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Department of Foreign Languages Education
English Language Teaching Master's Program**

**ENHANCING VOCABULARY LEARNING IN CIVIL AVIATION
STUDENTS: A COMPARATIVE STUDY OF THE EFFECTS OF
ONLINE INTERACTIVE VOCABULARY ACTIVITIES AND COURSE
BOOK-BASED ACTIVITIES**

**Kenan BOZKURT
A Master's Thesis**

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KİTABI TABANLI ALIŞTIRMALARIN ETKİLERİNİN
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**MAKÜ EĞİTİM BİLİMLERİ
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İmza

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**Enhancing Vocabulary Learning in Civil Aviation Students: A Comparative
Study of the Effects of Online Interactive Vocabulary Activities and Course
book-based Activities
(A Master's Thesis)**

Kenan BOZKURT

ABSTRACT

Aviation industry has been a sector which is developing rapidly both in our country and in the world. In line with this, several needs have occurred. As this sector has an international role, a common language is needed in order to process the work and provide communication. Without question, this language is English. On the other hand, since the aviation is a specific field, the needed English is not only General English but it is also English for Specific Purposes (ESP). In other words, it is a language which has a terminology and special structures in spoken language. Furthermore, it has several rules in different subjects, such as language framework, aviation alphabet, numbers, etc. which are formulated by International Civil Aviation Organization (ICAO). This research aims to explore and compare the effects of online interactive vocabulary activities and traditional course book-based activities on vocabulary improvement in Civil Aviation students at Burdur Mehmet Akif Ersoy University. With a comparative nature, the research seeks to determine the effectiveness of these two approaches and identify which method enhances vocabulary learning more effectively. Additionally, the study sets out to investigate students' perspectives and opinions regarding the use of online interactive vocabulary activities versus course book-based activities in their learning process. Through statistical analysis and gathering students' viewpoints, this research intends to contribute valuable insights to the field of language teaching and learning in the context of Civil Aviation education. There are 84 students who are between 18 and 23 in the study. Their level of English is A1 and A2. In this study, mixed-methods sequential explanatory design was used as quantitative data and qualitative data were collected respectively. As a quantitative data, placement test was applied to see the English level of students and Aviation vocabulary test was used in order to see the level of students in Aviation English. As for the qualitative data, firstly, interview questionnaire form was applied to voluntary students and then the same form was given to focus groups to receive their written opinions. Results indicated that there was a significant difference between the success of the students of experimental and control group in terms of pre-test and post-test scores. In addition, students' satisfaction in experimental group related to course activities is much higher than the one in control group. This study is significant for students' comprehension of aviation vocabulary to use them in their prospective jobs to be successful. In addition, it is assumed that they will be successful in written and oral aviation English exams before being hired thanks to this study.

Keywords: Aviation English, ESP, Online Interactive Activities, Online Vocabulary Games, Vocabulary Teaching.

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Sivil Havacılık Öğrencilerinin Sözcük Öğrenimini Artırma: Çevrimiçi Etkileşimli Kelime Alıştırmalarının ve Ders Kitabı Tabanlı Alıştırmaların Etkilerinin Karşılaştırmalı İncelemesi
(Yüksek Lisans Tezi)

Kenan BOZKURT

ÖZ

Havacılık sektörü hem ülkemizde hem de dünyada hızla gelişen bir sektör halini almıştır. Bununla bağlantılı olarak da bazı ihtiyaçlar ortaya çıkmıştır. Bu sektör uluslararası bir role sahip olduğu için işlerin yürümesi ve iletişimin sağlanması amacıyla ortak bir dile ihtiyaç duyulmaktadır. Bu da şüphesiz İngilizcedir. Öte yandan havacılık özel bir alan olduğu için ihtiyaç duyulan İngilizce de sadece Genel İngilizce değil aynı zamanda özel amaçlı İngilizcedir. Diğer bir deyişle kendine has bir terim bilgisi olan ve konuşma dilinde özel yapılara sahip olan bir dildir. Bu dilin Uluslararası Sivil havacılık Örgütü tarafından oluşturulan bir dil seviye ölçütü, havacılık alfabesi ve sayılar gibi farklı konularda kuralları vardır.

Bu araştırma, Burdur Mehmet Akif Ersoy Üniversitesindeki Sivil Havacılık öğrencilerinde çevrimiçi etkileşimli kelime bilgisi etkinliklerinin ve geleneksel ders kitabı tabanlı etkinliklerin kelime dağarcığı gelişimine etkilerini araştırmayı ve karşılaştırmayı amaçlamaktadır. Karşılaştırmalı bir yapıya sahip olan araştırma, bu iki yaklaşımın etkililiğini belirlemeyi ve hangi yöntemin kelime öğrenimini daha etkili bir şekilde geliştirdiğini belirlemeyi amaçlamaktadır. Ek olarak, çalışma, öğrencilerin öğrenme süreçlerinde çevrimiçi etkileşimli kelime etkinliklerinin kullanımına karşı ders kitabına dayalı etkinliklerin kullanımına ilişkin bakış açılarını ve görüşlerini araştırmayı amaçlamaktadır. Bu araştırma, istatistiksel analiz ve öğrencilerin bakış açılarını toplayarak, Sivil Havacılık eğitimi bağlamında dil öğretimi ve öğrenimi alanına değerli içgörüler katmayı amaçlamaktadır. Araştırmaya 18-23 yaş arası 84 öğrenci katılmıştır. İngilizce seviyeleri A1 ve A2'dir. Bu çalışmada nicel veriler ve nitel veriler sırasıyla toplandığı için karma yöntemli sıralı açımlayıcı desen kullanılmıştır. Nicel veri olarak öğrencilerin İngilizce seviyelerini görmek için seviye belirleme testi, Havacılık İngilizcesinde seviyelerini görmek için Havacılık kelime testi kullanılmıştır. Nitel verilere ilişkin olarak ise öncelikle gönüllü öğrencilere görüşme anket formu uygulanmış, daha sonra aynı form odak gruplarına verilerek yazılı görüşleri alınmıştır. Sonuçlar, deney ve kontrol grubu öğrencilerinin başarıları arasında ön test ve son test puanları arasında anlamlı bir fark olduğunu göstermiştir. Ayrıca deney grubundaki öğrencilerin ders etkinliklerine ilişkin memnuniyetleri kontrol grubuna göre çok daha yüksektir. Bu çalışma öğrencilerin havacılıkla ilgili kelimeleri anlamaları ve bunları gelecekteki işlerinde başarılı olmaları için kullanmaları açısından önemlidir. Ayrıca bu çalışma sayesinde işe alınmadan önce yapılacak yazılı ve sözlü havacılık sınavlarında başarılı olacakları varsayılmaktadır.

Anahtar Kelimeler: Çevrimiçi Etkileşimli Etkinlikler, Çevrimiçi Kelime Oyunları, Havacılık İngilizcesi, Kelime Öğretimi, Özel Amaçlı İngilizce.

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TABLE OF CONTENTS

BİLDİRİM	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
ÖZ	v
TABLE OF CONTENTS	vii
LIST OF ABBREVIATIONS	xi
LIST OF TABLES	xii
LIST OF FIGURES	xiii
CHAPTER I	1
INTRODUCTION	1
1.1. Background of the Study	1
1.2. Statement of the Problem	4
1.3. Purposes of the Study	6
1.4. The Significance of the Study	7
1.5. Assumptions	8
1.6. Limitations.....	9
1.7. Definition of Key Concepts.....	9
CHAPTER II.....	11
LITERATURE REVIEW.....	11
2.1. Teaching Vocabulary	11
2.2. Vocabulary Learning Strategies	14
2.2.1. Cognitive Strategies.....	14
2.2.2. Metacognitive Strategies.....	14
2.2.3. Social/Affective Strategies.	15
2.2.4. The Role of Vocabulary Learning Strategies in Vocabulary Acquisition.....	15
2.3. Online Interactive Vocabulary Activities	16
2.3.1. Constructivism and Technology-Enhanced Learning.....	16
2.3.3. Benefits and Limitations of Online Interactive Vocabulary Activities. ...	17
2.4. Aviation English and Vocabulary in the Aviation Industry	18
2.4.1 Overview of Aviation English as a Specialized form of English	18
2.4.2. Importance of Vocabulary in Aviation Communication and Safety.	18

2.4.3. Challenges and Specific Features of Aviation Vocabulary.	19
2.4.4. Existing Approaches and Resources for Teaching Aviation Vocabulary.	19
2.5. Previous Studies	20
2.6. Summary and Literature Gap	23
CHAPTER III	25
METHODOLOGY.....	25
3.1. Research Design	25
3.2. Research Questions	26
3.3. Participants	27
3.4. Data Collection Tools and Procedure.....	28
3.4.1. Straightforward Beginner and Elementary Placement Test.....	30
3.4.2. Aviation Vocabulary Test as Pre-test and Post-test.....	31
3.4.3. Questionnaire Forms.....	32
3.5. Data Analysis	33
3.6. Reliability and Validity of the Study.....	34
CHAPTER IV	36
FINDINGS	36
4.1. The Equation of Experimental and Control Group with the Results Of Placement Test	37
4.2. The Equation of Experimental and Control Group with the Results of Aviation Vocabulary Test.	37
4.3. Descriptive Statistics Based on the Scores of Experimental and Control Groups From Aviation Vocabulary Test.....	38
4.4. The Comparison of Pre-And Post-Tests Progression Scores of Experimental and Control Groups with Wilcoxon Signed Ranks Test	39
4.5. The Comparison of Difference (Progress) Scores of Students in Experimental Group and Control Group with Mann Whitney U Test.....	40
4.6. The Themes and Sub-Themes Developed through the Analysis of Questionnaire and Focus Group Questionnaire	41
4.6.1. Learning Aviation English.....	44
4.6.2. Quality of Learning in Aviation English.	46
4.6.3. Ways of Teaching Aviation English.....	47

4.6.4. Characteristics of Aviation English Course.....	50
4.6.5. Materials in Aviation English.....	52
4.6.6. Assessment in Aviation English.....	54
4.6.7. Quality of Study in Aviation English.....	56
4.6.8. Characteristics of Lecturer.....	57
4.6.9. Deficiencies of Students.....	58
4.6.10. Contribution to Other Fields.....	60
4.6.11. Changes in Fear, Prejudice and Self-confidence.....	62
4.6.12. Suggestions About Course and Factors Concerning the Course.....	63
CHAPTER V.....	67
DISCUSSION, CONCLUSION AND RECOMMENDATION	67
5.1. Discussion and Conclusion	67
5.2. Recommendations	73
REFERENCES.....	75
TÜRKÇE GENİŞLETİLMİŞ ÖZET.....	84
Problem Durumu	84
Problem Cümlesi	85
Alt Problemler	85
Araştırmanın Amacı	85
Araştırmanın Önemi	85
Yöntem	86
Araştırmanın Yöntemi	86
Çalışma Grubu.....	86
Veri Toplama Araçları.....	86
Verilerin Analizi.....	87
Bulgular	87
4.1. Deney ve Control Gruplarının Havacılık Kelime Testinden Aldıkları Puanlara Dayalı Betimsel İstatistikler	87
Öğrenmenin Niteliği.....	90
Öğretim Yolları	91
Dersin Özellikleri	92
Materyaller	93

Değerlendirme	93
Uygulamanın Niteliği	94
Öğreticinin Özellikleri.....	94
Öğrenci Eksiklikleri	95
Diğer Alanlara Katkı	95
Korku, Önyargı ve Kendine Güvendeki Değişimler	96
Derse ve Dersi Etkileyen Unsurlara Dayalı Öneriler	96
Sonuç, Tartışma ve Öneriler.....	97
APPENDICES	100
Appendix 1	101
Appendix 2	110
Appendix 3	114
Appendix 4	119
Appendix 5	121
Etik Beyan	121
ÖZGEÇMİŞ	122

LIST OF ABBREVIATIONS

ATC	: Air Traffic Control
ATCOs	: Air Traffic Controllers
CS	: Control Student
EFL	: English as a Foreign Language
EOP	: English for Occupational Purpose
ES	: Experimental Student
ESP	: English for Specific Purpose
FGCS	: Focus Group Control Student
FGES	: Focus Group Experimental Student
ICAO	: International Civil Aviation Organization
RT	: Radio Telephone
RTFE	: Radio Telephony English

LIST OF TABLES

<u>Tables</u>	<u>Pages</u>
Table 1. Instructional Design Used in Experimental and Control Group	26
Table 2. Demographical Characteristics of Students in the Study	28
Table 3. The KR-21 Reliability Coefficient of Placement Test and Aviation Vocabulary Test	31
Table 4. The Result of Normality Test Obtained from Placement Test and Aviation Vocabulary Test	36
Table 5. The Comparison of Experimental and Control Group Students' Scores in Placement Test	37
Table 6. The Comparison of Experimental and Control Group Students' Scores in Aviation Vocabulary Test as Pre-test.	38
Table 7. Descriptive Statistics Based on the Scores of Experimental and Control Groups from Aviation Vocabulary Test	39
Table 8. The Comparison of Pre- and Post-Tests Progression Scores of Experimental and Control Groups with Wilcoxon Signed Ranks Test	39
Table 9. The Comparison of Difference (Progress) Scores of Students in Experimental Group and Control Group with Mann Whitney U Test	40
Table 10. Themes and Sub-Themes Formed with the Qualitative Data Analysis	41

LIST OF FIGURES

<u>Figures</u>	<u>Pages</u>
Figure 1. Quantitative and Qualitative Data Collection Tools and Process	29
Figure 2. Themes and Sub-themes Obtained from Qualitative Analysis	43
Figure 3. Students' Ideas about Learning Aviation English	44
Figure 4. Students' Ideas about Quality of Learning Aviation English	45
Figure 5. Students' Ideas about Ways of Teaching Aviation English	48
Figure 6. Students' Ideas about Characteristics of Aviation English Course.....	51
Figure 7. Students' Ideas about Materials in Aviation English	53
Figure 8. Students' Ideas about Assessment in Aviation English	55
Figure 9. Students' Ideas about Quality of Study in Aviation English	56
Figure 10. Students' Ideas about Characteristics of Lecturer	57
Figure 11. Students' Ideas about Deficiencies of Students	59
Figure 12. Students' Ideas about Contribution to Other Fields	60
Figure 13. Students' Ideas about Changes in Fear, Prejudice and Self-confidence	62
Figure 14. Students' Ideas about Suggestions Related to Course and Factors Concerning the Course.....	64

CHAPTER I

INTRODUCTION

This section consists of the background of the study, the statement of the problem, purposes of the study, significance of the study, assumptions, and limitations of study and definition of key concepts.

