non-native undergraduate senior students participated in the study's exercises which required the participants to communicate with each other in a simulated Vessel Traffic Service (VTS). The communication between ships and the crew members were recorded and transcribed. The findings of the study indicated that the language used by the bridge communications team who participated in the study differed from the data in the Brown Corpus and Vienna Corpus very significantly. The comparison between the language used by the participants and the phrases in SMCP were found to be more similar, however, the researchers noted that both the language used by the participants of the study and the SMCP Corpus were small in terms of data to reflect on the whole maritime field by themselves. They also suggested a future study in which the language used by a bridge team of native speakers of English is compared to the language spoken outside of the nautical field.

2.2.2 Data Driven Learning Approach

DDL, first suggested by Johns (1991), differs from traditional methods of learning language in the sense that it enables students to be their own researchers. He states that applications of corpora use in language education is divided into two main practical applications. The first one, what is called a COBUILD (Collins Birmingham University International Language Database) approach, is used for creating source materials, referencing work and syllabi by teachers. The second approach is concerned with the DDL approach, which means removing the middleman and giving the learners the opportunity to take part in building their own profiles of meanings and uses.

Similarly, Payne (2008) describes DDL as an approach to language learning where learners can exploit corpus data to realize and internalize the way language is used. In this regard, learners are seen as researchers who have access to authentic data which depicts the real use of language rather than altered forms of it (Hadley, 2002). There needs to be however, a distinction between corpus-oriented and corpus-driven approaches. Teubert (2010) establishes this distinction by stating that findings of linguistic studies can only be considered as corpus-oriented findings in cases where all of the data included is verified by corpus evidence, while on the other hand, linguistic findings can be recognized as data that are corpus-driven only in cases where they are derived straight from the corpora. Similarly, Tognini-Bonelli (2001) describes the corpus-driven approach as a methodology in which the learners and teachers have the chance to meet the real linguistic data behind language.

Considering that vocabulary plays an important role in defining ESP, teachings of ESP and vocabulary go hand-in-hand in most cases. Some of the previous studies in the field pursued the task of determining whether DDL and corpus-driven approach had a significant effect on the vocabulary learning performance of ESL/EFL learners. Sun and Wang (2003) examined whether there was a significant difference on student performance levels between teaching inductively and deductively while using a concordancer. In their study, a total of 81 students in the second year of high school in Taiwan were divided into two groups, a deductive group and an inductive group. At the beginning of the study, learners in both inductive and deductive groups were given a pre-test. The learners in the inductive group were instructed on how to search for collocations using concordancers while the learners in the deductive group were shown a model of the target process. In addition, the learners in the inductive group were shown an example that consisted of a three-stage process. During the process, the learners first used a web-based concordancer to search for a keyword, then induced on the results and noted down their perceptions. On the other hand, grammatical rules that would be necessary to correct the sentences were shared with the learners in the deductive group. In the end, the learners in the inductive group were asked to correct the sentences in accordance with their own inferred rules while learners in the deductive group were asked to study the distributed rules and correct the sentences. Following the experiment, learners in both groups were given a post-test in order to evaluate their performance. The results demonstrated that the students in the inductive

group performed slightly better than the students in the deductive group in terms of learning easy collocation patterns. Finally, these results were considered to suggest that the concordancers allow students to perform better in terms of self-discovery of collocations.

In another study, Chao (2010) also investigated the effects of concordancer use on the collocation learning of Taiwanese junior high school students. 71 students who were the top 20% in terms of academic achievement were randomly divided into experimental and control groups, consisting of 36 and 37 students respectively. The researcher adapted a concordancer, *IWiLL,* and introduced it to the students in the experimental group for them to utilize it while they were in the collocational learning process. Meanwhile, students in the control group continued their studies with their regular course books. The data related to the pre-tests indicated no significant difference between the test scores of the two groups. The results of the post-test however, indicated a significant difference in terms of collocation learning.

The results of these studies depict a significant difference between the performances of experimental and control groups, demonstrating that the utilization of concordancers in vocabulary education can be beneficial for the students in terms of their performances of learning new vocabulary and collocations.

Other empirical studies in the field examined the relationship between corpus-oriented activities, DDL, concordancing and the collocation learning of university level students. A noteworthy study in this regard belongs to Koosha and Jafarpour (2006). The researchers examined whether concordancing materials presented to students through DDL approach had any effect on their performance of collocation and preposition learning. At first, 200 English major students attended the study and were split into two groups randomly. The students were given the Michigan English Language Assessment Battery (MELAB) test in order to determine their overall proficiency. Afterwards, the students were divided into three experimental and three control groups, forming a total of 6 groups. The students then were pre-tested by a collocation of prepositions test. Following the pre-test, the students in the control group attended conventional courses regarding collocations of prepositions, and the courses were one-hour each, for fifteen weeks. The students in the experimental groups however, took a DDL based instruction which was derived from lines of concordancer data in the Brown Corpus Online (2005) and depicted in KWIC format. The

collocations of prepositions were distributed to the students as handouts. In the end, the post-test for collocations of prepositions was given to the students in order to evaluate their performances on the matter. The findings of the study indicated that students who had DDL based instruction had higher scores than the students in the control group. The researchers concluded that DDL approach was prominently more effective in terms of teaching collocations of prepositions while also their performance on collocation learning was a direct result of the influence which their overall proficiency levels created.

In another study, Mudraya (2006) created a specific corpus in search of integrating the lexical approach with a DDL methodology in mind on engineering students of English. The study included a frequency-based corpus created with the engineering lexis. 1200 word families derived from the engineering textbooks were included in the lexis. The most prominent implication of the study was that sub-technical vocabulary should be included in the ESP classroom alongside American English due to the benefits the students witnessed regarding their learning performance.

Overall, studies in the field of corpus linguistics, especially related to DDL, have seen an increase in popularity recently. The findings of the aforementioned studies suggest that corpus-driven and DDL oriented approaches to collocation learning can be quite beneficial in terms of higher success rates. However, while these studies investigated the influence of aforementioned approaches to some aspects of collocation learning and in terms of general English, there also is a need for studies in the field that examine the effect of corpus-driven materials on the performance levels of learners in terms of ESP. Bearing that in mind, the main aim of this research is to determine whether a significant effect of a corpus-driven approach exists on the vocabulary learning performance of low-proficiency level university students in the field of maritime.

In this chapter, the background of corpus linguistics, including controversies among linguists regarding whether corpora may be useful in terms of language teaching and learning were also discussed. Previous research related to corpora in teaching language in general, ESP and Maritime English were also summarized and presented alongside a brief exploration of Data-Driven Learning and related studies. In the following chapter, the methodology behind the present research will be

presented. This presentation will include the research questions, the creation of the specific corpus, description of the data collection tools, the data collection procedure and scoring.

CHAPTER 3

3. METHOD

The main aim of this research is to explore whether corpus-driven vocabulary instruction has a significant effect on the vocabulary learning performance of lower proficiency level students in the maritime field at the university level, with the help of a pre-test, eight progress tests and a post-test. The Maritime Corpus (MarCo) was compiled within the scope of this research with the intention of being used in the vocabulary instruction during the research and by students, maritime officers, captains, seamen, and personnel working under different titles in the field of maritime in the future. With this idea in mind, the corpus was created and shared with the students in the experimental group immediately after the application of the pre-test. Instruction regarding how to navigate the corpus along with its use cases was also demonstrated to the students. It was made sure that the students had enough time to study for the progress tests every week. After eight weeks of progress tests, the students in both experimental and control groups were given a post-test. Their papers were scored, and the scores were analyzed in order to see whether integrating a corpus approach into the teaching of specific vocabulary had an effect on the performance levels of the students in terms of pre-posttest comparison and within the progress tests themselves. The students' reflections on learning vocabulary with the help of a corpus were also noted and prepared for this research.

3.1 RESEARCH QUESTIONS

As explored in Chapter 2 – Review of Related Literature, a lack of studies is present in the field of corpus linguistics regarding studies that aim to investigate whether there is a significant correlation between the use of a corpus-driven approach and students' ability to learn maritime related vocabulary. Additionally, students, along with instructors seem not to have appropriate sources to check for proper collocations for maritime terminology. The present research pursued this aim in an attempt to answer the following research questions:

1. Is there a significant correlation between the use of a corpus and the performance of low proficiency level students' learning maritime related vocabulary at the university level?

2. Is there a significant difference between the pre and post test results in comparison to the distribution of the progress test results in the successive weeks?

3. What are the reflections of the students on learning vocabulary related to the field of maritime studies through corpus-driven instruction?

The research questions above were built on the corpus-driven instruction provided to the students of the experimental group of this research with the help of the specific corpus that was created within the framework of this research. The specific corpus created and used in this research is meant to be used by instructors, enthusiasts, scholars and possibly most importantly, the university level students who study maritime related subjects.

In the following parts, research population, the specific corpus, data collection tools, procedures and scoring will be presented.

3.2 RESEARCH POPULATION AND SAMPLING

The population of the research consisted of a total of 52 students attending maritime related universities in Turkey. Both control and experimental groups consisted of 26 male students each. The students in the experimental group were taught by the researcher while the students in the control group were taught by another English language instructor. All students were attending either a department or university related to maritime studies and were taking English courses at the academic year of 2018-2019. The students were on the lower proficiency level of the spectrum in accordance with the CEFR.

3.3 THE SPECIFIC CORPUS

Corpora may be beneficial to learners and teachers in various ways. As Nesi (2013) states, even language teachers may fail to serve as a source of information in cases where they lack information in areas of language in general, and especially Language for Specific Purposes (LSP), and the deficiency of a teacher in this regard

may limit the students' ability to further their knowledge of language. Therefore, it is of vital importance to state that teachers can also consult concordancers in order to fill the gaps in their knowledge of the language. Nowadays, one may do so on numerous websites quite easily. A fruitful example would be the website lextutor.ca which includes a variety of corpora such as the Brown Corpus among other academic corpora, and the user can simply choose a corpus and search for concordancing data.

In order to be able to perform corpus-driven language instruction, it was necessary to create a specific corpus that included the terminology used in the field of maritime. In this regard, Standard Marine Communication Phrases (SMCP) and International Maritime Language Program (IMLP), two prominent sources in Maritime English, which also include specific sets of language that need to be used in order to prevent confusion and danger among vessels, played an important role in the creation of the corpus. In other words, vocabulary items and phrases to be included in the corpus were derived from these sources. The structures and sentences in these resources consist of both spoken and written language used in maritime. In the process of creation, the first step was to convert the sentences used and exemplified in IMLP and SMCP into a sentence list that was suitable to be used in corpus creation tools. Afterwards, the researcher added extra lines to the data from a website (smcpexamples.com) that provided additional context for the vocabulary used in maritime. At the time, total vocabulary size consisted of 3852 words. However, the number of elements were reduced to a total of 2672 words after removal of duplicates, numbers, and noisy data. The items were then compiled with BootCaT software into a corpus and the corpus was tested via AntConc software, as suggested in Boulton (2016). Although there is no specific guideline for how many running words a specific corpus should include, the specific corpus for this research was decided to contain one-million running words, upon taking into consideration that vocabulary related to Maritime English takes on different meanings in general English. The specific corpus was named Maritime Corpus – MarCo.