1.1. Background of the Study

In the aviation industry, effective communication is vital for ensuring safety, and the use of English as a common language is necessary. According to the rules of International Civil Aviation Organization Authority (ICAOA) all air traffic controllers and flight crews who are related with flights internationally have to be proficient in English since 2008 (Zakaria et. al. 2011). In the official website of ICAO, in order to be accepted as a proficient, anyone in aviation industry must be able to communicate effectively, must have clarity and accuracy, effective communicative strategies for message transitions to solve problems due to misunderstanding, must overcome linguistic challenges and must use intelligible dialect for aeronautical society (safety, 2023, 07, 20, <http://www.icao.int>). There are five highlighted features (fluency, vocabulary, interaction, pronunciation and grammatical structure) existed on the ICAO's language proficiency scale. The sixth feature which is accepted as the most significant one is comprehension. The pilots' and controllers' communication skills are assessed based on ICAO scale consisting of those six features. The levels in the scale are: Level 1-3: Non-operational, Level 4: operational, Level 5: Extended, and Level 6: Expert. It is suggested that more critical precautions must be taken in order to set a language environment which is error resistant and without mistake for the pilots and controllers who are non-native to abstain from miscommunication (Tajima, 2003). Errors caused by human have been demostarated to damage safety and has a role of supporting most of the accidents and incidents almost 80% according to some authors in aviation (Javaux, 2002).

The ICAO determined in 1962 that air traffic control had to supply services in English, and soon afterwards suggested that pilots and air traffic controllers (ATCs) contact each other through radiotelephony (RT) phraseology, which contains characteristics such as markers of attention (for instance ‘caution’), urgency markers (‘immediately’), imperatives (‘ascend to flight level 240’), fronting (‘description turn left 30’), and ellipsis (‘delay not determined’) (Cutting, 2012).

From the 1970s, a general phrase ‘Aviation English’ has not only encircled RT phraseology but it has also surrounded the language of airport ground staff, cabin crew, passenger service agents, management and Civil Aviation Authority staff. The years of 1970s and 1980s realized the urgency of English for Specific Purpose (ESP) course books, such as Ground services (Hall, 1976), In-flight services (Akiyama, 1976), Aviation in English: Flying and traffic control (Williams, 1987) and Airspeak: Radiotelephony communications for pilots (Robertson, 1987). Although there is a wide field for aviation English, most of the training tools and courses have concentrated on pilots and ATCOs by ignoring ground staff in airport (Cutting, 2012).

The lack of required language proficiency in terms of non-native English speaker pilots and ATCOs can be seen one of the factors causing a lot of fatal accidents (Cutting, 2012). A lot of well-documented cases which have resulted in serious fatal accidents have taken place because of the fact that a lack of sufficient communication between aviation staff who have different linguistic backgrounds are available. Ripley and Finch (2004) state that in three accidents alone 1,600 people lost their lives partly because of language problems that increased communication troubles. To illustrate, a Kazakhstan Airplane collided mid-air with a Saudi Arabian airplane over Charki Dadri, New Delhi, India, which resulted in killing 351 people in November 1996. The pilots’ nationalities were Saudi and Russian, and the air traffic controller was Indian (as cited in Alderson, 2009).

In radio communication, aviation English is essential between parties especially during international flights. To illustrate, if there is an urgent situation, the term (pan) must be used. If there is a real emergency, the aviation term (Mayday) must be used. One of the examples caused by the mentioned topic is shown in the following case.

Another crash occurred in April 1991 at Cove Neck, New York between Avianca Flight 052 and en route from Bogota Colombia to JFK New York. The reason of the crash was crew's failing to communicate clearly to air traffic controller in terms of their aircraft's oil shortage. Furthermore, the air traffic controller was not successful to use communication strategies which may have explained the actual situation on board (Alderson, 2009).

However, the most fatal event took place at Tenerife airport in 1977, while a Pan Am Boeing 747 that was still taxiing up the same runway and had not yet cleared the runway a KLM Boeing 747 crashed on take-off during foggy weather. Due to misunderstanding of phrase 'at take-off,' 583 people died in this crash. The messages between the English speaking pilot of the Pan Am aircraft and the Spanish air traffic controller stated that runway was not yet clear were misunderstood by the senior Dutch pilot of the KLM (Alderson, 2009).

According to the ICAO rules, pilots and ATCOs have to take a test to prove their operational level 4 competence in English (similar to the European council C1 in terms of level) since 2008. This has resulted in a new considerable amount of books: Aviation English for ICAO compliance (Emery & Roberts, 2008), Cleared for take-off: English for Pilots (Mariner, 2007), English for Aviation (Ellis & Gerighty, 2008) and Airspeak: Radiotelephony communication for pilots (Robertson, 2008). According to Robertson (2005, p.3), "it is to be expected that developments in standards for pilots and controllers will result in similar influences for other aviation professions", as a result the significance of the current study (as cited in Cutting, 2012, p. 3-13).

A development has been observed in non-accident-related linguistic research, which has concentrated primarily on pilots and ATCOs since the last decade. Pilot-ATCOs transactions have been examined by Sullivan and Girginer (2002) and variation in the way numbers have been found, and openings and closings have been stated. The interactional significance of pronouns, 'and', 'ok' and 'thanking' in routine talk of pilots has been analysed by Neville (2006) in flight. Phonetic, semantic and collocation differences between English and mandarin pilot-ATCOs talk have been found by Wang (2007).

1.2. Statement of the Problem

The lack of satisfactory command of Aviation English, including its jargon and terminology, leads to miscommunication and misunderstandings in the aviation industry, leading to potential safety risk. When the history of aviation accidents were checked, we can easily see that most of the causes of problems are due to the miscommunication and misunderstanding between parties. One of the main reason of these troubles is not having a satisfactory command of the common language and in this context the language of the aviation is English. In addition, the language which is spoken in aviation industry is not General English, it is Aviation English which has different jargon and terminology. In fact, the cause of the problems in this sector can be attributed to the language education of the students involved. Vocabulary learning in aviation English as ESP comprises the big part of the related field as it has different terminology, coding the letters in alphabet, numbers and measurement units etc. It needs background in general English as some words have different meaning and they are used in different purposes. When students meet English words and grammar, their difficulties were positively correlated with their age and the duration they spent on learning English (Aydoğan, 2017) accordingly as Nurweni and Read (1999, p.171) stated that English knowledge of students is not enough for writing academically or presenting a topic orally in English (Aydoğan, 2017). Likewise, the factors having a crucial impact on learning English comprise socio-economic status, age, teaching methods, age, teaching techniques, learning and teaching environment, attitudes and cultural differences (Muhammad & Varol, 2019). In the field of studying aviation English in civil aviation, necessity of the material is crucial. Unfortunately, the available materials have been prepared particularly for pilots and controllers. Therefore, the need for suitable materials especially course books in classrooms is vital for students who will work in other parts of aviation sector. It is suggested that materials which are instructional must be made easier for being understood well, particularly in terms of contents of language structure since students thought that vocabulary and grammar are incredibly boring (Muhammad & Varol 2019). Therefore, this research aims to explore and compare the effects of online interactive vocabulary activities and traditional course book-based activities on vocabulary improvement in Civil Aviation students at Burdur Mehmet Akif Ersoy University.

During the learning process of a foreign language, the role of vocabulary plays a great importance. Vocabulary is necessary while learning a foreign language as learners cannot express themselves without enough knowledge of it (Viera, 2017). It is the key factor for all four skills of reading, writing, listening and speaking. Students should gain sufficient number of words so as to communicate in a foreign language. Vocabulary learning is usually thought as the fundamental communication too, and often accepted as the most problematic section of the language by the learners. Although students are aware of the significance of vocabulary while learning language, Turkish students learn vocabulary inactively on account of several factors. Firstly, students only consider vocabulary learning as finding the meaning of unknown words. Learners of English usually use dictionaries not grammar-based books, in order that vocabulary teaching aids students communicate and understands others in English successfully (Hadi, 2017). Secondly, they often learn the new words when the teacher teach by using course book or any other materials such as worksheets, assignments etc. Next, when they could not find the meaning or do not want to look up, they prefer asking for the teacher. The final but the critical one is that they are not self-confident enough to take risk in terms of applying what they learnt both in written or spoken form. Oxford (1990, p. 1) defines vocabulary learning strategies as “actions, behaviours, steps, or techniques students use, often unconsciously, to improve their progress in apprehending, internalizing, and using the L2”. The main problem is that traditional vocabulary learning activities might not be effective in teaching aviation English and so, they might affect their achievement negatively while attending exams and interviews for their future career.

Vocabulary learning process is affected by different factors such as explicit and implicit techniques, individual and group based exercises, motivation and learning strategies (Coady, 1997; Nation & Newton, 1997). According to Ellis (2008, p258),

[i]mplicit knowledge is intuitive, procedural, systematically variable, automatic, and thus available for use in fluent unplanned language use. It is not verbalizable. ... Explicit knowledge is conscious, declarative, anomalous, and inconsistent (i.e., it takes a form of fuzzy rules inconsistently applied) and generally accessible through control

processing in planned language use. It is verbalizable ... like any type of factual knowledge it is potentially learnable at any age.

Implicit vocabulary learning is related to non-conscious learning whereas explicit vocabulary learning is about conscious learning. It is believed that instead of choosing one, both of the strategies are useful in the development of vocabulary (Nezhad et. al. 2015). Along with strategies for vocabulary learning, the most significant one obtained from all learning strategies, is the fact that they provide learners to take the control of their learning by themselves in order that students can be more responsible for their studies (Nation, 2001; Scharle & Szabó, 2000).

1.3. Purposes of the Study

There has been a great interest in the vocabulary learning through online games recently. Donmus (2010) stated that “[t]he value of educational games has been increasing in language education since they help to make language education entertaining” (p. 1497). Likewise, according to Hammer (1991, p.153), “[i]f the language structure makes up the skeleton of a language, then it is vocabulary that provides the vital organs and flesh”. In the past years, ESP have focused on structures and words significant in a specific field. In recent years, studies in register analysis have started to describe lexical items and structures which are frequently mentioned in a specific field (Basturkmen, 2005).

There are two vocabulary learning strategies as direct and indirect and they also have sub-categories: the former has ‘memory’, ‘cognitive’ and ‘compensation’ while the latter has ‘meta-cognitive’, ‘affective’ and ‘social strategies (Oxford, 1990). Another taxonomy presented by Schmitt (2010) as vocabulary learning strategy is ‘Discovery’ and ‘Consolidation’. Discovery comprises ‘determination’ and ‘Social’ strategies while consolidation has ‘Memory’, ‘Social’, ‘Meta-cognitive’, ‘cognitive’ strategies. According to Nation (2001), there are three strategies as planning, source and processing in vocabulary learning. Planning requires learners’ selecting words, strategies and word aspects, source includes dictionary use, guessing meaning or applying background knowledge by the learner, processing comprises observation, retrieving and production (as cited in Al Zahrani & Chaudhary, 2022). While learning

new vocabulary students need obvious and clear methods in order to accumulate, maintain and reattain words for future use. After all, the main purpose addressed in this study is to examine the effectiveness of online interactive vocabulary activities, and traditional course book-based activities on vocabulary improvement in Civil Aviation students at Burdur Mehmet Akif Ersoy University. With a comparative nature, the research seeks to determine the effectiveness of these two approaches and identify which method enhances vocabulary improvement more effectively. Additionally, the study sets out to investigate students' perspectives and opinions regarding the use of online interactive vocabulary activities versus course book-based activities in their learning process.

1.4. The Significance of the Study

This study holds significant importance as it seeks to investigate and compare the effects of two different teaching approaches, online interactive vocabulary activities and course book-based activities, on civil aviation students' vocabulary comprehension. The ultimate goal is to enhance their language proficiency and effective communication within the aviation industry. The aviation industry operates on a global scale, with various countries utilizing each other's airspace and airports. Despite the diversity in languages, a common language is essential for effective communication and safe flight operations. English has emerged as the standard language for aviation, enabling pilots, air traffic controllers, and other aviation personnel from different regions and backgrounds to communicate seamlessly.

The decision to establish language proficiency requirements for pilots and air traffic controllers was a direct response to fatal accidents caused by the lack of English proficiency (ICAO 32nd meeting session, September 1998). ICAO emphasizes the importance of language standardization and the achievement of at least level 4 English Language Proficiency as a "minimum operational level" for aviation personnel (ICAO Language Proficiency Requirements).