The specific corpus for this research was compiled with 2672 seeds which formed a corpus of 1 million "running words". Besides the amount of words, frequency lists also include important signs regarding the characteristics of corpora. Due to the fact that the corpus includes one million words, the frequency list can provide

information regarding its characteristics. In pursuit of the task, the most frequent 100 words are presented in Table 1 below.

	MarCo								
1	THE	67,054	51	THEY	1,511	26	HAVE	2,774	76	CHAPTER	1,152
2	OF	37,475	52	HULL	1,508	27	THAN	2,541	77	SPACES	1,139
3	TO	29,504	53	PART	1,495	28	YOU	2,451	78	SHORE	1,132
4	A	26,463	54	WATER	1,491	29	WAS	2,419	79	BETWEEN	1,125
5	AND	25,351	55	RULES	1,479	30	WILL	2,394	80	FIGURE	1,119
6	IN	21,225	56	ACCORDING	1,468	31	IF	2,189	81	STRENGTH	1,112
7	IS	13,745	57	SHOULD	1,463	32	VESSEL	2,156	82	SAID	1,108
8	FOR	13,649	58	ANY	1,441	33	WHERE	2,131	83	STRUCTURAL	1,103
9	BE	13,167	59	THEIR	1,419	34	MAY	2,121	84	OUT	1,081
10	OR	8,625	60	ALSO	1,392	35	DECK	2,062	85	ABOUT	1,077
11	ARE	7,436	61	AREA	1,372	36	HAS	1,954	86	THICKNESS	1,071
12	ON	7,101	62	FOLLOWING	1,370	37	SHIPS	1,927	87	BEEN	1,057
13	AS	6,984	63	SUCH	1,369	38	WHEN	1,904	88	LENGTH	1,056
14	WITH	6,782	64	WE	1,337	39	NO	1,781	89	DEFINED	1,052
15	THAT	6,547	65	HE	1,298	40	CAN	1,773	90	YOUR	1,051
16	BY	6,227	66	ONLINE	1,293	41	ALL	1,771	91	UP	1,045
17	AT	5,194	67	LESS	1,291	42	OTHER	1,744	92	WERE	1,041
18	NOT	4,525	68	LOAD	1,274	43	USED	1,739	93	PLATE	1,037
19	FROM	4,503	69	SEE	1,241	44	BUT	1,714	94	THERE	1,037
20	IT	4,031	70	MESSAGE	1,237	45	CARGO	1,712	95	TWO	1,025
21	THIS	3,791	71	PAGE	1,224	46	MM	1,689	96	AFTER	1,021
22	SHIP	3,658	72	W	1,221	47	SIDE	1,661	97	STEEL	1,017
23	AN	3,027	73	ITS	1,219	48	ONE	1,609	98	SUPPORT	1,012
24	SECTION	2,855	74	ICS	1,209	49	SHALL	1,606	99	STRUCTURES	1,006
25	WHICH	2,812	75	INTO	1,167	50	MORE	1,597	100	BULK	1,002

Table 1. The 100 Most Frequent Words in MarCo.

A key discovery regarding corpora and frequency lists was that the most frequent words correspond to a high percentage of usage in language (Sinclair, 1991; Schmitt, 2000). As noticeable in Table 1 above, the most frequent word in the corpus is *the*, which covers 6.75% of all the words in the corpus. The data the frequency list yielded in this research is in line with previous research which states that the most frequent words are functional words (Rizzo, 2010). On the other hand, the frequency list of MarCo also shows that the functional words are followed by specific vocabulary items relative to Maritime English. In this regard, Kennedy (1998) states that the content words reaching a high rank in frequency lists indicates a higher percentage of

specificity of corpora while in general corpora, the functional words are followed by notional words. In this vein, it is important to note that the first content word in the list, *ship*, is positioned in the 22nd place within the frequency list, and thereon content words and notional words are observed to be alternating. This may be considered as an indication of a specific corpus. An example word search in the concordancer of MarCo in action can be seen in Figure 1 below.

location. The monkey fist and other	HEAVING	-line knots were sometimes hi
stabilizer deployed in the water for	HEAVING	in heavy weather. It acts as a
turn around a cleat and alternately	HEAVING	on the rope above and below
on the deck; ah: acceleration due to	HEAVING	to be measured at the center
of the lines are required. Have a	HEAVING	line ready at the pilot ladder
on. Have your crew on stand by for	HEAVING	up anchor when the pilot emb
shackle(s) is / are out. Stand by for	HEAVING	up. Put the windlass in gear.

Figure 1. The Corpus Concordancer Example Search for the Word "Heaving" in MarCo

3.4 DATA COLLECTION INSTRUMENT

This research used a total of ten data collection means over the period of ten weeks. The means adopted and designed to collect the data of the present research consisted of nine 'multiple-choice tests of maritime collocations' (pre-test and eight progress quizzes) along with a 'gap-filling test of maritime collocations' (post-test). Pre and post-tests of the instrument were adopted from Visan and Georgescu (2011), and three professors working at the university where the experiments took place were consulted regarding the validity of the instruments.

The pre-test adopted from the aforementioned study and used in the present study was a multiple-choice test of Maritime English collocations. The pre-test included twenty multiple-choice questions and each item was directed towards a different vocabulary item. The aim of this test was to determine the students' existing knowledge related to maritime collocations in English before the treatment began. The post-test on the other hand, was a gap-filling type of test related to maritime collocations in English including the same sentence structures from the pre-test, however, in gap-filling format. The intention behind this kind of structure was to use alternative assessment methods while also ensuring that a possible difference in difficulty of the questions did not have an effect on the performance levels of the

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students in the post-test. In addition, the eight progress quizzes were created by the researcher, relying on examples drawn from SMCP (2000) by the International Maritime Organization, and IMLP, whose author was Van Kluijven (2005).

In order to prepare the progress tests, the researcher first created a question pool consisting of 300 structures involving vocabulary items related to maritime terminology. Upon the creation of the question pool, the researcher consulted experienced English language instructors at the university where the experiments were about to take place, regarding the difficulty of the questions in the pool. The experts shared their feedback with the researcher and the researcher made the necessary adjustments to the questions in order to ensure the same level of difficulty among all questions in the pool. The researcher then chose questions from the pool for each test randomly, and created the eight progress tests, which consisted of twenty multiple-choice questions each. The students were requested to choose the best option to fill in the blank appropriately. The tests were then shared with the experts once again, this time for feedback regarding the validity of the tests. The eight tests were finalized following the feedback from the experts and the completion of the necessary adjustments.

In addition to the quantitative data, reflections of the students were also elicited after the post-test in order to support the research with qualitative data. The students were asked three questions regarding their perceptions of the integration of corpus into the language classroom, how they studied with the help of the corpus, and whether they faced any difficulties during the experiment. The reflections of the students were acquired through e-mail correspondence, after the completion of the experiment.

3.5 CORPUS-DRIVEN INSTRUCTION AND DATA COLLECTION

The researcher first checked the academic calendar in order to lay out a schedule for the tests and activities to be carried out. The schedule was then decided to be carried out over the course of 10 weeks, including pre and post-tests, throughout the spring semester. Following the scheduling process, preparation of the pre, post and progress tests, and the reconfiguration of the tests were completed in accordance with the feedback received from the experts. The students in both the experimental and control groups were introduced to the pre-test at the beginning of the spring semester of the academic year 2018-2019, and the pre-tests were completed in one hour.

Following the pre-test procedure, students in the experimental group were presented with a demo lesson in order to get them to familiarize with using the specific corpus. The demo included an introduction to the specific corpus MarCo, and instruction regarding how to navigate through corpora via concordancers. The first and later instructions were carried out on the smart board in the classroom. AntConc software was used to give students access to the specific corpus of the study and other web-based concordancers such as lextutor.ca were used as supportive examples in order to widen the variety of corpora the students were exposed to. The concordancer at lextutor.ca includes various corpora such as the Brown Corpus, Graded Readers, Wiki Corpus, and several others, allowing the students to experience a variety of corpora in action. During the first week, the researcher instructed the students in the experimental group about the usage of the corpus, and in the following weeks the students were instructed on how to look for collocations in the corpus, using the concordancers. Instructions lasted for one lesson hour (45 minutes) every week for a total of 10 weeks and included searching for words with and without the addition of associated words (e.g. look+out). The researcher wrote phrases from the IMLP and SMCP on the board with the key words missing. The students were then asked to come to the board one-by-one, use the concordancer to search for words that could be placed in the gap, and write the correct word into the gap in the sentence on the board. When necessary, students also used on-line dictionaries that are hosted on various websites, such as vocabulary.com in order to find out the meanings of maritime related vocabulary. The researcher informed the students whether they had found the correct word that was missing from the phrase and assisted them in finding the suitable word in cases where they could not find the appropriate word. On the other hand, students were shown maritime related videos and tv series in order to support the learning process of maritime related vocabulary. In addition to this activity, the students were also given a paper-based version of the specific corpus to study (see Appendices M-N for examples), because some technical restrictions at the institution prevented the students from using smartphones and accessing the corpus through their computers. The paper-based version of the specific corpus paid special attention to the vocabulary items in the corpus that they might require in order to study for the upcoming tests. However, it is of crucial importance to note that, the students were not advised on which vocabulary items would be included in the tests. The students in the control group,

following the pre-test, continued their studies using their English coursebook along with regular exercises regarding the maritime vocabulary items that were included in their coursebook. On the other hand, for the experimental group, the tests were conducted on the same day of every week, therefore, every week the students had one week to receive the corpus instruction and study the handouts. After nine weeks of progress tests, the students had one week to look back on their progress and prepare for the post-test. After the one-week break from the applications, students of both control and experimental groups took the post-test. Upon the completion of the post-test application, the papers were collected and scored. Every correct answer was worth 1 point. Incorrect answers and questions that were not answered were not given any points. Immediately after finishing the scoring process, the data were entered into SPSS for analysis.

In this chapter, the methodology behind the research was presented along with information regarding research population, data collection instruments and the procedure. In the following chapter, the findings and their statistical indications will be discussed.

CHAPTER 4

4. FINDINGS

The main purpose of the present research was to establish an understanding of whether corpus use in the classroom correlates with the specific vocabulary learning performance of lower proficiency students at a university level. Additionally, the research aimed to explore if the progress test scores of the students differed from the pre-post test scores in a significant manner. Lastly, the research aimed to voice the reflections of the students regarding corpus-driven language instruction. In this regard, a total of 52 students attending a maritime related university participated in the research. The control and experimental groups consisted of 26 students each. The experimental group was taught by the researcher with the help of corpus-driven materials, while the control group was taught by another instructor, as per usual, with the help of the coursebook with which the students and instructors were provided.

The duration of the research was approximately ten weeks and at the beginning of the period, students in both groups were given the pre-test. One week after the application of the pre-tests, the students in the experimental group participated in the first progress test. The tests, excluding pre and post-tests, were applied to the experimental group over the course of eight weeks. During this period, students in the experimental group studied the paper-based version of the specific corpus MarCo in order to infer the meaning of vocabulary with collocational data present. The students were instructed to first read the sentences and attempt to figure out the meanings of specific vocabulary. After taking their notes, the students were allowed to check their dictionaries for any unknown words. The instructor also assisted students in discovering the meanings of the maritime specific vocabulary by using digital dictionaries on the smartboard. On the other hand, students in the control group studied with their regular coursebooks which included vocabulary and exercises in the maritime context. Approximately two weeks after the last progress test was applied to the students in the experimental group, all students took part in the post-test session. After the post-tests and scoring, all data were added to the Statistical Package for Social Sciences (SPSS) version 23 for analysis.

4.1 DATA ANALYSIS PROCEDURE

4.1.1 Findings Regarding Research Question 1

The first research question was formed as follows:

"Is there a significant correlation between the use of a corpus and the performance of low proficiency level students' learning maritime related vocabulary at the university level?"

Therefore, in order to see whether the groups were normally distributed and decide on the following analyses, the pre-test and post-test data were analyzed via SPSS in terms of normality. Results can be seen in Table 2 below.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	*df*	Sig.	Statistic	*df*	Sig.
Pretest	.14	26	.18	.94	26	.165
Posttest	.10	26	.20	.96	26	.463

Table 2. Results of the Tests of Normality for the pre and post-test data.

Results of K-S and S-W tests indicated that the variables were distributed normally (K-S p>.05, S-W p>.05).

		Mean	Median	Variance	SD	Skewness	Kurtosis
Pretest	Statistic	5.62	6.00	2.08	1.44	-.03	-.66
	Std. Error	.28				.45	.88
Posttest	Statistic	13.23	13.00	8.58	2.93	.42	-.34
	Std. Error	.57				.45	.88

Table 3. Descriptive Statistics values for pre and post-tests.

As can be seen in Table 3 above, analysis also indicated a statistically significant difference between the pre-test ($\bar{X}$=5.62 SD=1.44, SK= -.34, RKU= -.66) and post-test variables ($\bar{X}$=13.23 SD=2.93, SK=.42, RKU=-.34).

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In order to decide whether there was a difference between groups, the pre-test scores of both groups were analyzed through one-way ANOVA. Results can be seen in Table 4 below.

Pretest	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.92	1	4.92	2.61	.112
Within Groups	94.15	50	1.88		
Total	99.07	51			

Table 4. Pretest One-way ANOVA results of both groups.

The results of the One-way ANOVA analysis indicated that there was no significant difference between the groups ($\bar{X}^2$=4.92, F=2.61, p=.11, SS=4.92), failing to reject the null hypothesis, therefore, indicating that the average of the dependent variable is the same for all groups.

In order to determine whether variances were distributed homogeneously, Levene's Statistic values were also taken into consideration.

	Levene Statistic	df1	df2	Sig.
Pretest	.68	1	50	.41

Table 5. Test of Homogeneity of Variances

Results of Levene's Statistic indicated that the groups were homogeneous in their distribution (Table 5). The null hypothesis for Levene's Statistic is that the participants of two or more groups are homogeneous in their distribution. Therefore, the Levene's Statistic of our research (LS=.68, p=.41), failing to reject the null hypothesis, indicate that the groups were homogeneously distributed.

Furthermore, the pre-test scores of all students were analyzed in order to reach the mean values for both groups. Histograms can be seen in Figure 2 below.
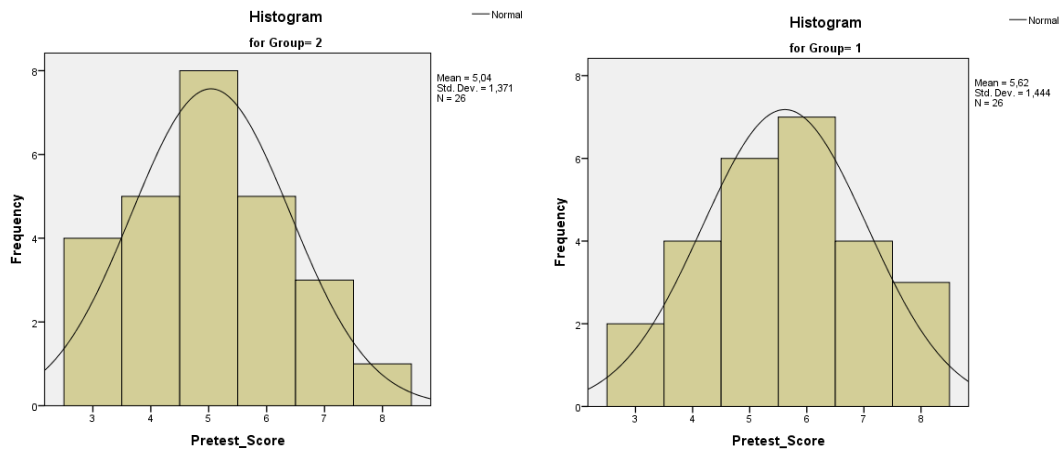
Figure 2. Pre-test Mean Values for the Control Group (left) and the Experimental Group (right)

The analysis of the pre-test scores of the students in both groups indicated that the minimum amount of questions students answered correctly out of 20 questions was 3, and the maximum correct answers on a pre-test were 8. The mean value for the control group in the pre-test was $\bar{X}=5.04$ while the same value was $\bar{X}=5.62$ in the experimental group. The .58 points difference between the mean values comes up to a 2.9% difference between the groups, considering that the full score was 20 points.

Paired Samples t-Test was also applied to the data, in order to compare the pre and post test scores in terms of correlation. Results can be observed in Table 5 below.

	Mean	N	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)	Correlation
Pretest	5.62	26	1.44	.28	-18.84	.000	.75
Posttest	13.23	26	2.93	.57			

Table 6. Paired Samples Correlation and Paired Samples t-Test Values.

Paired samples correlation values indicated that there was a significant difference in the scores for the pre-test ($\bar{X}=5.62$, SD=1.44) and post-test ($\bar{X}=13.23$, SD=2.93) conditions; t(25)=18.84, p<.05 (two-tailed). Correlation values also indicated that the test scores were significantly correlated ($r=.759$).

Lastly, repeated measures ANOVA was applied to the pre and post-test data and the results can be seen in Table 7 below.

	Group	Mean	Std. Deviation	N
	Control	5.04	1.29	26
Pretest	Experimental	5.62	1.44	26
	Total	5.31	1.39	52
Posttest (10 Weeks)	Control	6.69	1.69	26
	Experimental	12.85	3.52	26
	Total	9.77	4.14	52

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	Time	.19	203.63	1.00	50.00	.000	.80
	Time*Group	.38	78.45	1.00	50.00	.000	.61

Table 7. Pre and Posttest Repeated measures ANOVA results.

Repeated measures ANOVA results for the pre and post tests indicated a statistically significant difference between means of pre-test values for the control (X̄=5.04, STD=1.29) and experimental groups (X̄=5.62, STD=1.44) versus the post-test values for the control (X̄=6.69, STD=1.69) and experimental groups (X̄=12.85, STD=3.52). Furthermore, the Wilks' Lambda p<.05 suggested that there was a significant difference in the test results over time, indicating that the students demonstrated learning during the experiment.

4.1.2 Findings Regarding Research Question 2

The second research question was formed as follows:

"Is there a significant difference between the pre and post test results in comparison to the distribution of the progress test results in successive weeks?"

In order to answer the second research question, while ensuring that the significant increase in performance between the pre and post-tests was genuine and not due to the alternative assessment methods integrated in this research, data related to the eight progress tests applied between the pre and post tests were analyzed via

one-way repeated measures ANOVA test. The descriptive statistics related to the test can be observed below in Table 8.

	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8
Mean	6.73	7.35	6.65	7.96	7.54	6.92	7.88	9.88
Std. Deviation	2.01	2.13	2.75	2.02	2.56	2.11	1.92	1.79

Table 8. Descriptive Statistics Related to the One-Way ANOVA Test of the Progress Tests

Changes in the mean scores over the period of eight weeks, as can be observed above, indicate a significant difference in terms of performance between Test 1 ($\bar{X}$=6.73) and Test 8 ($\bar{X}$=9.88). The data also suggests a fluctuation in terms of performance over time.

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.
Treatment	.22	33.59	27	.185

Table 9. Mauchly's Test of Sphericity Results

In order to evaluate whether the data met the assumption of sphericity, the results of Mauchly's Test of Sphericity were examined. In accordance with the results, as can be seen in Table 8, Mauchly's Test of Sphericity indicated that the assumption of sphericity had not been violated, $\chi^2(2)$ =33.59, p=.185

Due to the fact that the assumption of sphericity was not violated, the values for Sphericity within subjects were examined.

Treatment	df	Mean Square	F	Sig.	Partial Eta Sq.
Sphericity Assumed	7	28.25	7.48	.000	.23
Error (Treatment)					
Sphericity Assumed	175	3.77			

Table 10. Results of Sphericity Test of Within Subjects

In accordance with the results in Table 9, it is safe to say that there was a significant effect of the treatment on the performance level of the students, $F(7, 175) = 7.48$, p $< .005$, $\eta p\ 2= .23$).

In order to further examine the mean values shown in Table 10, the pairwise comparisons of the data were also checked. The relevant statistics can be seen in Table 11 below.