Vocabulary plays a crucial role in aviation communication, as it encompasses all the words used by professionals in the industry. Without sufficient vocabulary knowledge, effective communication in aviation becomes challenging. For effective

communication in aviation grammar cannot provide sufficient role by itself; vocabulary is equally essential for clear and accurate interactions. In Türkiye, where learners of English face limited opportunities for interactive language practice, the significance of learning vocabulary and grammar is undeniable (Aydoğan, 2017). English language teachers dedicate considerable time to vocabulary teaching, recognizing its pivotal role in language acquisition (O'Del, 1997). The use of technology, such as online interactive vocabulary activities and games, presents an opportunity to enrich the aviation English course and enhance the learning environment.

The study's quantitative component, the aviation vocabulary test, aims to equip students with core aviation terminology. Passing this test is crucial for students seeking employment in the aviation sector. Through the qualitative study, this research further aims to gather students' perspectives and opinions regarding the effectiveness of online interactive vocabulary activities compared to traditional course book-based activities. These insights can guide the integration of new teaching methods and materials in aviation English courses.

By conducting statistical analysis and collecting students' viewpoints, this research not only contributes to enhancing language teaching and learning in the context of Civil Aviation education but also serves as a valuable resource for the aviation industry's language proficiency standards. Ultimately, the findings of this study have the potential to improve language training programs and promote efficient communication within the global aviation community.

1.5. Assumptions

In this study, it is assumed that students (sophomore) studying at the department of Civil Aviation and Management at the vocational school of social sciences at Burdur Mehmet Akif Ersoy University give their honest opinions to the questions in the interviews. It is also assumed that participants answered the questions in the pre-test and post-test consciously and skipped the questions which they did not know instead of randomly choosing items.

1.6. Limitations

There are some limitations in this study. First, this study is limited with the second grade students (sophomore) studying at the department of Civil Aviation and Transportation Management at the vocational school of social sciences at Burdur Mehmet Akif Ersoy University in fall term 2021-2022 academic year, accordingly the number of the students participated in the study consisted of 84 students after the absent students and students who did not attended all of the exams and interviews in the study regularly were omitted. Second, this study was conducted in the fall term including fourteen weeks as the students had to go to internship in the second spring term. Besides, the study is limited with Aviation English course, particularly vocabulary teaching in this course. In this study, the mixed-methods sequential explanatory design was used as data was first collected and analysed quantitatively and later qualitative phase was carried out.

1.7. Definition of Key Concepts

Oxford Advanced Learner's Dictionary (2018) explained vocabulary as "1. All the words that a person knows or uses, 2. All the words in a particular language, 3. The words that people use when they are talking about a particular subject, 4. A list of words with their meanings, especially in a book for learning a foreign language", and word was defined by the same dictionary as 'a single unit of language which means something and can be spoken or written'. A learner of a foreign language should know the meaning, usage and function of a word so as to communicate in that particular language.

ESP is seen to have "legitimized English teaching" hence it is a kind of more standardized and purposeful way of English teaching (Brumfit, 1986). ESP can also be described as instructions and investigations which necessitate particular communicative needs and practices of specific occupational and professional communities (Hayland, 2007).

A game is a systematic activity that has some common characteristics, such as a specific task or aim, a list of rules, race and communication among players through written or spoken language (Richards, Platt & Platt, 1992). Hadfield (1990, p.1)

described the game as “an activity with rules, a goal, and an element of fun”. “Online or offline electronic games played on computers, mobile devices, and games played with video game consoles are used as digital games” (Aydemir, 2022, p. 44).

According to Dictionary of English Language (2016), “[i]nteractive game is an electronic game played by manipulating moving figures on a display screen, often designed for play on a special gaming console rather than a personal computer“ (link to the dictionary).

Aviation English which is a language lesson for professionals in aviation especially pilots and ATCOs has specifically been designed to assist learners in order to get and keep the level 4 according to ICAO (Emery & Roberts, 2006).

Civil aviation means that “lights and aircraft used for personal and business purposes, such as transporting goods or passengers, rather than for military purposes”

(<https://dictionary.cambridge.org/dictionary/english/civil-aviation>).

Gamification is describes as the use of game materials in nongame places (Zeybek & Saygı, 2023). Gamification has gained a profound role in education recently. They are applied during activities in order to reinforce learning and memorisation.

“Interactivity refers to the extent to which teacher-role students expect to or do interact with their students while teaching“ and the interaction of teacher–student comprises presenting explanations, giving supplementary explanations, questioning and answering, and reciprocal feedback (Kobayashi, 2019, p.2).

CHAPTER II

LITERATURE REVIEW

This chapter reviews the vocabulary teaching and learning, vocabulary as a concept, and the impact of online interactive vocabulary activities in particular games based ones on vocabulary teaching. It begins with the description of vocabulary, vocabulary learning strategies and definition of word. Then, it is followed by the role of word game activities on language learning especially vocabulary. This chapter also comprises of the review of relevant studies.

2.1. Teaching Vocabulary

There are many vocabulary learning theories, such as connectionist theory, constructivist theory, schema theory, and dual coding theory etc. Connectionism is a learning theory in which knowledge is comprehended as a link between notions; creating neurons connections in the brain. Meeting words in the context or surroundings is the best way of internalization of vocabulary (Brown, 2000). Therefore, encouraging learners to improve strategies for designating words' meaning is crucial. Accordingly, learning is the product of changing the strength of these connections. They made complex networks which process the information in parallel way instead of serially; if two parts are activated simultaneously once a task is carried out, hence the strength of the link enhances (Williams, 2005). "Connectionism is a cognitive, psychological, and computational-based model of language processing "(Gonzalez, 2014, p. 5). Its goal is revealing the process type of language in brain by using the computational tools.

Another learning theory is Constructivist focusing on the internalization of social activities by individual through the use of language frequently while the others contribute to behavioral change and connections early, hence individual language development occurs (Vygotsky, 1978). According to Schema theory, learning process consists of combining background knowledge and information existing in a text by the

learner to understand that text. All readers have different backgrounds in terms of schemata and they are also different from each other culturally (Stott, 2001).

Dual code learning is a general cognition theory which is explained as a cognition both verbally and nonverbally (Paivio, 1991). The theory assumes a significant distinction between verbal and nonverbal code. The former one functions as symbolising and processing language in different forms, while the latter code handle with representing and performing of nonverbal things, situations, and events (Sadoski, 2005). This theory contains provision for individual and progressional differences. Learners distinguish from each other in reading skill and their connection with imaginal notion and verbal notion (Sadoski, 2005)

As it was mentioned above, there are several vocabulary learning theories in English language teaching. The significant point to be focused here is to move with the right theory or theories while teaching vocabulary as the learners have different backgrounds in terms of age, gender, culture or level of English etc.

In order to handle with unknown vocabulary during language acquisition, learners of English language should take part in various task-based activities such as forming dialogue, describing exercise, acting something etc. Activities like those also comprise vocabulary games which particularly concentrate on providing learners development in terms of using words in different context by making the courses funnier. Vocabulary acquisition is expected to occur in a comfortable, motivating, and funny area where learners focus on the new word and its contextual use (Ashraf et. al., 2014). Therefore, in vocabulary teaching investigating the impacts of online interactive vocabulary activities with games on learners is essential and should be improved.

Vocabulary is not taught separately as a skill or an independent field. On the contrary, it is integrated into other skills, such as speaking, listening, reading and writing during the teaching process. According to Tebeweka (2021), vocabulary supports students to improve themselves and become sufficient in four basic skills, in this context they are listening, speaking, reading and writing. During teaching, students use the new words which are taught by the course instructor, classmates or materials used in course. According to most learners of English, vocabulary learning consists of meeting new

words and listing them on a notebook with their meanings in their mother tongue without any real context related to those words in other words it is accepted as a task.

Outside the school environment, according to Sorensen and Audon (2004), and Warschauer (2004), language is often understood and utilized by students as a communicative tool to collect information and to play games while inside schools they usually understand the language as tasks to be carried out. Vocabulary acquisition process often tracks a pattern which includes students' acquisition of new words, knowing the meanings in their mother tongue(s), realizing how they could apply them in different contexts, and finally using them in their everyday life (Sulistianingsih et al., 2019). To know a word's meaning does not mean only knowing its meaning in dictionaries, it also requires knowing the words related to it in terms of connotation which includes cultural aspect and register (Thornbury, 2002).

For most learners, using bilingual dictionaries in order to find out the meaning of those unknown words is the easiest way of learning. Furthermore, some of the learners can write those new words more than once as a revision or repetition so as to comprehend and remember easily. According to studies in this field, it is not accepted as an effective way of learning vocabulary. Without comprehending, only with memorization words should not be learnt as a separate field (Decarrico, 2001). Furthermore, "learning new words is a cumulative process, with words enriched and established as they are met again" (Nation, 2000, p. 6). Moreover, some students are dependent on teachers to learn the meaning of new words when they do not have any option, such as looking up dictionary, asking classmates or checking internet. They always expect teachers to explain the meaning of those words and use them in context as it is the easiest and shortest way of their learning, yet it is limited with in class activities. This prevents learners from using the words in new contexts in different forms outside the class.

There is a fixed process while learning new information respectively as obtaining, storing, retrieving and using (Rubin, 1987). Hence, the teacher should provide the first encoding of new words and then "subsequent retrieved experiences" (Rubin, 1987, p. 29). According to Schmitt (2000), when learners meet and use a word in a different way they first encountered it, they can learn more effectively. Similarly, Nunan (1991) claims that while we are teaching new words, we ought to start with using new ones

in context yet in the following phase we should give opportunity to learners in terms of using them out of context. In language learning, memorising words is vital and this process can be facilitated when words are regularly recycled. Likewise, if words are not processed in a different way and transfer them into long term memory, they are forgotten easily (Carter & McCarty, 1998). According to Cameron (2001), vocabulary development is an ongoing process, where the learners come across many of them in their learning so as to enhance their knowledge and increase the usage of them in foreign language.

2.2. Vocabulary Learning Strategies

In this section vocabulary learning strategies were explained. These strategies focused on especially Vocabulary learning and the importance of Vocabulary learning. The features and necessities belonging to each strategy were presented respectively.

2.2.1. Cognitive strategies. Cognitive strategies are described as “manipulation or transformation of the target language by the learner” (Oxford, 1990, p. 43). Cognitive strategies and memory strategies are similar to each other yet they do not concentrate on manipulative mental processing. They consist of repetition and mechanical methods to illustrate, flash cards, word lists, word books in order to study vocabulary. The basic principle in this strategy is repetition (Baskın et. al. 2017). The utilization of cognitive strategies is vital in vocabulary learning as it includes practice. Practice enhances internalization of vocabulary. There are repetition, recognition of patterns and recombination as the subcategories of practice (Oxford, 1990).

2.2.2. Metacognitive strategies. Metacognitive strategies includes consciously scrutinizing the learning process and decision making about monitoring, planning, or assessing the best methods to study (O’Malley & Chamot, 1990; Schmitt, 2000; Schmitt & McCarthy, 1997). In other words, learners can improve accessing input and decide on choosing the best methods of studying with metacognitive strategies.

2.2.3. Social/affective strategies. Social strategies requires interaction with people in order to develop vocabulary learning (Oxford, 1990; Schmitt, 2000). Learners may ask teachers or classmates when they need assistance in terms of unknown lexis using paraphrases, translation, or synonym (Schmitt, 2000). It is highlighted that how learners try to find their chances in order to use the language outside the classroom (Sanaoui, 1995). Learners can look for opportunities to talk to L1 speakers or attempt to speak L2 among them outside the classroom (Sanaoui, 1995).

2.2.4. The role of vocabulary learning strategies in vocabulary acquisition. Vocabulary has a crucial role while learning a foreign language. While learning new words, it is not easy to keep them in mind. In language teaching, a lexical approach means that the fundamentals of language learning and communication do not consist of grammar, function, concepts or any other planning and teaching unit, it is lexis in other words, words and words varieties (Richards & Rodgers, 2014). On the contrary, it needs some strategies and repetition to transfer those word in long term memory. Language learning strategies according to researchers have a profound role in providing students to control their own leaning (Oxford, 2011). Unfortunately, there is a limited number of aviation English course books and these course books are occupational purposes. In most of the teaching and learning environment teachers and students have to follow only coursebooks. In addition, those course books do not include any fun activities while teaching aviation English. As the level of those books are higher in terms of difficulty and they do not such entertaining activities with games, it is inevitable for learners to get bored and meet difficulty in learning without motivation. The variety of learning strategies boosts the process quality by enhancing the learning and teaching period. It turns student into a conscious learner and enhances their productivity, provides the student independend learning ability, contributes them learn with pleasure and makes students become independent for learning after school (Özer, 2002).

2.3. Online Interactive Vocabulary Activities

Online interactive vocabulary activities used as a reinforcement after face to face classes includes the core vocabulary and presents different platforms to practise previously learnt knowledge in online gaming sites.

Technology is indispensable for our life. It is used in many sectors from industry, commerce, aviation etc. to education. Software updates are available thanks to technology which is easy to reach nowadays. Many studies supplied proofs that technology is necessary in our modern learning settings and it has already been available in most of the countries (Pavlou, 2019). The impact of technology on accessing and learning type of vocabulary by learners can show itself in such discreet ways since the usage of computers or mobile phones increase learning chances outside class environments (Li et al., 2017; Stockwell, 2011).

2.3.1. Constructivism and technology-enhanced learning. Constructivism which has a theoretical foundation promises for forming the debate of technology and the application of it in social studies (Doolittle & Hicks, 2003). Internet and computational devices including it provides learners a rich environment for social awareness and opportunity to use experiences and knowledge by practising previously learnt items in interactive online platforms. Constructivism comprises learning personally and socially and provides a real learning environment where learners can perform learning activities by themselves or interacting with their mates and teachers. Mobile learning as in technology enables learners using cooperative learning places where they can communicate whenever and wherever the learners need. It makes them feel a sense of belonging to community and strong relations with learning environment and therefore, provide them more motivation and engagement in learning (Wang, 2014).