Measure Pairs		Mean Difference	Sig.
Test 1	Test 3	.07	.912
Test 1	Test 6	-.19	.715
Test 3	Test 6	-.26	.691

Table 11. Pairwise Comparisons for Progress Tests 1-3, 1-6 and 3-6

The pairwise comparisons of the tests with the three lowest mean values showed a significant similarity (p>.05). In order to see the similarity in perspective, the estimated marginal means graph was also examined.
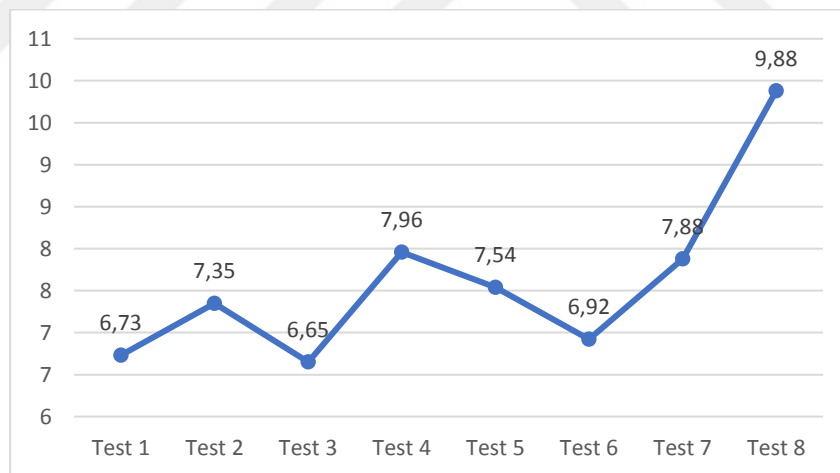
Figure 3. The Estimated Marginal Means Graph for the Progress Tests

The graph indicates that the test performance of the students in the experimental group fluctuated over the period of eight weeks, with three high and three low points on the spectrum. The performance drop was observed to occur for the 3rd and 6th progress tests, only to recover immediately in the next test.

4.1.3 Findings Regarding Research Question 3

The third research question was formed as follows:

"What are the reflections of the students on learning vocabulary related to the field of maritime studies through corpus-driven instruction?"

In order to answer the third research question of the research, the students in the experimental group were asked about their opinions regarding the research and data of qualitative quality was collected. A total of randomly selected 10 students reflected on the process of the corpus-driven instruction and their performances, while also including their personal opinions regarding the tasks. Below, a selection of excerpts from the students' responses will be presented. Every student in the experimental group was given a code number ranging from 1 to 26. Their reflections will be presented alongside their given code number.

The first question asked to the students in the scope of the research was related to the overall satisfaction of the students regarding the experiment.

Question 1: What do you think about learning maritime vocabulary with the help of a corpus?

Eight out of ten students shared their positive remarks regarding the corpus use in learning Maritime English vocabulary. Two students stated that they faced difficulties while learning with a corpus when compared to the traditional ways of studying vocabulary. Below are some example excerpts from the students' reflections.

Student 25: *"I love English and I study in a maritime department, so maritime vocabulary is very important for me. I always study with dictionary. It is a benefit for me to study with corpus because I can learn words more easily with it."*

Student 12: *"Studying with corpus helped me learn many more words than I knew before. For example, I check the corpus for the word 'adverse' and I learn more words used in the same sentence".*

Student 19: *"I think corpus study is good but I need to improve my English first, general English is more important, I think. I learn better when I see pictures. So, I don't prefer corpus"*

The second question asked to the students was about how they studied for the progress tests over the weeks.

Question 2: "How did you study for the progress tests?"

Six students out of ten stated that they studied the corpus for the progress tests, one day before the tests. On the other hand, three students expressed that they studied for the progress tests on a day to day basis, expressing that every day when they had finished their studies regarding the general English topics, they would spend some time studying the corpus for the progress tests. One student expressed that he studied whenever he could, but it was irregular. Below are some excerpts from the reflections of the students regarding the second question.

Student 15: *"I usually study one day before the test, because it helps me remember words more easily. If I study the corpus a long time before the exam, I may not remember the words very well."*

Student 13: *"Studying with corpus is good, yes, but if I study every day, I get confused sometimes. So, it is better for me to study one day before the test."*

Student 25: *"I study corpus when I have free time. I always want to learn new vocabulary because I think learning vocabulary is learning language. If you do not know vocabulary, you can't speak. So, I study always."*

The students took two midterm exams related to their studies during the semester. In order to investigate whether having exams unrelated to the corpus studies made anything different for them, the researcher asked a third question.

Question 3: "Do you remember the weeks in which you had midterm exams? Did the way you study for the corpus change in any way during those weeks?"

All of the ten students, although to varying degrees, stated that the way they studied for the progress tests differed in and before the weeks they took the midterm exams. Some of the student responses are presented as excerpts below.

Student 3: *"Yes, I remember. It was difficult. I usually study for exams one day before, and when we have midterm exam, it is very important. Because if I get low scores from midterm exams, I will fail. Failing will cause problems for me. So, I study more for the midterm."*

Student 1: *"Yes, there was not enough time to study for corpus, because I had to study for the midterm. I like learning new words, but if I get low scores* (from the midterms)*, it will be bad for me."*

Student 9: *"I studied for the corpus on the weekend but not very much. Because I needed to do revision for midterm."*

Overall, the findings related to the three research questions were analyzed and presented in this chapter. The data included test of normality, One-way ANOVA for pre-tests, Levene Statistic, Paired Samples t-Test, Repeated Measures ANOVA for the pre and post-tests, One-way Repeated Measures ANOVA for the progress tests, and finally the students' reflections on the corpus-driven instruction for Maritime English. In the following chapter, the findings will be discussed.

CHAPTER 5

5. DISCUSSIONS AND CONCLUSION

In this chapter, the summary of the research will be presented and discussion of findings, conclusion of the research and recommendations for further studies will follow.

5.1 GENERAL OVERVIEW OF THE RESEARCH

Despite criticisms in the past (Chomsky, 1966; Sullivan, 1977; Chomsky, 1986; Harrison, 1992), corpus linguistics and its implications in language teaching have become a popular field of study in the last two decades (Carter and McCarthy, 1988, McEnery and Hardie, 2013). Due to the fact that corpora allow learners and teachers access the language data in its authenticity, using this data may be beneficial in several ways, such as creating dictionaries, exposing learners and teachers to the authentic form of the target language, and gaining statistical insight regarding the different languages around the world.

Several scholars (Aston, 2001; Connor and Upton, 2004; Flowerdew, 2001; Nesi, 2013; Römer, 2011) state that including corpora in the L2 and ESP classrooms can be quite beneficial due to the fact that they allow learners to develop skills to grasp notions of language they would not be able to grasp otherwise. In this regard, previous studies in the field (Chao, 2010; Cobb, 1997; Gavioli, 2005; Payne, 2008; Sun and Wang, 2003; Stevens, 1991; Weber, 2001) show that there are many opportunities that arise with the inclusion of corpora in the language classroom.

As mentioned earlier, the main purpose of the present research was to establish an understanding of whether corpus use in the classroom significantly correlates with the specific vocabulary learning performance of lower proficiency students at a university level. Additionally, the present research aimed to explore whether the progress test scores of the students differed from the pre-post test scores in a significant manner. Lastly, the current research aimed to also voice the reflections of the students regarding corpus-driven language instruction. At the beginning, pre-test data of both experimental and control groups were analyzed in order to explore the vocabulary knowledge of 52 participating students attending universities related to maritime studies, prior to their studies on maritime specific terminology. Afterwards, pre and

post-tests, along with progress tests of students in the experimental group were analyzed in order to establish whether corpus-driven instruction for field-specific vocabulary was effective on their learning. The progress test results were then compared with the pre and post test results in order to investigate whether there was a difference in performance, despite the pre and post-test differences. Finally, the students' reflections regarding the corpus-driven instruction along with possible differences in their performances over the period of the experiment were examined.

In this chapter, findings related to the research questions will be discussed and concluded in the light of previous studies in the literature. Implications and suggestions for further studies will also be presented.

5.2 DISCUSSION OF THE FINDINGS

The corpus-driven approach, including the use of concordancers in the classrooms for ESP, plays an important part for DDL, and allows teachers to shape the language instruction to the needs of the students (Cheng, Warren, and Xun-feng, 2003; Flowerdew, 1993; Hadley, 2002; Johns, 1991b; McKay, 1980; Murison-Bowie, 1996; Thurstun and Candlin, 1998). In this vein, Tognini-Bonelli (2001) describes corpus-driven approach as a methodology in which the students and teachers have the opportunity to meet the real linguistic data behind language and use it in order to further their knowledge. Through the integration of a corpus-driven approach, learners become familiar with the use of authentic language and more autonomous in the sense that they no longer require written material such as course books. On the other hand, several scholars (Aston, 2001; Connor and Upton, 2004; Flowerdew, 2001; Nesi, 2013; Römer, 2011) state that the inclusion of corpora can be very beneficial for L2 and ESP education because it allows the students to develop the skills to grasp parts of language use that they would not be able to grasp without the help of corpora. In favor of the inclusion of corpora in ESP, Boulton (2012) also emphasizes that general corpora cannot satisfy the needs of ESP due to the fact that specific corpora, such as MarCo that was used in this research, are able to highlight the way English is used in specific situations to a higher degree of accuracy when compared to general English corpora. In this regard, the question in mind at the beginning of the current research was concerned with whether corpus-driven instruction correlated with the vocabulary learning performance of students of the maritime department of universities.

5.2.1 Discussion of Findings Referencing Research Question 1

"Is there a significant correlation between the use of a corpus and the performance of low proficiency level students' learning maritime related vocabulary at the university level?"

Analysis of the quantitative data gathered from the pre-test applied to both groups indicated that prior to the treatment the students possessed a very similar level of knowledge regarding Maritime English and were homogeneously distributed. Therefore, the specific corpus was created with the phrases and vocabulary derived from IMLP and SMCP, as suggested in John et al. (2017), and students were instructed on how to access the corpus data through a concordancer in order to improve their vocabulary knowledge. The treatment was applied to the experimental group along with the progress tests. In order to compare the post-test results of the groups, repeated measures ANOVA analysis was applied to the data of both groups and results indicated that although the students in the control group scored better in the post-test when compared to their pre-test results, the students in the experimental group showed a higher learning margin.

Further analysis of the data collected within the framework of the current research aligned with the findings of several studies conducted in the context of using corpus-driven instruction, concordancers and DDL (Chao, 2010; Chujo et. al., 2006; Koosha and Jafarpour, 2006; Sun and Wang, 2003; Stevens, 1991; Weber, 2001). All of these studies aimed to investigate whether the aforementioned sources had any significant effects on the EFL learners' vocabulary learning performance and the common finding they shared was that using corpora and DDL in the classroom positively affected the learning performance of the participants to varying degrees. The findings of the present research indicate that students who received corpus assistance in learning maritime vocabulary performed better than their counterparts in the control group. On the other hand, Paired Samples t-Test values presented a significant correlation between the scores of the pre and post-tests, demonstrating that the degree of learning differed among peers. However, the fact that standard error presents a higher value in the post-test results of the experimental group indicates that the mean values of the participants, therefore degree of learning, varied more significantly in the post-test.

Another prominent indication of the findings is that despite majority of the studies in the field having investigated whether using corpora in the language classroom could be beneficial for advanced level learners, lower level EFL students are also able to support their vocabulary learning with the help of the corpus-driven approach. In the study of Chujo et al. (2006), beginner level EFL students studied with a Japanese-English parallel corpus in order to compare vocabulary usage patterns and learn new words. In agreement with Hill's (2000) argument that corpus use in the classroom allows learners to discover new patterns for vocabulary, findings of the study demonstrated that corpus-driven approach was effective in terms of vocabulary learning. Moreover, it was also found that beginner level students were able to use corpus-driven activities effectively to learn English grammar and improve their performance in the tests. Thus, it can be claimed that using the corpus-driven approach with lower level EFL learners is also possible and may improve vocabulary learning for lower level EFL students.

Last but not least, previous corpus studies interested in maritime (John et al., 2017; Reguzzoni, 2006; Valle and Portela, 2012), investigated whether it was possible to create specific corpora for Maritime English. However, no studies were found in the literature that explored whether corpora of Maritime English could serve as a utility to teach and learn terms used in the field-specific language. In this regard, the present research fills the gap of corpus studies researching whether a corpus-driven approach to teaching maritime vocabulary can be beneficial.

5.2.2 Discussion of Findings Referencing Research Question 2

"Is there a significant difference between the pre and post test results in comparison to the distribution of the progress test results in the successive weeks?"

As part of the first research question, the pre and post test results showed significant differences. However, in order to evaluate whether the learning was linear, related to the pre and post test results, or differed from what the previous values suggested, the eight progress tests were also analyzed. In the descriptive statistics of the one-way repeated measures ANOVA, it was possible to see a fluctuation of performance. The lower mean values were spread over three weeks, first, third and the sixth week. Results of within subjects' test confirmed the hypothesis that the corpus-

driven instruction was effective on the students' vocabulary learning performance. On the other hand, the pairwise comparison for the first, third, and sixth weeks showed that the mean values for the results of these tests were significantly similar. The fluctuation in terms of the mean values might stem from various reasons. One of the reasons may be the fact that distinguishing the meanings of vocabulary in the Maritime English may be difficult at times. Learning vocabulary in ESP may be challenging, and because vocabulary in the Maritime English are also present in other fields such as mechanical engineering, commerce, and chemistry and meanings may shift from time to time, the learning process of the students may be distorted at times. In this regard, Reguzzoni (2006) states that polysemies and homonymes are the basic lexical devices that form maritime vocabulary and decontextualizing them in lines of words may cause shifts in meaning and grammatical functions of the words. She adds that students may be required to be able to discriminate through the various uses of the vocabulary in order to achieve a complete learning. On the other hand, the students having to study for the two midterm exams they had to take throughout the spring term may be another reason. The spring term lasted for a total of 12 weeks and the experiment lasted for 10 weeks. Taking into consideration that the pretest was applied to the students one week after the beginning of the term and the first midterm exam they encountered was in the 5th week of the term, the first midterm was found to align with the 3rd week of the experiment. On the other hand, the second midterm exam the students took during the term was in the 9th week of the term and the 7th progress test seems to be in line with the second midterm the students attended. The students spent the 8th week of the term, a week prior to the second midterm, studying for the second midterm exam, therefore it is safe to assume that the scores for the 6th progress test indicated a sharp decrease compared to the previous week. The estimated marginal means graph and related data showed a significant decrease in terms of performance in the 3rd and 6th progress tests. This decrease may be explained with the fact that the students prioritized studying for the midterms, rather than the progress tests, given that they were informed beforehand that the progress tests would not have any effects on their grades. The students' reflections were explored as part of the third research question in order to test this hypothesis and the findings regarding this matter will be discussed under the relative section.

The results of the one-way repeated measures ANOVA can be compared to the findings of the study carried out by Cobb (1997). The researcher created a lexical tutor which included 10,000 words and was used to present new vocabulary to a total of 100 Arabic-speaking students. There were two versions of the corpus, with and without a concordancer, and the participants used these two types of corpora in alternation every week. Cobb reported that the results indicated a better performance for the weeks the participants used the version with the concordancer. The present research shows similarities to Cobb's study in the sense that although the present research was not designed to have the students alternate between using and not using a concordancer throughout the weeks, the midterm exams posing a greater threat may have caused the test performance of the students to decrease during specific periods. In this regard, Gavioli (2005) emphasizes that corpus use in ESP is important, and ESP is a particularly suitable area for utilizing corpora and allowing students to be their own researchers. Thus, the students as their own researchers failing to do their research in and prior to the weeks of another important examination just around the corner could be considered as the culprit of the fluctuation presented in this research. In order to further investigate the cause of the fluctuation, the researcher used a third question, quoted below.

5.2.3 Discussion of Findings Referencing Research Question 3

"What are the reflections of the students on learning vocabulary related to the field of maritime studies through corpus-driven instruction?"

The analysis of the findings regarding this research question is threefold. One aspect of the analysis is related to whether the students' reflections portrayed a positive or negative approach to studying with the help of the corpus, while the second aspect is concerned with how they used the corpus to study vocabulary, and the last part is related to finding out whether the way they studied for the tests changed during the 3rd and 6th weeks of the application. In this regard, the responses of the students to the first question demonstrate that the majority of students found studying with the corpus beneficial. They stated that they were able to focus on the words better while also being able to learn additional vocabulary. One student expressed that he felt using a dictionary alongside the corpus allowed him to become more productive. These responses and the fact that the majority of the students shared their positive reflections

on the use of corpus for learning specific vocabulary are in line with the findings of Yoon and Hirvela's (2004) study, in which they also elicited the reflections of the students regarding corpus use for learning vocabulary. Similar to the present research, students participating in Yoon and Hirvela's study also received instruction regarding how to use the corpus and then studied on their own. Majority of the students expressed that they found corpus use beneficial for improving their vocabulary use and finding the meanings of the words they came across. Yoon and Hirvela reported that students felt a confidence boost and found the corpus related activities useful for also learning where and how to put words in context. Although the students in the present research did not express their opinions regarding whether there was a change in their confidence levels after the experiment, the students showed enthusiasm towards learning vocabulary with the help of a corpus-driven approach, both during and after the experiment. In another study, Farr (2008) surveyed student teachers at a master's program and the majority of the participants reflected that they would prefer to use corpus-based activities in their classrooms given that it was possible, and showed a very positive disposition towards the use of corpora in language education.

The response of the students to the question regarding how they studied for the progress tests indicated that most of the students preferred to study for the tests on the previous day. Three students expressing that they studied with the assistance of the corpus more often than once a week indicated that there was also a percentage of students who studied continuously. The students who studied on the previous day of the test also expressed that they fear forgetting the learned vocabulary items if they study more than a few days before taking the tests. This may be explained with the fact that the students needed to also study for learning vocabulary in the general English part of the course.

The third question regarding the reflections of the students on corpus use was related to the weeks of the midterm exams and how they studied for the progress tests in especially the 5th and 8th weeks of the term. The students reflected that they prioritized studying for the midterms over studying for the progress tests due to the fact that midterms posed a greater demand and there was not enough time to study for the progress tests during those weeks. These reflections may be in correlation with and explain the decrease of performance in the 3rd and 6th progress tests. Similarly, participants of Yoon and Hirvela's (2004) study emphasized that they found studying

with corpora to be time consuming, especially when compared to the use of dictionaries. However, they also added that corpora, although time consuming, gave the correct word to use in the sentence, while dictionaries often did not give the word they were actually looking for. Throughout the experiment of the present research, students generally reflected that although they felt grateful for learning vocabulary related to the maritime field and they believed that the vocabulary items they learned would be very useful for them in the long term, they also stated that they were worried about their vocabulary of general English along with their midterm scores. Therefore, it can be stated that the students prioritized studying for the midterm exams and did not have enough spare time for the progress tests during the midterm weeks.

5.3 CONCLUSION

The present research investigated whether corpus-driven approach to language and vocabulary instruction had an influence on the vocabulary learning ability of lower proficiency EFL learners at university level regarding the vocabulary of Maritime English. In addition, whether the pre and post-test results differed from the results of the progress tests in the successive weeks, namely, whether learning varied throughout the experiment, was analyzed. Lastly, the reflections of the students regarding the experiment were elicited and evaluated in order to gain insight regarding the possible causes of the fluctuation in their performance over the weeks.

The findings of this research indicate that adding the corpus element into the language education, and especially vocabulary teaching, has a positive effect on the performance of lower proficiency EFL learners in terms of learning maritime vocabulary. In addition, the maritime vocabulary learning performance of the students was found to be generally in a linear fashion over the ten weeks, except two weeks when their overall scores decreased. The students also reflected that they found studying maritime related vocabulary with the help of a corpus fascinating. The positive reflection towards corpus and corpus-driven approach is a prominent factor due to technology predominantly surrounding learners in the environments they are generally in by giving them the opportunity to embrace learning in every area of their lives.

A surprising aspect discovered during the process of this research was that although language use plays a key role in communication for areas such as the

maritime, development on the approach aspect of teaching maritime vocabulary was found to be advancing at a slow pace. It is believed that in order to prevent misunderstandings and accidents in such fields, the importance of approaches taken in teaching maritime vocabulary will shape the future of many aspects of the field. In this regard, previous studies combining corpora and Maritime English were found to be laying the foundations of different ways to create corpora that are suitable for the needs of the field along with students who are studying to become important actors in the field.

As aforementioned, previous studies in the field were generally concerned with how corpora suitable for Maritime English could be compiled. The present research may be a distinctive example in this aspect that a specific corpus was created within its scope and applied to the students of the maritime field in order to see whether their vocabulary learning performance was influenced. Without any doubt, this research alone cannot correspond to the vast majority of the field and the students in such a field around the world; however, one of the impressions to be drawn from this research is the emphasis on the required nourishment of development regarding corpus integrated language and vocabulary teaching.

In conclusion, the specific corpus created within the scope of this research along with the test results the students garnered throughout the experiment indicate a significant influence of corpus-driven vocabulary instruction on the ability of students to learn maritime related vocabulary. The students showing enthusiasm towards the use of corpus in their studies also indicates an acceptance of new approaches in vocabulary teaching in general, and also in the field of maritime. These indications point out that the present research helped 26 students in the field of maritime to develop their vocabulary of Maritime English, while also developing a different viewpoint of learning language in general.

5.4 PEDAGOGICAL IMPLICATIONS

In the pedagogical sense, this research involved students with the use of corpora and concordancers in order to give them a new perspective on learning vocabulary and language. The fact that the students were tested every week helped to establish an urge to benefit from the corpus in order to develop their maritime vocabulary. By the end of the experiment, it was observed that the students

demonstrated learning new vocabulary. This research indicates that integrating corpora into the vocabulary teaching of ESP and especially Maritime English in order to further experiment on these matters is worth pursuing.