2.3.2. Gamification and motivation in language learning. Wood (2001), searched the usage of learning games as learning instrument and stressed that game-like designs can be more efficient at drawing students' attention rather than traditional tools such as course books. Gamification can develop learning outcomes in

constructing education related to practice and theory, in which gamification provide benefits and engaging. Simulations in which learners participated actively ‘experience-based’ learning are believed that they are more effective and lasting for a long time for learners and include the ‘potential to address many of the limitations of the traditional paradigm’ (Ruben, 1999). In order to make online interactive vocabulary activities with games more effective than traditional lessons, sophisticated experienced-based games, such as simulated tasks, game activities including core vocabulary, quiz shows are essential, since they contain more interaction and collaboration and may address cognition and promotes active learning. As they are satisfied with the gamified vocabulary learning approach in English, learners had the chance of practicing vocabulary independently and adaptively, and they thought that they could enhance the vocabulary knowledge and develop their perceptions about language (Schamroth & Sara, 2014). Gamification was believed beneficial for education. Learners showed positive attitudes to gamification and effective and cognitive thoughts of gamified education. Rather than quizzes and traditional exercises, simulations developed the comprehension of knowledge by practising considerably. An analytical real-time serious game was evaluated positively for teaching progress and goals (Minovic et al., 2015). Gamification could make reading comprehension easier, which English vocabulary learning can be profoundly improved (Sundqvist & Wikström, 2015). Gamification can also improve the retention of vocabulary in English in order that the the efficiency of learning vocabulary was developed (Alshaiji, 2015).

2.3.3. Benefits and limitations of online interactive vocabulary activities.

Learners exposed to online interactive vocabulary activities incline to learn better and can retain the previous vocabulary for a long period of time and retrieve so many words than the learners who just participated in face-to-face classes without the online vocabulary games (Alvin & Kwan, 2006). In order to get rid of the routine and monotonous side of the course interactive vocabulary activities can present an authentic atmosphere to learn better and have fun by revising the previous learning. They can get rid of the boring and difficult aspect of the learning by participating

online interactive vocabulary activities and can catch the opportunity of socializing with their classmates during group work by feeling belonging to a group.

However, there are some limitations such as technological equipment and internet. In case there is no internet connection or devices supporting internet, using those activities can be impossible. In some parts of places especially countryside, there may be poor internet connection, consequently reaching online based studies requiring technology and internet can be inaccessible. Therefore, it forced teachers and learners to use traditional methods as they do not have variety in teaching and learning environment.

2.4. Aviation English and Vocabulary in the Aviation Industry

In this section aviation English and Vocabulary in aviation english were mentioned from a few perspectives. Firstly, an overview about the aviation english as a specific part of ESP and significance of aviation english were explained. In addition, challenges of aviation Vocabulary and existing approaches and resources in teaching aviation english were presented.

2.4.1 Overview of Aviation English as a specialized form of English.

“Aviation English” is not only limited to pilots or ATCOs, it is also related to English on more general terms in aviation or aeronautical universities. It may be designed for students in the area of aviation as an integrated ESP curricula (Wang, 2008).

2.4.2. Importance of vocabulary in aviation communication and safety.

“The language of international air-traffic control could be regarded as special, in the sense that the repertoire required by the controller is strictly limited and can be accurately determined situationally, as might be the linguistic needs of a dining-room waiter or air hostess” (Mackay & Mountford, 1978, p. 4–5). Therefore, aviation English may be a sub-category of ESP, whereas RT English that comprises the center of aviation English can be accepted a special language or restricted language in English for occupational purposes.

2.4.3. Challenges and specific features of aviation vocabulary. As the students' words knowledge affects their success in all specific fields and the words are important for communicating on content generally, vocabulary in Aviation English can be thought as a fundamental difficulty which prevents students' advancement in ESP. In a survey applied to students in an aviation university of China 83% of the students accepted that vocabulary is a significant element in learning English. According to the research, vocabulary has the highest role as an obstacle to understand reading, second role in background and grammar, and biggest block in listening, pursued by accent and speed in speaking, biggest barrier to written and verbal expression (Wang, 2011)

2.4.4. Existing approaches and resources for teaching aviation vocabulary. ESP traditionally is described as an "approach to language teaching", instead of a production and in this language teaching approach "all decisions as to content and method are based on the learner's reason for learning" (Hutchinson & Waters, 1987, p. 19). We as teachers in aviation English course focus specially on teaching vocabulary, particularly dedicating most of our attention to the productive use of vocabulary which has a great importance in aviation personnel language learning. Teaching vocabulary in ESP is closely same as teaching it in General Purpose English Dudley-Evans and John (1998). From the 1970s, a general phrase 'Aviation English' has not only encircled RT phraseology but it has also surrounded the language of airport ground staff, cabin crew, passenger service agents, management and Civil Aviation Authority staff. The years of 1970s and 1980s realized the urgency of ESP course books, such as Ground services (Hall, 1976), In-flight services (Akiyama, 1976), Aviation in English: Flying and traffic control (Williams, 1987) and Airspeak: Radiotelephony communications for pilots (Robertson, 1987). Although there is a wide field for aviation English, most of the training tools and courses have concentrated on pilots and ATCOs and not ground staff in airport (Cutting, 2012). In addition to above mentioned materials, there has been several course books published and used as a tool so far. For instance, Civil Aviation (2012) by (Virginia Evans, Jenny Dooley, Jacob Esparza, Express Publishing), English for Aviation (2011) by (Sue Ellis, Terence Gerighty, Oxford), Flightpath (2011) by (Philip Shawcross, Cambridge

University Press), and Aviation English for ICAO compliance (2008) by (Henry Emery, Andy Roberts, Macmillan).

2.5. Previous Studies

This study aims to present several examples from the literature related to the use of interactive vocabulary games in learning new words. The studies were reviewed based on chronology and context.

In a study carried out by Alvin and Kwan (2006), the benefit of online games in vocabulary teaching for undergraduate students were investigated. Almost along nine weeks, three teachers and 100 students in engineering attended in a study which is quasi-experimental. The students in experimental group were taught vocabulary through two selected websites including games, whereas the ones in control group were taught the same vocabulary via activity focused lessons. In the first and last week of the study, a pre and post-test were applied. According to the findings, experimental group has higher score than control group in post-test. Students of experimental group chose learning with online supplementary educational games rather than traditional lessons.

Gaming in vocabulary learning Aviation english has a positive impact on improving vocabulary knowledge. In a study by Pinem (2009), if gaming in vocabulary learning supported students' knowledge and upgrade their score in vocabulary was searched by comparing routine learning. Two groups of students studying at the Air Transportation Management were tested before attending two different methods in learning vocabulary as pre-test and after attending as post-test. The result obtained from those tests showed that the group using online games had a better score than the control one.

Demirbilek et. al. (2010), investigated the perspectives of foreign language lecturers in terms of the use of educational games in foreign language learning at the graduate level. Semi- constructed interviews were used as data collection. The participants of the study consisted of 11 instructors at the school of foreign languages at a university in southwest of Turkey. when the results of analysis were checked, it was clear that computer games as an aid tool can have an impact the way its useage during courses,

the characteristics of games, structure of hardware and software of intelligent classes, opinion of lecturers and students' thoughts about games.

According to the study of Alemi (2010) in Iran, the function of using word games in enriching the learners' vocabulary was investigated. The researcher used five different word games which were 'Charades, Twenty Questions, Passwords, Definition Games, and Crossword Puzzle'. The participants were selected randomly as male or female from the junior high school students at third grade and they were divided into two groups as experimental and control group. At the end of each session words were taught to experimental group with games whereas, traditional method was used in control group for vocabulary teaching. A vocabulary test was applied to both groups as a final test in order to determine the differences between two groups. The score of experimental group proved the positive effect of games on vocabulary teaching.

Furthermore, Dolati and Mikaili (2011), investigated the impacts of instructional game activities on enhancing the vocabulary learning of students. The aim of the study was to collect information about the function of the games on the level of students' vocabulary learning. The participants consist of 70 female students whose ages are between 12 or 13 and they were students at a primary school in Iran. In this study pre-test and post-test were conducted. After analysis of those tests they found that games have a significant role in increasing the success and motivation of students in vocabulary teaching.

Similarly, Kalaycioglu (2011), examined the effects of educational games on the nursery school children's English vocabulary learning. The participants consisted of 33 preschool children who were four years old. 17 of them were female and 16 of them were male. There were two groups as experimental and control. In the former, they used picture vocabulary games but in the latter there were no games. At the end of the study a significant difference was found between the two groups. The experimental group's success was greater than the control group.

In addition, Saffarian and Gorjian (2012) examined the effect of computer-oriented video games on enhancing the cognitive learning of children. The aim of this study is to find out the impact of various kinds of instructional delivery techniques on the learning achievement of children. The study consisted of 418 EFL teachers and

learners who are interested in EFL in an institute in Iran. Two different instructional practice as traditional computer assisted one and computer-based video game were applied to learners. According to the results of the study experimental group who used computer games outperformed the control group who were taught traditional computer-based instruction.

In our technological era learners who have been grown up with digital tools find vocabulary learning so boring. In this era, internet has broadened the possibilities of learning vocabulary for learners. Through online games teachers and parents are sure that learners are ready and learning experience can be exciting for their learners (Turgut & Irgin, 2009). For instance, Riahipour and Saba (2012), stated that activities which are traditional such as fill-in the gaps, memorizing of list of words, derivations, translation and repetition of words are not motivating for students. Another study was conducted by Riahipour and Saba (2012) about the impacts of a digital computer game on improving Iranian children's vocabulary learning. There were 40 participants who were six or seven year-old girls and had no English background. They were divided into two groups as experimental and control group. They used a digital computer game with experimental group, whereas they taught vocabulary through traditional methods in control group. According to the result of the study, the mean score of the learners in experimental group was found higher than the one in control group.

In another study by Aslanabadi and Rasouli (2013), the impacts of games on the vocabulary development of EFL learners of Iran in kindergartens. The goal of the study was to look for a method to make the learners keep the new words in their mind. The study was applied to two different kindergartens. Students were divided as experimental and control group. They gave an online language game to the experimental group while the control group was given traditional teaching. The result showed that games both provide fun for learners and increase motivation and confidence of learners.

In a study by Septida (2019), the role of modern games in teaching vocabulary for children was investigated. As the writer focuses on the motivation of students, description of using games and stages of teaching process were clearly explained and divided into three as pre, while, post. In the first stage students were directed to turn

on computer, in the second step, they did their activity by having fun, and in the last part, their assessment on certain printable activities provided on online platforms by teachers. It is concluded that vocabulary learning through online website games is one of the efficient way which can be benefited from in vocabulary teaching for young learners.

In the study of Fainman and Tokar (2019), in aviation English course, vocabulary teaching sessions were conducted with here different groups consisting of 12 fourth-year university students at the flight academy of National Aviation University in Ukraine. The objective of the study was to expain how the implicit, explicit and the blended instruction affected students' improvement in vocabulary learning in aviation. Each group was applied a pre-test, post-test and delayed post-test. According to results, all types of vocabulary instruction had positive impact on learning and remembering aviation vocabulary.

In the study performed by Dinçer and Dinçer (2021), whether one of the simulation game had an impact on the learning experiences on vocabulary in aviation was investigated. In the study by including convenience sampling a form which contains quasi experimental mixed method design was used. 30 students were registered to the program as future candidate pilots. 15 subjects were selected in both experimental and control group. The results proved that there was a considerable positive effect of gaming on students' success and learning. Students who attended the interview also indicated that the game was useful for their learning.

2.6. Summary and Literature Gap

When previous researches and their findings were reviewed, there has been carried out several studies based on the effect of interactive online vocabulary activities through gaming. The common point in the findings of those studies is that there is a positive significant difference between experimental groups and control groups in favour of experimental groups. In other words, the score of experimental groups outnumbered the one in control groups. It can be inferred from these results that the role of interactive online vocabulary activities have a significant role in terms of increasing the success of students in vocabulary learning in English particularly Aviation English

based on the studies in literature. However, when reviewed, it can be seen in previous studies that there were some limitations related to settings and sample groups. The number of the participants can be thought limited in order to generalise the findings to other learners. In addition location, age and background of the learners can be accepted as important factors having impact of the success of students in such studies. It was claimed that the game was useful and motivating in learning language even though there are some difficulties such as language level, software and hardware types preventing efficiency (Dinçer & Dinçer, 2021).



CHAPTER III

METHODOLOGY

This chapter gives detailed information about the type of research method, data collection instruments, analysis of data collection and participants. Furthermore, research questions were presented in this chapter.

3.1. Research Design

This research aims to explore and compare the effects of online interactive vocabulary activities and traditional course book-based activities on vocabulary improvement in Civil Aviation students at Burdur Mehmet Akif Ersoy University. With a comparative study, the research seeks to determine the effectiveness of these two approaches and identify which method enhances vocabulary improvement more effectively. Additionally, the study sets out to investigate students' perspectives and opinions regarding the use of online interactive vocabulary activities versus course book-based activities in their learning process. Through statistical analysis and gathering students' viewpoints, this research intends to contribute valuable insights to the field of language teaching and learning in the context of Civil Aviation education. According to Tashakkori & Teddlie (2003), there are 40 mixed method research designs in the literature. Six most frequently used ones three of them concurrent and the other three sequential ones were described in literature (Creswell et al., 2003). One of the most popular one among researchers is sequential explanatory design which functions as collecting and analysing data first in quantitative and later qualitative data in two successive phases in a study. As the data has been collected quantitatively and qualitatively respectively in this study, this design was chosen. In this study which mixed-methods sequential explanatory design was chosen to investigate the impact of online interactive vocabulary activities with games on the achievement of students' vocabulary learning was used.

3.2. Research Questions

This study was conducted in order to investigate the answers of the following research questions.

What are the effects of online interactive vocabulary activities and course book-based activities on the vocabulary comprehension of students in Civil Aviation and students' viewpoints based on online and course book-based vocabulary teaching period?

Sub-questions

1. Is there a statistically significant difference between pre-test and post-test scores of the students in experimental group?
2. Is there a statistically significant difference between pre-test and post-test scores of the students in control group?
3. Is there a statistically significant difference between the achievement score of the students in experimental group and the students in control group?
4. What are the opinions of students about online interactive vocabulary activities and course-book based activities?

Table 1.

Instructional Design Used in Experimental and Control Group

Placement Test (K=50)	Groups	Pre-Test	Teaching-Learning Process (Independent Variables)	Post-test
	Experimental	Aviation Vocabulary Test (K=50)	Online Vocabulary Activities (Course Book Based + Online Vocabulary Games)	Aviation Vocabulary Test (K=50) Interview (Individual + focus group)
	Control		Course Book Based	
	Quantitative Data		-	

3.3. Participants

As there are two classes for the study, their students have already been formed according to the results of the central examinations based on their scores in central entrance examination by government as morning and evening education whereas in terms of group selection two classes were divided into two groups as experimental and control group randomly. In the sampling of students, convenience sampling was used because most of the times it is highly difficult to choose a random or a systematic non-random sample, during such periods a researcher can use convenience sampling (Fraekel & Wallen, 2006, p.100). “A convenience sample is a group of individuals who (conveniently) are available for study” (Fraekel & Wallen, 2006, p.100). These two classes were selected randomly by drawing lots as experimental and control group. The participants of the study comprised of 84 students studying in the department of Civil Aviation and Transportation Management at a Vocational College of Burdur Mehmet Akif Ersoy University. 42 of the students comprised the experimental group and the rest 42 students existed in control group. Experimental group consisted of 22 female students and 20 male students whereas, control group had 22 male students and 20 female students.

The students who are between the ages of nineteen and twenty three were the second graders who were divided into two classrooms as morning education and evening education. They study General English as A1 in the first term and A2 in the second term in their first year. In the sampling of students, convenience sampling was used because most of the times it is highly difficult to choose a random or a systematic non-random sample, during such periods a researcher can use convenience sampling (Fraekel and Wallen, 2006, p.100). “A convenience sample is a group of individuals who (conveniently) are available for study” (Fraekel and Wallen, 2006, p.100). These two classes were selected randomly as experimental and control group. Since this technique would provide equal chance of being chosen as experimental and control group, it was selected (Best & Kahn, 1993, p.97). The experimental group was exposed to online interactive vocabulary activities to learn vocabulary in aviation English whereas the control group was taught traditional course book activities.

Demographical information of participants in this study was given in the following

table.

Table 2.

Demographical Characteristics of Students in the Study

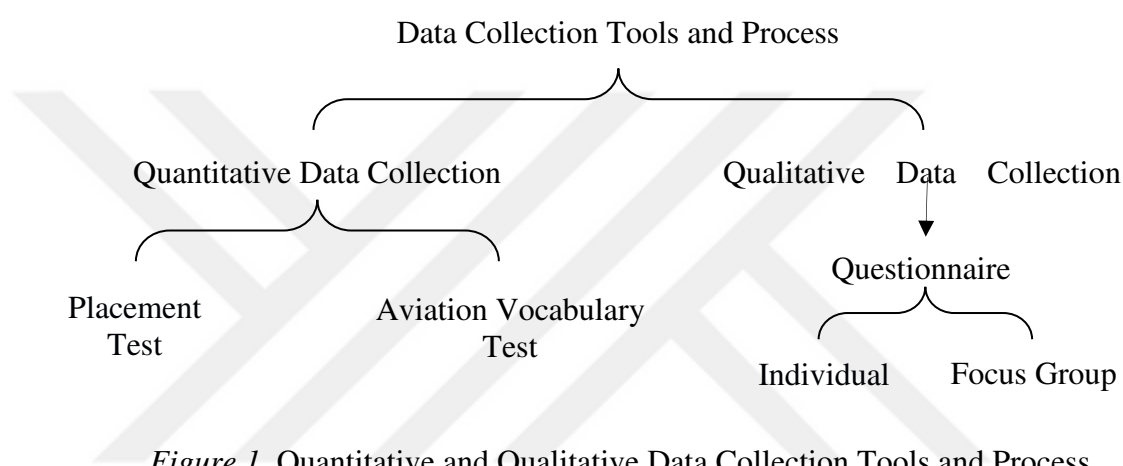
Groups	Registered students			Placement Tests			Aviation Vocabulary Tests (Pre-Post Test)			Interview*			FocusGroup interview		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Experimental	26	35	61	22	20	42	22	20	42	23	29	52	5	4	9
Control	24	31	55	20	22	42	20	22	42	22	25	47	5	4	9

3.4. Data Collection Tools and Procedure

Before beginning the study, there were some necessary permissions to be taken. Firstly, it was required to take permission from the Ethics Committee at Burdur Mehmet Akif Ersoy University, so the related permission was taken (Appendix 5). After that, the second permission was taken from the Vocational College of Social Sciences as the students are studying at Civil Aviation and Transportation Management department at this school. There are 14 weeks in one semester at this vocational college's education. In the first week of the semester, based on the approval taken from the concerned departments, a proficiency test 'Straightforward Beginner and Elementary Placement Test' including general English knowledge was taken from Macmillan Publishers Limited (2012) and a pre-test which has 50 items related to aviation English terminology were prepared by the researcher. While Aviation vocabulary test was being prepared as pre-test and post-test, the vocabulary in this test were examined by the content teachers and course teachers in different schools and universities in terms of repetition of frequency in aviation and order of importance. In the next stage, those words are examined in different aviation course book. After that, the level of the students, the level and contents of course books in aviation English were examined by course and content teachers, so entitled 'Civil Aviation by Express Publishing' and written by Virginia Evans, Jacob Esparza, and Jenny Dooley (2012) was selected as course book in this study. In addition to factors mentioned before this course book has a reading text which includes all the words in Aviation vocabulary

test as key words and the level of units was ordered from simple to complex in terms of content and difficulty. Next, participants were informed that the results of the exams would not be used as an English exam in their courses. One class comprising 52 students was chosen as an experimental group and the other consisting of 47 students was selected as a control group randomly by drawing lots.

In this study, a mixed-methods sequential explanatory design was used by collecting quantitative data and qualitative data respectively. The data collection tools and data collection process of the research were displayed in Figure 1.



In the second week, after meeting students and informing them about the process, those tests were applied in order to equalize students before beginning to the study. In this study, in order to specify the vocabulary improvement of students in experimental and control group, firstly students' level in general English were assessed. For the equation of groups, in this study "Straightforward Beginner and Elementary Placement Test by Macmillan Publishers 2012" was used. Furthermore, in order to specify the readiness of students in relation with the extent of study, "Aviation Vocabulary Test" which was formed by the researcher according to the views of experts in Aviation was used as pre-test. In the following 10 weeks period, in experimental group after each lesson, five key words which are available in pre-test and post-test were taught through online interactive vocabulary activities as games while in control group course book-based activities were used as material and those five words were taught via course book activities. For the study, a course book entitled 'Civil Aviation by Express Publishing' and written by Virginia Evans, Jacob Esparza, and Jenny Dooley (2012) was used as

it was suitable for learners in the department of civil aviation in terms of content and order of units related to level of difficulty. After 10 weeks teaching, in the thirteenth week of the term, the same pre-test was applied as post-test by reordering the questions in order to see the difference between the two tests. Students who could not participate in all phases of the study regularly were omitted from the study for the consistency of study.

Moreover after online interactive vocabulary activities, pre-tests and post-tests were applied, an interview was carried out with 52 students in experimental group and 47 students in control group who were selected randomly and voluntarily after being asked whether they wanted to write their opinions to interview form in order to receive their opinions about the practise and the effects of it on them. Finally, another focus group interview was performed with nine students selected from both groups as three levels of success (successful, average, and unsuccessful) based on their participation to lesson and exam results so as to compare the general and focus groups' results. Based on the post-test score of students, three students in the highest range, three students in the medium and three students in the lowest range were determined in each group and they were asked whether they wanted to participated in focus group interview. After voluntarily selection, the same interview as focus group was applied to those students. Both the results in the first interview and focus group were examined in order to see the consistency of the information. Explanations which are related to the quantitative and qualitative data collection tools were presented respectively.

3.4.1. Straightforward beginner and elementary placement test. In this study "Straightforward Beginner and Elementary Placement Test by Macmillan Publishers 2012" was used in order to determine the level of students in terms of general English before taking part in the study. It has been formed to help the researcher decide if this test would be suitable for the students before aviation English course was studied. As for the features of test, it consists of 50 questions, each worths two points. The first 40 questions are grammar-based questions and the last 10 questions are vocabulary-based questions. Each question consisted of a root, four choices and one key. The test was prepared by Macmillan Publishers Limited in 2012.

3.4.2. Aviation vocabulary test as pre-test and post-test. This test was prepared by the researcher with the help of experts in the department of Civil Aviation and English by following a well-designed respective steps. Those experts are professors and associate professors who are teaching both content courses and aviation terminology in different universities related to their departments. Firstly, a course book whose name is “Civil Aviation by Virginia Evans, Jenny Dooley, Jacob Esparza Express Publishing (2012)” was chosen as a main material for the course. Second, 10 related units were chosen by receiving the views of experts in the field of aviation. Next, in each unit, key words were ordered one by one and a gap was assigned next to the each of them for ranking in terms of importance and frequency of usage in the field of aviation. After ranked by the researcher and the experts in aviation, five highly repeated words from each unit were selected by the researcher and 50 multiple choice questions including four options were prepared by the researcher. Later, the questions in this test were controlled by experts in testing and evaluation. After final editing, the test was checked and prepared by the researcher in order to apply to students.

The reliability coefficient of the Placement and Aviation Vocabulary Test was calculated with the KR-21 formula given below.

$$KR-21 = \frac{k}{k-1} \left[1 - \frac{\bar{x}(k-\bar{x})}{ks^2} \right]$$

As this test is applied in classroom, the formula of KR-21 was used. The formula of KR-21 is suitable for multiple choice test conducted in classroom settings (Terzi, 2019)

The reliability coefficients obtained by using this formula and the descriptive statistics of the tests required to find these coefficients are given in Table 3.

Table 3.

The KR-21 Reliability Coefficient of Placement Test and Aviation Vocabulary Test

Groups	N	Aviation Vocabulary Test								
		Placement Test				Pre-test			Post-test	
		$\bar{x}$	SD	KR-21	$\bar{x}$	SD	KR-21	$\bar{x}$	SD	KR-21
Experimental	42	45,57	14,00	0,99	32,10	10,36	0,85	46,29	14,75	0,99
Control	42	40,43	10,01	0,92	30,81	7,72	0,82	38,24	12,01	0,94

As seen in Table 3, the KR-21 reliability coefficient of the Placement test for the Experimental group was determined as 0.99 and as 0.92 for the control group. The KR-21 reliability coefficient of the results obtained from the Aviation Vocabulary Test test application of the experimental group was determined as 0.85, and it was determined as 0.82 in the control group. In the last application of the same test as post-test, the reliability coefficient of the experimental group was calculated as 0.99 and as 0.94 for the control group. These values show that the reliability coefficient in terms of internal consistency of both tests is high.

3.4.3. Questionnaire forms. A plan was followed while preparing the outline of the questionnaire form. In this form, which consisted of semi-structured open-ended questions, five open-ended questions were created based on expert opinions. First, a short explanation which consisted of instructions, answering style of the questions, the purpose of the questionnaire and the privacy of the information in the questionnaire were added at the beginning of the form in order to make students feel free and give objective answers. Second, gender, age and departments were requested by students to answer. In addition, the name of the researcher and question were written respectively to the questionnaire form. All of the explanation, instruction and questions were prepared in students' mother tongue (Turkish) as their English level is low. This form was prepared according to experts' views considering the fourth sub-questions of the research. Those experts are professors of testing and assessment in the department of educational sciences. In this form, students were asked five main open-ended questions and six open-ended sub-questions about the activities conducted in this lesson. The questions requested by students to express their opinions are about the lecturing style of this course, how the course affected their learning, the difference and similarities of the lecturing styles between Aviation English course and other lessons, the positive and negative sides of the teaching type of this course to their reading, writing, listening, and speaking skills, vocabulary comprehension, and personal development. In addition, this form asked for students suggestions for a better and effective learning in this course and other opinions which were not included in the form. This form which students stated their opinions by writing was applied to 52 students in experimental group and 47 students in control group. The numbers were not equal in each groups as

the participation to interview was voluntary. In quantitative study placement test, pre-test and post-test were applied, students who did not participate one of those tests in the study were omitted in order to keep the validity and reliability.

3.5. Data Analysis

In the study quantitative data was collected with “Placement Test” and “Aviation Vocabulary Test” as data collection tools. If the data obtained from those data collection tools displayed normal distribution was checked with Kolmogorov-Smirnov and Shapiro-Wilk tests. As the results of placement test which was applied before the study to both groups did not present normal distribution in the results of both groups, non-parametric tests were used in the comparisons. Wilcoxon signed rank test was used in the comparison of groups in itself while Mann Whitney U was used in the comparison of groups with each other. The level of students in general English was assessed with “Straightforward Beginner and Elementary Placement Test by Macmillan Publishers 2012”. Besides, in order to equate the groups, the results of “Aviation Vocabulary Test” as a pre-test which belonged to the content used in the application process were compared.