Corpus-driven vocabulary instruction may be considered as a branch of corpus-driven language instruction and presents a new perspective on language education across institutions that deal with the teaching of ESP. Designing materials and curriculum suitable for corpus-driven instruction in these institutions may give the teachers and students the opportunity to create an unprecedented learning environment in which students can be their own researchers, explorers and teachers. The students participating in this research reflected that they enjoyed studying the vocabulary items with the help of the corpus, therefore, it can be assumed that students participating in future language classes where corpora are integrated may enjoy learning vocabulary to a higher extent. In this regard, this research may be considered as a stepping stone into a more diverse learning environment.

Corpus-driven approach to language instruction may also allow the teachers of language, and specifically teachers in the field of maritime, to feel more encouraged to use technology more often in the language classrooms. Allowing the students to discover new aspects of the language autonomously may also foster confidence in the students' minds. With the help of concordancers, students may be able to communicate easier, due to the fact that they will be able to find *that* word they need in order to complete their sentences, instead of spending a lot of time looking up words and synonyms in their dictionaries.

Although dictionaries are quite useful and they can be very beneficial in terms of finding meanings of words, using corpora in the classroom may also bring about reading habits. Students may feel encouraged to read more after using corpora, due to the fact that corpora have the ability to give examples as whole paragraphs and students may find these paragraphs enjoyable. As a result, reading for pleasure will help students learn new vocabulary immensely when compared to reading for tasks.

5.5 FURTHER RESEARCH

Based on the findings and limitations of this research, further studies may be planned for longer periods of time, if applicable, in order to increase the amount of

data, along with their accuracy and appliance. It may also be a good idea for further studies to include more participants in this regard.

This research was aimed at students with lower proficiency level of English. Further studies may extend on this aspect of the research and include upper intermediate and advanced proficiency level students in categories in order to collect data for a greater spectrum, therefore making it possible to generalize the findings and implications of the research for a broader variety of learners.

In order to strengthen the support of the qualitative data, specifying the attitudes of the learners towards corpus-driven instruction for ESP with the help of a survey may be another step to enrich the quality of data in further studies.

Another aspect to explore may include other specific fields where language use plays a major role, such as aviation, military land forces, or the medical field. The importance of language in these fields is very crucial in order to prevent accidents and expressing intention. Therefore, it may be included in further studies in the field.

Finally, adoption of a large corpus such as Brown University Corpus to be used in vocabulary teaching for ESP may be included in further studies in order to explore whether there are differences in the performance scores of students depending on the size and aim of the corpus used in the research.

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APPENDICES

APPENDIX A – MARITIME ENGLISH PRETEST

Please choose the correct option in order to complete the sentences below.

1) I will _____ cargo to stop listing.
   a. throw   b. pack   c. jettison   d. stow

2) MV Christina _____ tug assistance.
   a. needs   b. requests   c. wants   d. requires

3) Keep _____ lookout and report to the Master.
   a. closer   b. careful   c. sharp   d. exact

4) They are _____ radar search.
   a. carrying out   b. accomplishing   c. fulfilling   d. realizing

5) What is the result of the search? The result of search is positive. _____ vessel in position 018 degr.21 min. N, 23 degr. 12 min. S.
   a. hampered   b. constrained   c. sighted   d. loaded

6) I will proceed to pick up the survivors. _____ lifeboats.
   a. stand by   b. proceed   c. watch   d. unship

7) In smooth water and when sailing straight ahead the ship is usually at _____ keel.
   a. constant   b. stable   c. upright   d. even

8) _____ ground is reported in the anchorage.
   a. dangerous   b. unfavourable   c. foul   d. bad

9) The distance from the water line to the highest point of the vessel is understood by the _____ draft.
   a. water   b. sea   c. ship   d. air

10) Please check the _____ gear before commencing cargo operations.
    a. launching   b. steering   c. slipping   d. lifting

11) The surface of the cargo is constantly made equal by special pumps in _____ circumstances.
    a. rolling   b. loading   c. proper   d. adverse

12) The pilot will _____ the ship that has requested pilotage.
    a. board   b. climb   c. contact   d. leave

13) The pilot _____ is waiting for the incoming vessel.
    a. station   b. ladder   c. card   d. boat

14) MV Ulysses _____ sail last week.
    a. began   b. set   c. lost   d. raised

15) During the voyage they met with _____ swell.
    a. high   b. strong   c. heavy   d. smooth

16) Sailing in _____ waters requires avoiding crossing vessels.
    a. shallow   b. low   c. crowded   d. congested

17) The ship was deviated from the course by the _____ currents.
    a. powerful   b. fast   c. strong   d. tidal

18) The master asked the bosun to _____ the chain.
    a. check   b. pay out   c. clean   d. pay off

19) The shore _____ are prepared to load the ship.
    a. equipment   b. lines   c. crew   d. gang

20) Five minutes ago we received a gale _____.
    a. signal   b. warning   c. information   d. new

APPENDIX B – MARITIME ENGLISH PROGRESS TEST 1

Please choose the correct option in order to complete the sentences below.

1) _____ to the traffic separation scheme
a) access   b) reach   c) turn   d) advance

2) In _____ weather vessels must seek shelter
a) current   b) counter   c) adverse   d) direct

3) I hereby _____ for the position of first mate.
a) ask   b) walk   c) apply   d) contact

4) Please _____ us as soon as possible.
a) invite   b) await   c) congratulate   d) contact

5) The _____ is 5 metres above prediction.
a) anchor   b) tide   c) deck   d) speed

6) I have located you on my _____ screen.
a) radar   b) window   c) computer   d) navigation

7) _____ aids to navigation are displayed from the lighthouse
a) extra   b) excess   c) additional   d) minimum

8) The river is _____ by a bascule bridge
a) spanned   b) distributed   c) forced   d) covered

9) You are running into danger. _____ water ahead of you.
a) narrow   b) bad   c) difficult   d) shallow

10) You are not _____ with traffic regulations.
a) complying   b) completing   c) continuing   d) comforting

11) What is her maximum _____ now?
a) draught   b) withdrawal   c) water   d) pull

12) Large vessel is leaving the fairway- keep clear of the fairway _____.
a) road   b) area   c) gate   d) approach

13) What is your name and _____ sign?
a) number   b) phone   c) call   d) name

14) My anchor is clear of the _____.
a) keel   b) bottom   c) surface   d) top

15) I am on fire in the _____ spaces.
a) astern   b) hold   c) bridge   d) living

16) _____ anchor is reported in this area.
a) drifting   b) sinking   c) dragging   d) displaying

17) Flags and pennant are _____ from columns
a) called   b) added   c) displayed   d) dragged

18) The _____ track
a) recommended   b) required   c) requested   d) following

19) We are _____ of the fact that a mistake has been made by us.
a) know   b) aware   c) forced   d) hoping

20) We _____ on receiving a copy of the document.
a) insist   b) carry   c) cast   d) depend

APPENDIX C - MARITIME ENGLISH PROGRESS TEST 2

Please choose the correct option in order to complete the sentences below.

1) **We _____ you to inform us about your plans.**
a) ask
b) decide
c) delay
d) demand

2) **Please find _____ a copy of the contract.**
a) under
b) below
c) delivered
d) enclosed

3) **Wind is _____ and increasing.**
a) veering
b) speeding
c) shifting
d) stopping

4) **You are _____ other traffic.**
a) piloting
b) draining
c) obstructing
d) leaving

5) **The current turns _____ and sets NE**
a) right
b) clockwise
c) ahead
d) back

6) **A sewer _____ is marked by a pillar buoy**
a) outfall
b) mouth
c) opening
d) lid

7) **There has been a collision in (position). Keep _____.**
a) out
b) going
c) clear
d) distant

8) **Vessels must _____ this area.**
a) run
b) stow
c) avoid
d) escape

9) **The _____ line has parted.**
a) pulling
b) pushing
c) towing
d) tugging

10) **We will _____ port side alongside.**
a) close
b) berth
c) near
d) park

11) **Stand _____ on channel 15**
a) by
b) near
c) listening
d) here

12) **You are running into danger. _____ wreck ahead of you.**
a) plunged
b) overwhelmed
c) drowned
d) submerged

13) **Keep clear. You are _____ towards a towing line.**
a) going
b) moving
c) heading
d) sailing

14) **Vessels _____ 200 meters in length cannot enter.**
a) passing
b) extending
c) violating
d) exceeding

15) **Your track is _____ from the reference line.**
a) running
b) decreasing
c) shifting
d) diverging

16) **You are _____ a dangerous course.**
a) swimming
b) steering
c) going
d) clearing

17) **The counter _____ is rectilinear**
a) deck
b) stern
c) speed
d) current

18) **The roundabout is _____ for barge traffic**
a) impassable
b) open
c) built
d) inaccessible

19) **Risk of collision_____.**
a) ahead
b) near
c) close
d) imminent

20) **You are in the _____.**
a) fairway
b) shore
c) underway
d) station

APPENDIX D - MARITIME ENGLISH PROGRESS TEST 3

Please choose the correct option in order to complete the sentences below.

1) Fishing vessels may be _____ off the approach to the harbour
a) embarked   b) visited   c) confronted   d) encountered

2) The _____ passage is shallow
a) ahead   b) forward   c) next   d) onward

3) Go to emergency _____.
a) anchorage   b) area   c) field   d) port

4) I want navigational assistance to reach the _____ pilot station.
a) ashore   b) inshore   c) opposite   d) offshore

5) The _____ will pull.
a) ship   b) pilots   c) tugs   d) cable

6) You must wait for MV Cristina to _____ ahead of you.
a) pass   b) move   c) cross   d) overtake

7) I am ready to _____ your message.
a) listen to   b) accept   c) transmit   d) receive

8) _____ your position for identification.
a) report   b) call   c) locate   d) change

9) You may anchor until there is _____ depth of water.
a) enough   b) efficient   c) high   d) sufficient

10) Two black cones _____ from metal columns.
a) opened   b) exposed   c) marked   d) visible

11) _____ protect(s) the entrance from onshore swells
a) jetty   b) landmarks   c) buoy   d) groynes

12) Take precautions against _____ parts
a) new   b) repaired   c) required   d) protruding

13) We request that you _____ a meeting.
a) arrange   b) consider   c) count on   d) cancel

14) This does not meet our _____.
a) demands   b) questions   c) situation   d) information

15) What is your present _____?
a) situation   b) station   c) heading   d) way

16) You have permission to _____ until the tugs arrive.
a) wait   b) sail   c) anchor   d) turn

17) It is inadvisable to _____ the land
a) hug   b) near   c) close   d) strike

18) The island _____ 3 meters East
a) goes   b) extends   c) shifts   d) exposes

19) Your navigation _____ are not visible.
a) screens   b) satellites   c) lights   d) signals

20) What range _____ are you using?
a) scope   b) measurement   c) scale   d) position

APPENDIX E - MARITIME ENGLISH PROGRESS TEST 4

Please choose the correct option in order to complete the sentences below.