Before qualitative study, workshops and meeting were carried out with different experts in educational sciences teaching at different universities. In addition, different questionnaire forms were checked related to this study. Therefore, a questionnaire form consisting of five open ended questions and sub-questions was designed by the researcher according to experts’ views and was applied to students both in experimental and control groups. As the students’ level is low in English, the questions in questionnaire form were prepared in Turkish. Therefore, students answers were requested in Turkish. Then, the received answers were translated into English by the researcher. The opinion of students in the questionnaire and the views received from the focus group were analysed with content analysis. Content analysis is defined as “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” Krippendorff, (2004, p. 18). Elo et. al., (2014) mentioned that both in qualitative and quantitative research content analysis could be utilised in deductive or inductive form. Categories are formed with data

without adding a theory-based classification environment in an inductive content, while in a deductive analysis a previously available categorization coding or matrix is used (Liang, 2018). During the content analysis process, both types were used while analysing students' opinions given to questions in questionnaire form. Data belonging to those students were checked question by question and meaningful words and sentences were checked in order to be determined as themes and sub-themes by manual coding. During the analysis periods carried out by two researchers, situation and codes which could not be agreed on were revised again and therefore themes and sub-themes were formed using manual coding accordingly. When the themes were checked, several sub-themes were formed as case, features, advice, problems, skills, knowledge, quality of learning, and use of tools, qualifications, personal and professional development. In findings these themes and sub-themes were given together.

3.6. Reliability and validity of the study

In order to ensure the validity and reliability of the research, various validity and reliability studies were conducted before, during and at the end of the study. The studies carried out are explained in detail.

In order to carry out the study, Aviation students at Vocational College were observed by obtaining permissions from the necessary units given in the appendix. The layout of the classroom is arranged to facilitate activities. After determining the subject of the research, concepts such as “Aviation, aviation English, interactive online vocabulary activities, educational game, ESP” were revealed as the basic concepts of the study through various books, scientific studies (article, thesis, and paper), and internet related to the subject. These emerging concepts were effective in determining the limitations of the study for purposes such as connecting the activities to be prepared for the study, reaching the aim of the study, contributing to the development of students. Acting in line with expert opinions in these processes increased the validity of the study.

In the study, quantitative data were collected with “Placement Test” and “Aviation Vocabulary Test” as data collection tools. The level of students in general English was assessed with “Straightforward Beginner and Elementary Placement Test by

Macmillan Publishers 2012”. In addition, during the preparation of the Aviation vocabulary test as pre-test and post-test, the development of the items in those tests were again a validity and reliability study by taking feedback from six experts in aviation content at different institutions, two assessment and evaluation expert at different universities and several English language experts teaching especially aviation English at different institutions. Various validity and reliability studies were carried out within the data collection tools of the research. Wilcoxon signed rank test was used in the comparison of groups in itself while Mann Whitney U was used in the comparison of groups with each other.



CHAPTER IV

FINDINGS

Quantitative and qualitative findings of the study carried out with Sequential Explanatory Design as mixed method were given respectively as followed.

In the study, quantitative data was collected with “Placement Test” and “Aviation Vocabulary Test” as data collection tools. Whether the data obtained from those data collection tools displayed normal distribution was checked with Kolmogorov-Smirnov and Shapiro-Wilk tests and the results received from the tests were given in Table 4.

Table 4.

The Result of Normality Test Obtained From Placement Test and Aviation Vocabulary Test

Tests	Groups	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Placement Test	Experimental	,148	42	,021	,976	42	,513
	Control	,144	42	,028	,950	42	,064
Aviation Vocabulary Test	Experimental	,147	42	,024	,904	42	,002
	Control	,108	42	,200*	,961	42	,161

As seen in Table 4, as the results of placement test which was applied before the study to both groups did not present normal distribution in the results of both groups, non-parametric tests were used in the comparisons. Wilcoxon signed rank test was used in the comparison of groups in itself while Mann Whitney U was used in the comparison of groups with each other. Data collected after the pre-application of those tests were given in the followings.

4.1. The Equation of Experimental and Control Group With the Results Of Placement Test

The level of students in general English was assessed with “Straightforward Beginner and Elementary Placement Test by Macmillan Publishers 2012” and the results received from this test were given in Table 5.

Table 5.

The Comparison of Experimental and Control Group Students' Scores in Placement Test

Groups	N	$\bar{x}$	SD	Mean Ranks	Sum of ranks	U	Z	p
Experimental	42	45,57	14,00	47,27	1985,50	681,500	-1,797	,072
Control	42	40,43	10,01	37,73	1584,50			

As seen in Table 5, students in experimental group got 45, 57 and students in control group got 40, 43 from placement test. According to the comparison of means in both groups, it was determined that the difference between the means of both groups was not significant statistically at 0, 05 level. This result showed that the level of students in both groups in terms of general English was similar before the experiment was put into practice.

4.2. The Equation of Experimental and Control Group With the Results of Aviation Vocabulary Test.

It was observed that students did not differentiate from each other in both groups in terms of General English level. Besides, in order to equate the groups, the results of “Aviation Vocabulary Test” as a pre-test which belonged to the content used in the application process were compared. The results obtained from this comparison was given in Table 6.

Table 6.

The Comparison of Experimental and Control Group Students' Scores in Aviation Vocabulary Test as Pre-test.

Groups	N	$\bar{x}$	SD	Mean Ranks	Sum of Ranks	U	Z	p
Experimental	42	32,10	10,36	42,96	1804,50	862,500	-,175	,861
Control	42	30,81	7,72	42,04	1765,50			

As seen in Table 6, it was determined that there was not a significant difference at the level of 0, 05 statistically between experimental group and control group in terms of the level of knowledge in Aviation English when they started to the studies. It was clear that students in both groups started to the studies with similar levels in terms of knowledge of vocabulary in Aviation English.

It appeared that the level of students both in experimental and control group in terms of general English was similar with placement test. In addition, with Aviation Vocabulary Test prepared for this study to be used as pre-test and post-test it was determined that both groups had the similar levels in terms of vocabulary knowledge in Aviation English before taking the aviation course.

In the study, the mean scores of students in experimental group and control group obtained from Aviation vocabulary test as pre-test were compared. In the comparison, if the difference between pre-test and post-test of groups differentiated significantly was tested with non-parametric tests and findings were given respectively.

4.3. Descriptive Statistics Based on the Scores of Experimental and Control Groups From Aviation Vocabulary Test

Descriptive statistics based on the scores of Experimental and Control groups from Aviation Vocabulary Test were given in Table 7.

Table 7.

Descriptive Statistics Based on the Scores of Experimental and Control Groups from Aviation Vocabulary Test

Groups	N	Aviation Vocabulary Test							
		Placement Test		Pre-test		Post-test		Difference (post-pre)	
		$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
Experimental	42	45,57	14,00	32,10	10,36	46,29	14,75	14,19	10,63
Control	42	40,43	10,01	30,81	7,72	38,24	12,01	7,43	11,91

Experimental group got the score of 32, 10 and control group got 30, 81 from the application of Aviation Vocabulary Test as pre-test. At the end of the studies, the score of experimental group whose courses were lectured with online interactive vocabulary activities with games was risen 46, 29 and the score of control group whose courses were conducted with course book was risen 38,24. When it was looked at the progress score of both groups, experimental group obtained the score of 14, 19 progress and control group obtained the score of 7, 43 progress.

4.4. The Comparison of Pre-And Post-Tests Progression Scores of Experimental and Control Groups With Wilcoxon Signed Ranks Test

If this improvement performed by the groups in themselves was significant, was tested with Wilcoxon Signed Ranks and findings were given in Table 8.

Table 8.

The Comparison of Pre- and Post-Tests Progression Scores of Experimental and Control Groups with Wilcoxon Signed Ranks Test

Groups		N	Mean Rank	Sum of Ranks	Z	p
Experimental	Negative Ranks	0 ^a	,00	,00	-5,516 ^b	,000
	Positive Ranks	40 ^b	20,50	820,00		
	Ties	2 ^c				
	Total	42				
Control	Negative Ranks	10 ^a	11,30	113,00	-3,874 ^b	,000
	Positive Ranks	29 ^b	23,00	667,00		
	Ties	3 ^c				
	Total	42				

a. Posttest < Pre-test; b. Posttest > Pre-test; c. Posttest = Pre-test

When it was looked at Table 8 whether experimental group and control group progressed in themselves significantly, it was clear that the difference between the pre and post-tests of both groups was significant in favour of the post-test. This finding proved that online interactive vocabulary activities conducted in experimental group increased the success of students learning with online interactive games significantly. However, the activities conducted in control group based on course book also increased the success of students in this group.

That the significant difference between the progression scores of both groups being for the benefit of which group was tested with Mann Whitney U test and findings were given in the following.

4.5. The Comparison of Difference (Progress) Scores of Students in Experimental Group and Control Group With Mann Whitney U Test

The difference between the 14, 19 progress of experimental group and 7, 43 progress of control group was resulted with significantly at 0, 05 level for the benefit of experimental group (see Table 9).

Table 9.

The Comparison of Difference (Progress) Scores of Students in Experimental Group and Control Group with Mann Whitney U Test

Groups	N	Mean Rank	Sum of Ranks	U	Z	p
Experimental	42	50,86	2136,00	531,000	-3,149	,002
Control	42	34,14	1434,00			

It was determined that online interactive vocabulary activities conducted in experimental group were more effective than the activities based on course book conducted in control group in terms of increasing the success of students.

4.6. The Themes and Sub-Themes Developed through the Analysis of Questionnaire and Focus Group Questionnaire

Data belonging to the students were checked question by question and meaningful words and sentences were checked in order to be determined as themes and sub-themes using manual coding. During the analysis periods carried out by two researchers, situation and codes which could not be agreed on were revised again and therefore themes and sub-themes were formed using manual coding accordingly. Those themes and sub-themes were given in Table 10.

Table 10.

Themes and Sub-Themes Formed with the Qualitative Data Analysis

Themes	Sub-themes	Experimental Group	Control Group
1. Learning	1. Skills	✓	✓
	2. Knowledge	✓	✓
2. Quality of Learning	1. Qualifications	✓	✓
	2. Advice	X	✓
3. Ways of Teaching	1. Features	✓	✓
	2. Advices	✓	✓
	3. Problems	✓	✓
4. Characteristics of Courses	1. Features	✓	✓
	2. Advice	X	✓
	3. Problems	✓	✓
5. Material	1. Use of Tools	✓	✓
	2. Advices	✓	✓
	3. Problems	✓	✓
6. Assessment	1. Case	✓	✓
	2. Advice	✓	X
7. Quality of Experiment	1. Case	✓	✓
8. Characteristics of Lecturer	1. Features	✓	✓
	2. Advice	X	✓
	3. Problems	X	✓
9. Deficiencies of Students	X	✓	✓
10. Contribution to other fields	1. Personal	✓	✓
	2. Professional	✓	✓
11. Changes in Fear, Prejudice and Self-Confidence	X	✓	✓
12. Suggestions	X	✓	✓

As seen in Table 10, 12 themes and 21 sub-themes were formed as after Qualitative Data Analysis. When the themes were checked, several sub-themes were formed as case, features, advice, problems, skills, knowledge, quality of learning, and use of tools, qualifications, personal and professional. In findings these themes and sub-themes were given together.

The themes and sub-themes developed through the analysis of questionnaire and focus group questionnaire conducted both with students in experimental group and control group were given in Figure 2.



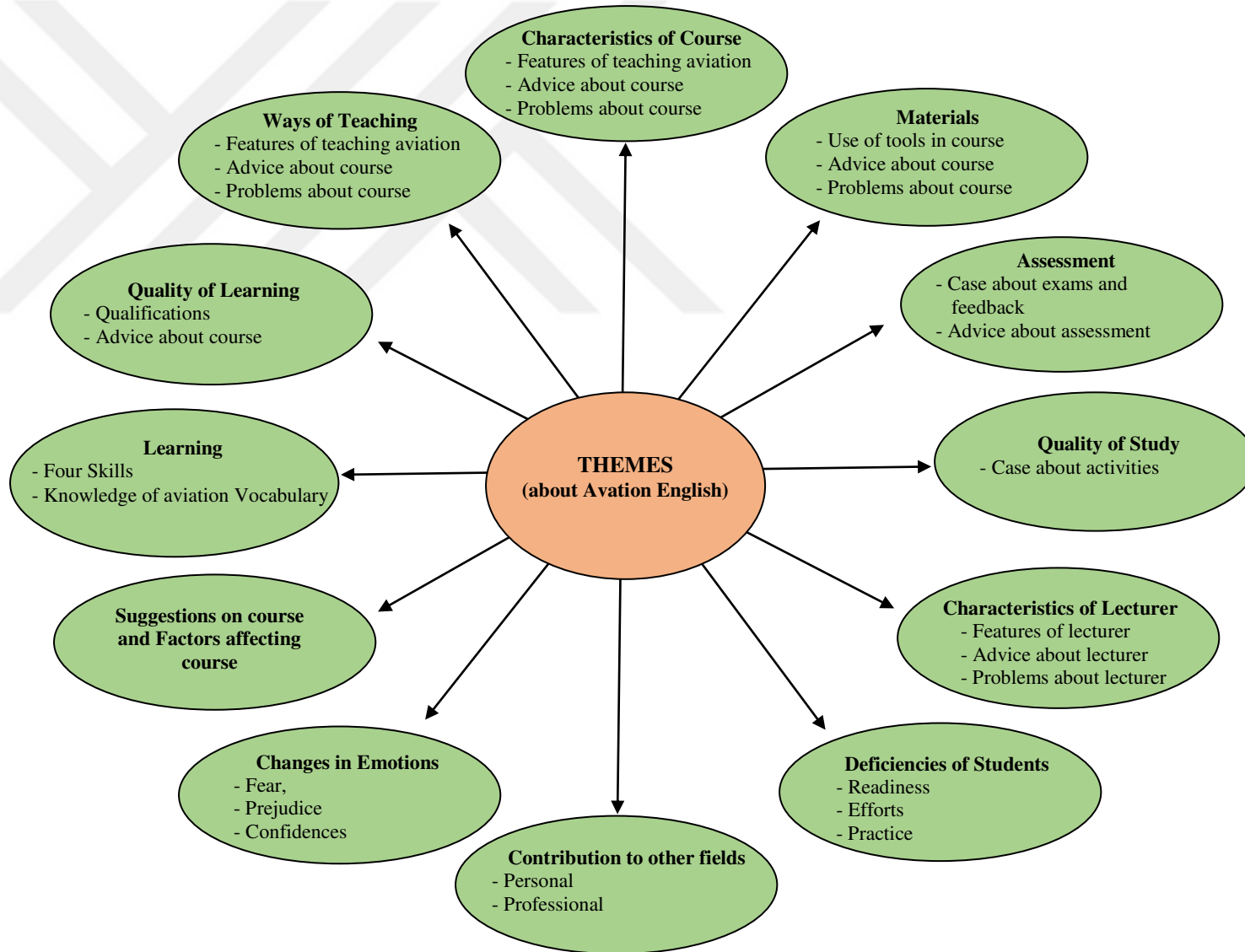


Figure 2. Themes and sub-themes obtained from qualitative analysis

4.6.1. Learning aviation English. The positive ideas of students in experimental group and control group about learning Aviation English which was categorized under two subtitles as skills and knowledge about aviation English were given in Figure 3.

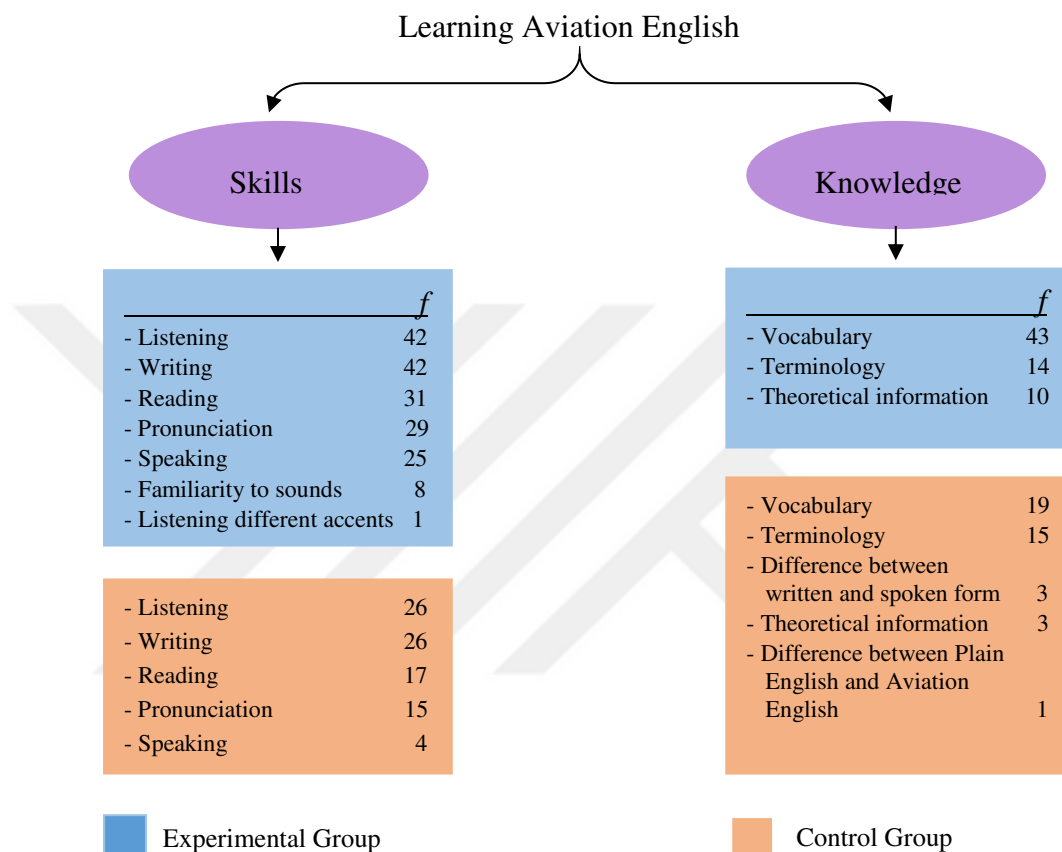


Figure 3. Students' ideas about learning aviation English

According to the 42 students out of 52 in experimental group, listening skill in aviation englishcourse has the highest rate in terms of improvement. 42 students of experimental group agreed on improvement in writing skills in aviation English. As for the reading skill in aviation English, 31 of the students in experimental group thought that they enhanced their skill. In addition 29 students in experimental group stated that they improved their pronunciation in aviation English. In relation to this, 25 students in experimental group stated that they developed their speaking skill in aviation English. Furthermore, eight students in experimental group stated that they got familiar to the sounds and one of the student in the same group was glad to hear different accents in that language.

When the results were checked in terms of knowledge, the huge difference can be realized between two groups about learning vocabulary in aviation English. 43 students in experimental group stated that they enhanced their vocabulary related to aviation. 14 students in experimental group stated that they had improvement in terminology of aviation English. 10 students in experimental group stated that they gained lots of theoretical information related to their department. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

“...the course contributed to my vocabulary and pronunciation (Experimental student 13), I think that I reinforce my knowledge about words by speaking and pronounce them better (ES14), I can pronounce words better (ES1), at first I cannot write what I heard but now I can write the words which I listened easily and correctly (ES24)...”

As for the ideas of the students in control group, similarly 16 of the students in control group out of 47 stated that their listening skill in aviation English has improved. 26 in control group has the same idea about writing skill improvement in aviation English. Likewise, 17 of the students in control group shared the same opinion on the reading skill development in aviation English. 15 of the students in control group agreed on pronunciation improvement in aviation English. Four students in control group thought that they could develop their speaking skill in aviation English.

19 students in control group had the idea of improving their vocabulary related to aviation. 15 students in control group stated that they had improvement in terminology of aviation English. Three students in control group stated that they gained lots of theoretical information related to their department. Three students in control group stated that they realized the difference between the written and spoken form of English words in aviation and one student in control group stated that s/he realized the difference between plain English and aviation English. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...I think I have improved myself in pronunciation (Control student 15), I have learnt a lot of vocabulary related to my department (CS33) ...”

4.6.2. Quality of learning in aviation English. The positive ideas of students in experimental group and control group and advice of the students in control group about quality of learning process were given in Figure 4.

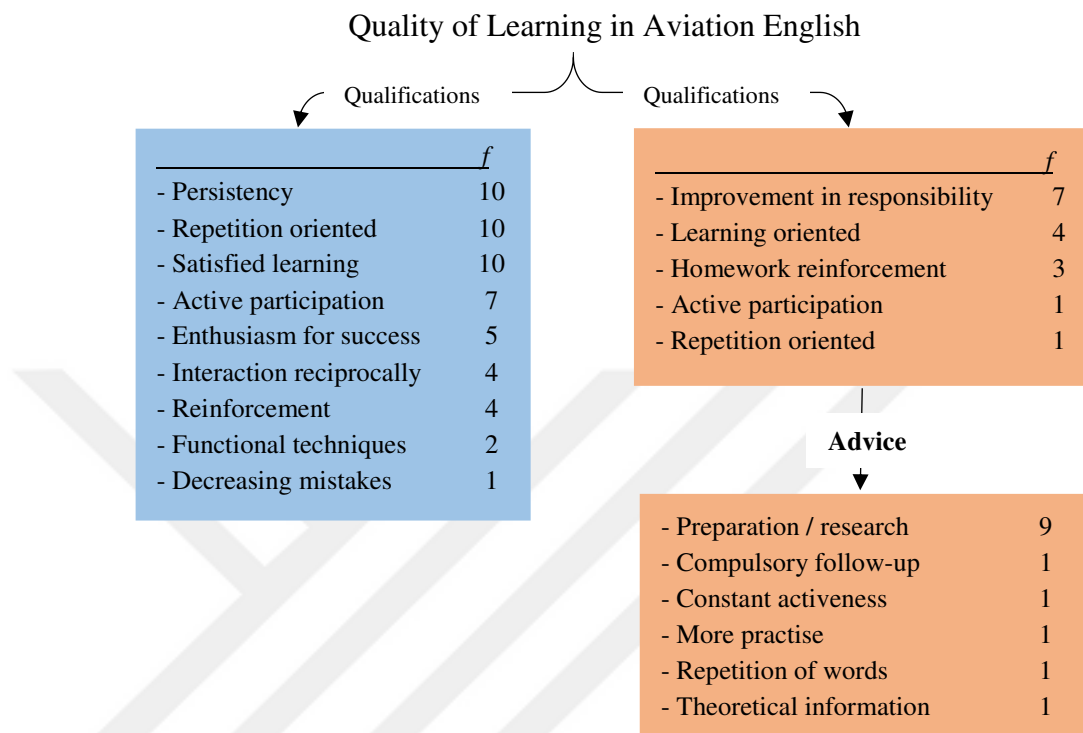


Figure 4. Students' ideas about quality of learning in aviation English

According to 10 students out of 52 in experimental group, persistency, and repetition during the teaching period of aviation English course were very important for their learning. 10 students in the same group stated that they were satisfied with the learning in aviation English. Seven students also stated that active participation encouraged them to be motivated and five of them stated that enthusiasm for success drew their attention to reach the aim of learning aviation English. Furthermore, four of the students in experimental group stated that interaction reciprocally is vital for learning aviation English and another four of them stated that reinforcement is significant for better learning in aviation English. Moreover, two of the students thought that techniques during the course were functional and one of them stated that their mistakes decreased. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"...Aviation English course is an interactive course that requires active participation. Unlike the teaching phase of other courses, it requires a

continuous and active participation (ES12), the course and vocabulary required more repetition to remember (ES9)... ”

As for the control group, seven students stated that their responsibility related to the course enhanced and four students stated that the course is learning oriented. In addition, three of them stated that homework reinforced their learning in aviation English and one of the student in control group stated that active participation and repetition of aviation vocabulary were useful for the learning. Along with those positive ideas by experimental and control group, there are some suggestions related to course made by students in control group. For instance, nine of the students in control group stated that preparation and research before the course were very important for active participation and understanding. One of the student claimed that compulsory follow up was necessary for their learning aviation English and one another student requested continuous activities related to aviation English. One of them stated that there should be more practise in aviation English and another one of them requested more repetition of words related to aviation English. In addition, one of them stated that theoretical information should be given more. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“... The teaching of the lesson is good, but it can be more fun with different activities (CS3), the course provided us responsibility in terms of regular study and revision (CS41)... ”

4.6.3. Ways of teaching aviation English. The positive ideas, advice and problems of students in experimental group and control group about the ways of teaching in aviation English were given in Figure 5.

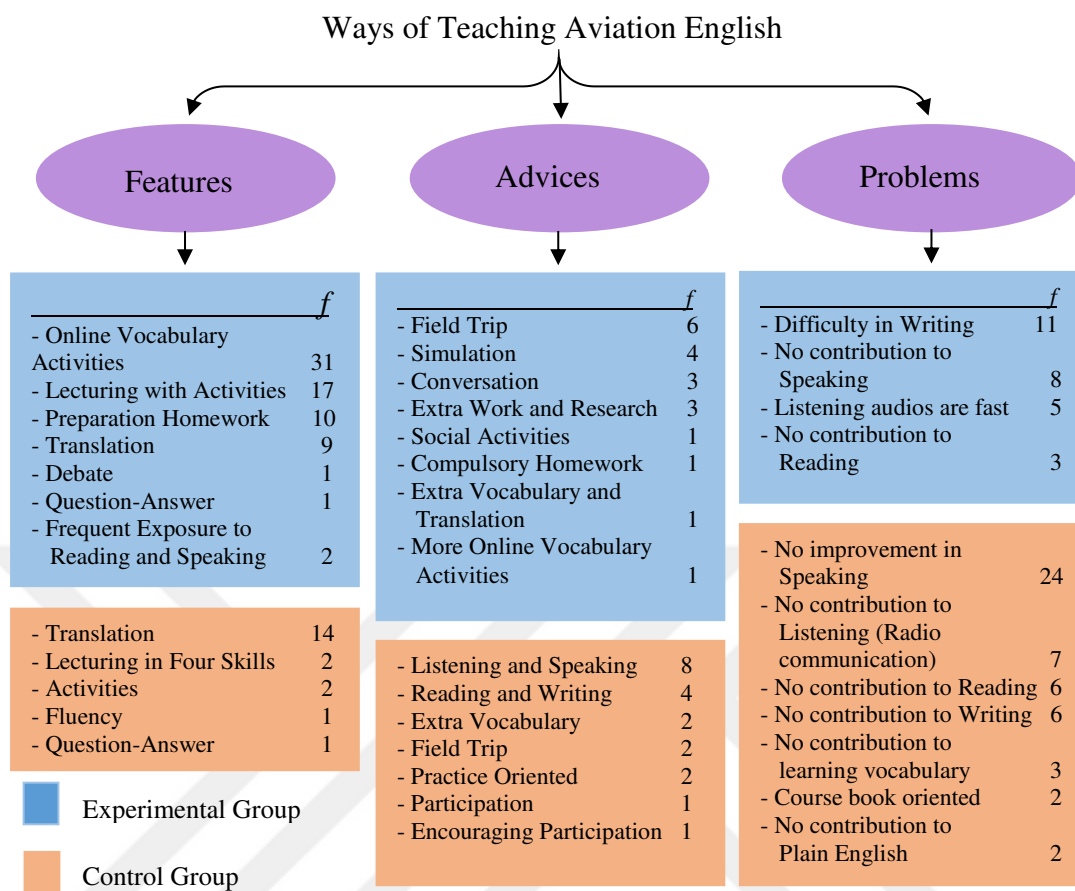


Figure 5. Students' ideas about ways of teaching aviation English

According to 31 students out of 52 in experimental group, online interactive vocabulary activities were useful for their learning, similarly 17 of them stated that learning aviation English with activities were effective for their development. In addition, ten of them thought that preparation before the course and doing homework in aviation English increased their understanding and participation during teaching process. Nine of them claimed that translation exercises in aviation English were useful for their learning. Moreover, one of the student in experimental group stated that debate and question-answer techniques about aviation field were effective for their comprehension of topics related to their department. Two of the students in experimental group stated that frequent exposure to reading and speaking in aviation improved them in terms of production in aviation English.