1) A _____ fairway forms the approach to the entrance.
a) narrow   b) deep   c) shallow   d) surface

2) Take command of search and _____.
a) rescue   b) recovery   c) salvage   d) claim

3) I need help. I have been in _____.
a) contact   b) crash   c) collision   d) strike

4) Advise you to change to larger range _____.
a) telescope   b) radar   c) scale   d) course

5) You must anchor clear of the _____.
a) fairway   b) roads   c) anchorage   d) astern

6) _____ the anchor ball.
a) hoist   b) heave   c) raise   d) uphold

7) A _____ swell is formed
a) low   b) moderate   c) forward   d) strong

8) A shallow _____
a) ground   b) patch   c) anchor   d) flag

9) To whom it may _____:
a) call   b) ask   c) concern   d) require

10) The meeting will be _____.
a) required   b) necessary   c) postponed   d) mentioned

11) Traffic _____ is required before entering the port.
a) clearance   b) governance   c) balance   d) distance

12) Berthing has been _____ by 3 hours.
a) accepted   b) advanced   c) hastened   d) delayed

13) _____ will commence within 2 hours
a) boarding   b) precautions   c) pilotage   d) dredging

14) _____ risk to navigation
a) instant   b) delayed   c) imminent   d) active

15) I am _____ dangerous cargo.
a) accommodating   b) jettisoning   c) moving   d) carrying

16) You must _____ gangway combined with pilot ladder.
a) lee   b) rig   c) plant   d) keep

17) An extensive _____ lies off the entrance.
a) blockage   b) destruction   c) corruption   d) obstruction

18) It is safe to _____ a rocket.
a) start   b) fire   c) shoot   d) light

19) I am on _____ in the hold.
a) discharge   b) heave   c) water   d) fire

20) I am not _____ command.
a) under   b) on   c) at   d) near

APPENDIX F - MARITIME ENGLISH PROGRESS TEST 5

Please choose the correct option in order to complete the sentences below.

1) **Vessels are instructed to _____ headway**
   a) keep   b) steer   c) change   d) maintain

2) **_____ to the adverse weather**
   a) in order   b) because   c) owing   d) required

3) **Anchoring is _____.**
   a) blocked   b) changed   c) prohibited   d) disabled

4) **Do you carry any _____ goods?**
   a) dangerous   b) rotten   c) heavy   d) small

5) **Pilotage is _____ by means of a hoist.**
   a) taken   b) granted   c) obtained   d) given

6) **Full sea speed is 30 _____.**
   a) kilometers   b) inches   c) miles   d) knots

7) **I have lost a man _____. Help with search and rescue.**
   a) overkill   b) overboard   c) fall over   d) dropdown

8) **May I _____?**
   a) continue   b) proceed   c) diverge   d) escape

9) **_____ your position for identification.**
   a) call   b) mark   c) state   d) report

10) **Rocky _____ form dangerous obstructions.**
   a) ridges   b) ledges   c) tracks   d) rims

11) **The passage is _____ during off-shore winds**
   a) impassable   b) impossible   c) lightened   d) patched

12) **_____ to the adverse weather**
   b) in order   b) because   c) owing   d) required

13) **What is the position of the vessel in _____?**
   a) distress   b) misfortune   c) anguish   d) misery

14) **Are you _____ by the head?**
   a) clipped   b) trimmed   c) snipped   d) cropped

15) **You are proceeding at a _____ speed.**
   a) fast   b) bad   c) great   d) dangerous

16) **The vessel is _____way.**
   a) over   b) under   c) near   d) in

17) **Vessel is _____ inflammable cargo in (position).**
   a) leaving   b) taking   c) crossing   d) leaking

18) **Give a slight _____ to starboard.**
   a) turn   b) heaving   c) rotation   d) heel

19) **My radar has become _____.**
   a) stopped   b) inoperative   c) unworkable   d) irregular

20) **The _____ stream sets W**
   a) tidal   b) draught   c) starboard   d) surface

APPENDIX G - MARITIME ENGLISH PROGRESS TEST 6

Please choose the correct option in order to complete the sentences below.

1) ETA must be _____ 6 hours
a) anchored   b) advanced   c) prospected   d) predicted

2)   Vessels bound in _____ direction
a) other   b) opposite   c) near   d) high

3) You may _____ on our support.
a) count   b) inform   c) trust   d) carry

4) _____ we will not be able to render you this service.
a) thankfully   b) recently   c) lastly   d) unfortunately

5) Take _____ against piracy
a) access   b) precautions   c) risks   d) permission

6) A _____ provides lee for vessels inward
a) training wall   b) traffic lane   c) surface stream   d) tide bound

7) Onshore sets may _____ during high slack water.
a) happen   b) occur   c) fall   d) rise

8) Do you have a right- or -left hand _____?
a) propeller   b) bearing   c) fan   d) wheel

9) There is a/an _____ of oil in the hold.
a) slick   b) sheet   c) coat   d) liter

10) _____ are reported in the offing off the sandbank.
a) swells   b) winds   c) currents   d) courses

11) _____ knowledge is necessary for sailing these waters
a) general   b) foreign   c) diverse   d) local

12)   Direction of the current is _____ to change
a) liable   b) dangerous   c) locked   d) maintained

13) We will _____ the mistake.
a) remedy   b) thank   c) state   d) refer

14) We _____ to inform you that some damage was caused.
a) regret   b) are happy   c) notice   d) urge

15) You must close up on the vessel _____ of you.
a) behind   b) ahead   c) near   d) upfront

16) When will the pilot _____?
a) embark   b) accelerate   c) board   d) stop

17) Seek _____ against gale
a) shelter   b) groyne   c) swell   d) buoy

18) Pilotage compulsory. _____ otherwise stated
a) because   b) due to   c) until   d) unless

19) You must _____ up on vessel ahead of you.
a) close   b) get   c) pass   d) move

20) Has your position been _____ by radar?
a) accessed   b) obtained   c) taken   d) reached

APPENDIX H - MARITIME ENGLISH PROGRESS TEST 7

Please choose the correct option in order to complete the sentences below.

1) A _____ gives access to inland waterways
a) jetty   b) lock   c) landfall   d) gale

2) A _____ provides shelter during storms
a) landmark   b) pilot   c) jetty   d) drill

3) We _____ you to settle the account presently.
a) request   b) thank   c) urge   d) see

4) The _____ worsened.
a) cargo   b) situation   c) wind   d) report

5) How many tugs do you _____?
a) ask   b) require   c) need   d) expect

6) You are _____ from pilotage.
a) outted   b) stopped   c) exempted   d) late

7) _____ vessel are allowed to proceed
a) dredging   b) weightened   c) steering   d) lightened

8) Disembarkation of pilot in the _____ of buoy CA4
a) area   b) vicinity   c) distance   d) field

9) You must _____ clear of the fairway.
a) stand   b) move   c) go   d) stay

10) What is your present position, _____ and speed?
a) course   b) way   c) destination   d) target

11) Have a _____ line ready.
a) help   b) draft   c) merit   d) messenger

12) How long does it take to _____ the engine from stopped?
a) open   b) start   c) end   d) begin

13) What _____ is required?
a) help   b) compensation   c) benefit   d) assistance

14) I do not have _____ way.
a) lee   b) course   c) steerage   d) pilotage

15) Vessels must navigate with _____.
a) help   b) trim   c) caution   d) communication

16) Tidal _____ for vessels outward: 2 hours
a) pressure   b) advantage   c) wave   d) gauge

17) Pilot will _____ in the offing
a) board   b) climb   c) get   d) embark

18) A landfall _____ indicates safe water
a) buoy   b) lock   c) ground   d) mark

19) _____ to the traffic separation scheme
a) reach   b) turn   c) access   d) advance

20) You must _____ speed.
a) accelerate   b) reduce   c) cut   d) slow

APPENDIX I - MARITIME ENGLISH PROGRESS TEST 8

Please choose the correct option in order to complete the sentences below.

1) We hereby _____ you of the fact that minor damage was caused.
   a) mention   b) relieve   c) prefer   d) notify

2) We _____ like to get into contact with you.
   a) would   b) do   c) are   d) can

3) You _____ take a pilot – pilotage is compulsory.
   a) must   b) can   c) may   d) can't

4) _____ has been reported in this area
   a) berthing   b) traffic   c) shoaling   d) friction

5) I am _____ my course to port.
   a) changing   b) altering   c) drafting   d) differentiating

6) Send a _____ line ashore to the boatmen.
   a) raising   b) heaving   c) lifting   d) hoisting

7) Put a man on _____.
   a) sentry   b) scout   c) beacon   d) lookout

8) You are running _____.
   a) foreground   b) underground   c) aground   d) inshore

9) What was your last port of _____?
   a) anchor   b) call   c) appeal   d) request

10) Tug services _____.
   a) stopped   b) continued   c) suspended   d) allowed

11) I cannot _____ my present course.
   a) change   b) stop   c) keep   d) steer

12) It is dangerous to _____ in present position.
   a) remain   b) move   c) stand   d) sail

13) We hereby _____ our agreement with you.
   a) decline   b) confirm   c) refuse   d) withdraw

14) We _____ you that we will do everything to avoid any problems.
   a) confirm   b) await   c) tell   d) assure

15) What is your _____ from Istanbul Pilot Station?
   a) miles   b) speed   c) space   d) distance

16) This _____ will lead clear of the danger
   a) road   b) way   c) sea   d) track

17) What are your _____?
   a) questions   b) requirements   c) intentions   d) expectations

18) Vessel at anchor in the _____.
   a) roads   b) fairway   c) ways   d) underway

19) The roadstead has been _____ by an oil-spill.
   a) dirty   b) spoiled   c) polluted   d) infected

20) I _____ to reach you at 11 hours.
   a) expect   b) wait   c) come   d) sail

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APPENDIX J - MARITIME ENGLISH POSTTEST

Please fill in the most appropriate word:

1. I will _____ cargo to stop listing.

2. MV Christina _____ tug assistance.

3. Keep _____ lookout and report to the Master.

4. They are _____ radar search.

5. What is the result of the search? The result of search is positive. _____ vessel in position 018 degr.21 min. N, 23 degr. 12 min. S.

6. I will proceed to pick up the survivors. _____ lifeboats.

7. In smooth water and when sailing straight ahead the ship is usually at _____ keel.

8. _____ ground is reported in the anchorage.

9. The distance from the water line to the highest point of the vessel is understood by the _____ draft.

10. Please check the _____ gear before commencing cargo operations.

11. The surface of the cargo is constantly made equal by special pumps in _____ circumstances.

12. The pilot will _____ the ship that has requested pilotage.

13. The pilot _____ is waiting for the incoming vessel.

14. MV Ulysses _____ sail last week.

15. During the voyage they met with _____ swell.

16. Sailing in _____ waters requires avoiding crossing vessels.

17. The ship was deviated from the course by the _____ currents.

18. The master asked the bosun to _____ the chain.

19. The shore _____ are prepared to load the ship.

20. Five minutes ago we received a gale _____.

APPENDIX K – ANSWERS OF THE PRETEST-PROGRESS TEST 5

Pretest answers

1) C   2) D   3) C   4) A   5) A   6) A   7) D   8) D   9) D   10) B   11) D

12) A   13) A   14) B   15) A   16) D   17) D   18) A   19) C   20) B

Progress Test 1 Answers

1) A   2) C   3) C   4) D   5) B   6) A   7) C   8) A   9) D   10) A   11) A

12) D   13) C   14) B   15) D   16) C   17) C   18) A   19) B   20) A

Progress Test 2 Answers

1) D   2) D   3) A   4) C   5) B   6) A   7) C   8) C   9) C   10) B   11) A

12) D   13) D   14) D   15) D   16) B   17) D   18) D   19) D   20) A

Progress Test 3 Answers

1) D   2) D   3) A   4) B   5) C   6) C   7) D   8) A   9) D   10) B   11) D

12) D   13) A   14) A   15) C   16) C   17) A   18) B   19) C   20) C

Progress Test 4 Answers

1) A   2) A   3) C   4) C   5) A   6) A   7) B   8) B   9) C   10) C   11) A

12) D   13) C   14) C   15) B   16) B   17) D   18) B   19) D   20) A

Progress Test 5 Answers

1) D   2) C   3) C   4) A   5) C   6) D   7) B   8) B   9) D   10) B   11) A

12) C   13) A   14) B   15) D   16) B   17) D   18) D   19) B   20) D

APPENDIX L – ANSWERS OF THE PROGRESS TEST 6 – POST-TEST

Progress Test 6 Answers

1) B   2) B   3) A   4) D   5) B   6) A   7) B   8) A   9) A   10) A   11) D

12) A   13) A   14) A   15) B   16) A   17) A   18) D   19) A   20) B

Progress Test 7 Answers

1) B   2) C   3) C   4) B   5) B   6) C   7) D   8) B   9) D   10) A   11) D

12) B   13) D   14) C   15) C   16) B   17) D   18) A   19) C   20) B

Progress Test 8 Answers

1) D   2) A   3) A   4) C   5) B   6) B   7) D   8) C   9) B   10) C   11) C

12) A   13) B   14) D   15) D   16) D   17) C   18) A   19) C   20) A

Post-test Answers

1) jettison	2) requires	3) sharp	4) carrying out
5) hampered	6) stand by	7) even	8) bad
9) air	10) steering	11) adverse	12) board
13) station	14) set	15) high	16) congested
17) tidal	18) check	19) crew	20) warning

APPENDIX M – SAMPLE OF PAPER-BASED CORPUS FOR MARITIME VOCABULARY

<div style="border:1px solid blue; text-align:center;">

Corpus Handout for the Maritime Vocabulary

</div>

Word: steering

Corpus example: The valves shall be of adequate size and so arranged as to avoid an undue rise in the pressure above the design pressure. 3. The main steering gear and rudder stock shall be: 1. Of adequate strength and capable of steering the ship at maximum ahead service speed which shall be demonstrated ; 2 Capable of putting the rudder over from 350 on one side to 350 on other side with the ship at its deepest seagoing draught and running ahead at maximum ahead service speed and, under the same condition, from 350 on either side to 300 on other side in not more than 28 seconds.

```
res Dry spaces 0.5 spaces, pump rooms, steering spaces, etc. Other compartments than ab
includes all parts from the rudder and steering gear to the steering position necessary
om the rudder and steering gear to the steering position necessary for steering the shi
to the steering position necessary for steering the ship. General Manoeuvring arrangeme
rance at the trunion cross head of the steering rams connection should be taken and rec
aces or the emergency fire pump in the steering flat through isolating valves. In addit
sually selected are : A room below the steering flat located in the transom space. A su
) State the SOLAS requirements for the steering gear. Answer: Regulation 29 Steering ge
very ship shall be provided with a man steering gear and a auxiliary steering gear to t
th a man steering gear and a auxiliary steering gear to the satisfaction of the adminis
faction of the administration. The man steering gear and the auxiliary steering gear sh
he man steering gear and the auxiliary steering gear shall be so arranged that the fail
 the other one inoperative. 2. All the steering gear components and the rudder stock be
ine the scantlings of piping and other steering gear components subjected to internal h
above the design pressure. 3. The main steering gear and rudder stock shall be: 1. Of a
1. Of adequate strength and capable of steering the ship at maximum ahead service speed
 maximum rudder angle. 4 The auxiliary steering gear shall be : 1. Of adequate strength
1. Of adequate strength and capable of steering the ship at navigable speed and of bein
e machinery space and the other at the steering flat or at any other location where the
trengthening see Section 15. A.2.3 The steering gear is to comply with the GL Rules for
ne, to prevent water from entering the steering gear compartment and the lubricant from
CS UR S10.3) E.2 In case of mechanical steering gear the diameter of the rudder stock i
he torsional moment from the auxiliary steering gear may be 0.9 D t . The length of the
nce depends on the construction of the steering engine and on the bearing. E.2 Strength
UR S10.4.3) Note Where a double-piston steering gear is fitted, additional bending mome
ng moments may be transmitted from the steering gear into the rudder stock. These addit
e case can be, and the rudder blade or steering gear (see F.3), the contact area betwee
 rudder stock. I.2 Locking device Each steering gear is to be provided with a locking d
o be duly consid- ered. B.7 Rudder and steering gear B.7 When calculating the rudder fo
n etc.) as well as the capacity of the steering gear are to be increased accordingly wh
of three plate connections at rudders, steering nozzle, etc. plating thickness t o [mm]
air-conditioning rooms; windlass room; steering gear room; stabilizer equip- ment room;
 employed in that space. B2.6.4 In the steering gear room, a second means of escape sha
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APPENDIX N – SAMPLE OF PAPER-BASED CORPUS FOR MARITIME VOCABULARY

<div style="border:1px solid blue">

Corpus Handout for the Maritime Vocabulary

</div>

Word: tidal

Corpus example: The tide is falling - ~ it is 3 hours after high water / before low water. ~ it is 5 metres below high water / above low water. The tide is slack. Present tide is 2 meters above / below datum in position. The tide is 2 meters above / below prediction. The tidal stream / current is 10 knots in position. The tide is setting in direction 5 degrees.

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y when mooring on the pier subjected to tidal conditions. MAY 2016 Mr Bhaumik. (174)
sailing vessel when not in use. Wave or tidal movement going in the same direction as
g tide and rising tide when there is no tidal induced current. A large cargo ships sp
1] Wind-over-tide Sea conditions with a tidal current and a wind in opposite directio
o be an issue. "If you are altering the tidal regime, if you have migratory fish, how
little attention. Following sea Wave or tidal movement going in the same direction as
er allowing for the effect of currents, tidal streams, and leeway caused by wind and
... metres above / below prediction The tidal stream / current is ... knots in positi
eorological conditions A weak / strong (tidal) current is setting .... degrees. The d
```

Word: Equipment

Corpus example: The floating liferaft shall be capable of withstanding repeated jumps on to it from a height of at least 4.5 m above its floor both with and without the canopy erected. The liferaft and its fittings shall be so constructed as to enable it to be towed at a speed of 3 knots in calm water when loaded with its full complement of persons and equipment and with one of its sea-anchors streamed.

```
y exactly where this blind is and which equipment is in danger of overpressure. Before yc
xidation. DREVO Gramr features standard equipment that improves gaming skills making it p
) 152.0 770.0 157.0 770.0 162.0 2.2 The equipment number EN is to be obtained from the fc
otection measure from loading discharge equipment wire, such as grab, should be taken for
rt of the ships structure. All portable equipment are to be capable of being readily erec
lities include: secure space for rescue equipment, education and training facilities, com
d safe for acceptance. (9) What are the equipment in engine room which require inspection
Explain the annual maintenance of foam equipment. Answer:- The following maintenance act
regular intervals as prescribed in the equipment manual.: the foam lines with their isol
OWS is oily water separator .It is the equipment in the machinery space of all ships whi
any tankers to supply deck foam-monitor equipment ,is shown in the figure above. The autc
am proportioner used in the foam making equipment on the ship. Answer:- A number of foam
e boat is to be rigged up with its full equipment as per the code of life saving applianc
pproval details of the bilge separation equipment. Approval details of the oil in water m
details of the oil in water monitoring equipment. Maximum through put of the system in M
major conversions. All machinery space equipment same details as per FORM A. Ship type c
neters. Details and approval of the COW equipment Details of the ODM approval, type and t
inspection is a functional check of the equipment and hence the operational check of the
ck of the oil separating and monitoring equipment will be checked for correct functioning
a height of 18 m, the liferaft and its equipment will operate satisfactorily. If the lif
vith its full complement of persons and equipment and with one of its sea-anchors streame
of the liferaft, its container and its equipment shall not be more than 185 kg. The life
vith its full complement of persons and equipment, be capable of withstanding a lateral i
, when packed with the liferaft and its equipment, to pull the painter from within and tc
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CURRICULUM VITAE

Hakan İkinci was born in Trabzon, Turkey in 1984. He graduated from the Foreign Language Education Department English Language Teaching Program of the Faculty of Education at Sakarya University. Throughout his career, he worked as a Language Instructor at several institutions such as K-12 schools and private language schools. At the time of this study, he works at a public university as an English Instructor. He speaks English and Italian fluently, and German to a pre-intermediate extent. He is also interested in programming languages alongside linguistic endeavors.

ÖZGEÇMİŞ

Hakan İkinci 1984 yılında Trabzon'da doğmuştur. Sakarya Üniversitesi Yabancı Diller Eğitimi A.B.D İngilizce Öğretmenliği mezunu olup, kariyeri boyunca özel ortaöğretim kurumları ve dil okulları dahil çeşitli alanlarda görev almıştır. Çalışmanın yapıldığı tarihte bir devlet üniversitesinde İngilizce Öğretim Görevlisi olarak çalışmaktadır. İngilizce ve İtalyanca dillerini akıcı şekilde konuşabilirken, orta seviye Almanca bilgisine de sahiptir. Dilbilim çalışmalarının yanı sıra programlama ve yazılım dillerine ilgi duymaktadır.