Students in both groups were not totally satisfied with the teaching and learning process in aviation English, so they offered some suggestions to course lecturer and

school management about those areas. To illustrate, six of the students in experimental group stated that field trip in relation to aviation would be useful for their learning in aviation English. Four of the students in experimental group stated that simulation activities should be used to understand the course of aviation clearly and three of them stated that conversation activities about aviation were necessary for good communication and extra homework and research related to aviation should be done to be prepared for their course. One of the student in experimental group suggested that social activities, compulsory homework, extra vocabulary, translation and extra online interactive vocabulary activities should be included to aviation English course in order to improve themselves.

Aside from the characteristics of the aviation English course and advice based on aviation English by students, there were some problems claimed by students about this course and management of the school which is related to aviation English course. 11 of the students in experimental group complained about the difficulty of the writing in aviation English and five of them thought that listening audios in course book were so fast to understand. Eight of them thought that they could not progress well in speaking related to aviation English and five of the students stated that they could not receive any contribution in reading in aviation English. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

*“...field trip to airports are very important for our department (ES37),
interactive online practice in this course contributed to my English (ES16,
ES1)... ”*

However, in control group 14 out of 52 students stated that translation activities during the teaching period of aviation English were effective for their learning. Moreover, two of the students stated that lecturing aviation English course in four skills as listening, speaking, reading and writing and activities based on those skills were useful for comprehending the aviation English course better. In addition, one of the student in the same group claimed that fluency and question-answer technique during the aviation English course improved their language skills in aviation English.

Students in both groups were not completely satisfied with the teaching and learning process in aviation English, so they offered some suggestions to course lecturer and

school management. To illustrate, two of the students in control group stated that field trip in relation to aviation would be useful for their learning aviation English course. As for the advice of control group related to teaching and learning process, eight students of this group stated that extra listening and speaking exercises in aviation English were necessary and four of them stated that extra reading and writing activities in aviation English were important for their learning. In addition, two of the students suggested that extra vocabulary exercises and practice based on aviation English should be used during the teaching aviation English. One of the students in control group stated that participation and encouraging participation were necessary for their learning environment in aviation English.

However, in control group 24 of the students stated that they could not progress in speaking skill in aviation English. Seven of them stated that there was no contribution to their listening skill; six of them claimed that they did not have any benefits in reading and writing skills in aviation English. Three of them stated that they did not obtain any knowledge about vocabulary related to aviation and two of them stated that there was no contribution to plain English. Moreover, two of the students in control group complained that the course was course book oriented. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...We always study from the book, I can't say that I learned much from the book (CS13), we progressed in translation (CS3)... ”

4.6.4. Characteristics of aviation English course. The positive ideas, advice and problems of students in experimental group and control group about the characteristics of aviation English courses were given in figure 6.

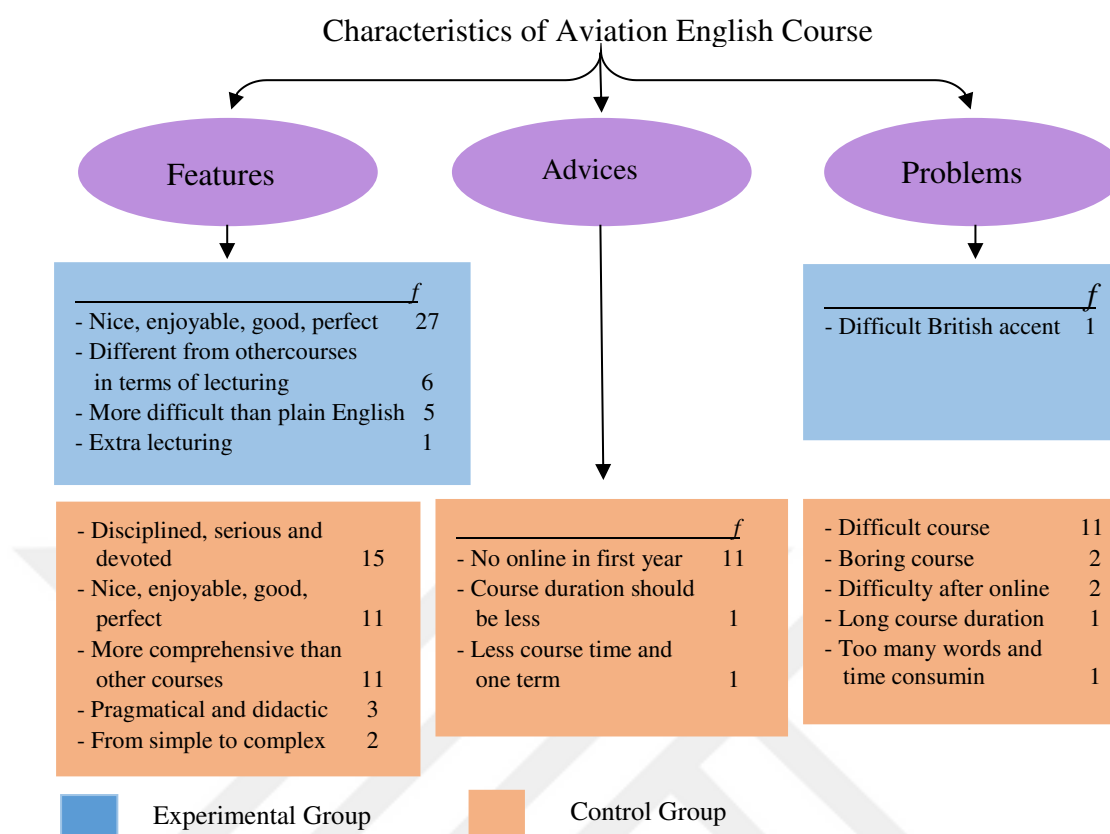


Figure 6. Students' ideas about characteristics of aviation English course

According to the 27 students out of 52 in experimental group thought that aviation English course was nice, enjoyable, good and perfect for their learning. Six of them in the same group stated that this course was different from other course in terms of lecturing style. Moreover, five of the students in the same group thought that aviation English course was more difficult than plain English was.

There are also some problems experienced by both groups. For example, one of the students in experimental group complained about the difficulty of British English accent during listening activities in aviation English course. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"...our course is so enjoyable, funny and perfect (ES31), the lecturing process of the course is very good, I did not get much efficiency in other courses, but the applications in this course contributed to my English (ES29), practice of words with online activities improved my knowledge in aviation terminology (FGES2)..."

11 students out of 47 in control group stated that aviation English courses was nice, enjoyable, good and perfect for their learning, and furthermore, one of them stated that extra lessons were so useful for their comprehension of the course. 15 of them thought that this course was disciplined, serious and devoted. Moreover, 11 of them stated that aviation English course was more comprehensive than other courses. Three of the students stated that the course was didactic and pragmatic and two of the students in the same group stated that this course continued from simple to complex and was ideal for thier learning as their background related to English was insufficient.

Aside from good points by students related to course, there are some suggestions made by control group. To illustrate, 11 out of 47 students strongly rejected online English education in the first year of their study. However, one of the students suggested that course duration in aviation English should be shortened as he/she got bored of long course duration. Likewise, one other student in the same group suggested that course time should be increased and instead of studying one term of aviation English, it should be studied more than one term.

There are also some problems experienced by both groups. For example, 11 of the students in control group stated that aviation English course was very difficult. Two of the students in control group stated that this course was boring and another two of them stated that they experienced difficult tasks related to aviation English after online education in heir first year. One of the students in control group stated that the duration of this course was very long and one another in the same group stated that there were too many words to be learned and it was time consuming. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...the course was much disciplined, serious and difficult (CS11), the English course should not be online in the first year of our education (CS44), the corse has too many words and it is difficult to remember (FGCSI)... ”

4.6.5. Materials in aviation English. The positive ideas, advice and problems of students in experimental group and control group about the materials in aviation English were given in figure 7.

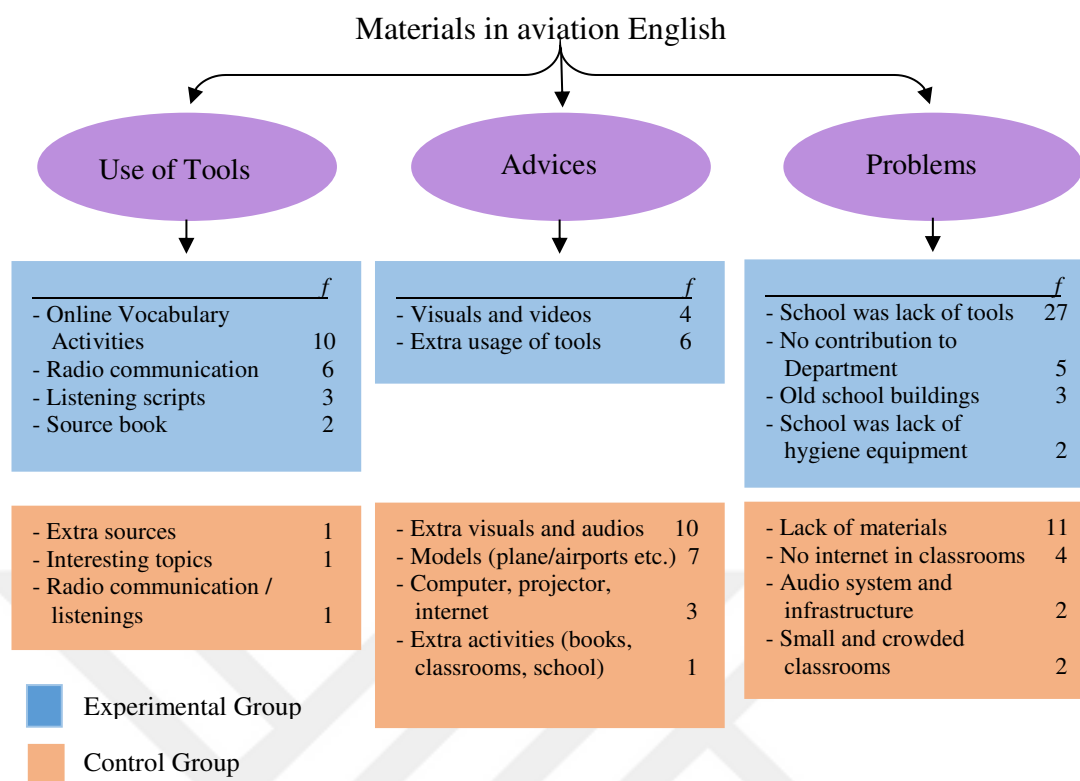


Figure 7. Students' ideas about materials in aviation English

According to the 10 students out of 52 in experimental group, online interactive vocabulary activities were beneficial for their learning in aviation English. Besides, six of them in the same group stated that radio communication in aviation English was so effective for their future working life and three of them mentioned that listening scripts related to aviation were important for understanding of different accents in aviation English. In addition, one of them stated that source book was very useful.

Along with those ideas, students in both groups have some advice related to materials used during the aviation English course. Six of the students in experimental group requested extra use of tools and four of them suggested that more visuals and videos should be used during the teaching period of aviation English.

As for the problems experienced by students in both groups related to materials, 27 students in experimental group complained about the lack of school in terms of tools. Besides, five students in experimental group stated that their school did not support their department in terms of materials related to aviation field. Three of them in the same group thought that school buildings were old and two of them complained that

their school lacked of equipment and hygiene. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

“...online vocabulary activities supported our learning (ES12), the course can be taught with different tools (ES13)... ”

On the other hand, one of the students in control group stated that extra sources were useful and one other student in the same group thought that topics in aviation English course were interesting. Besides, one of the students in this group stated that radio communication and listening in aviation English were useful for their learning.

Along with those ideas, students in both groups have some advice related to materials used during the course. Ten students in control group suggested that extra visuals and audios should be included into the aviation English course and seven of them in the same group requested models of aircraft and airports from the school management in order to reinforce their learning theoretically during the course. In addition, three of them suggested that computer, projector and internet should frequently be used and one of them stated that extra activities in books, classrooms, and schools should be used.

As for the problems experienced by students in both groups related to materials in this course, eleven students in control group complained about the lacks of school in terms of tools. Four of the students in control group stated that there was no internet connection in their classrooms and two of them stated that audio system and infrastructure were bad. Furthermore, two of them stated that their classroom were crowded and small. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...there is a lack of resources to make the lesson productive, such as the lack of internet and computer (CS14), can be taught in larger classrooms (CS13)... ”

4.6.6. Assessment in aviation English. The positive and negative ideas of students in experimental group and control group about the assessment in aviation English were given in figure 8.

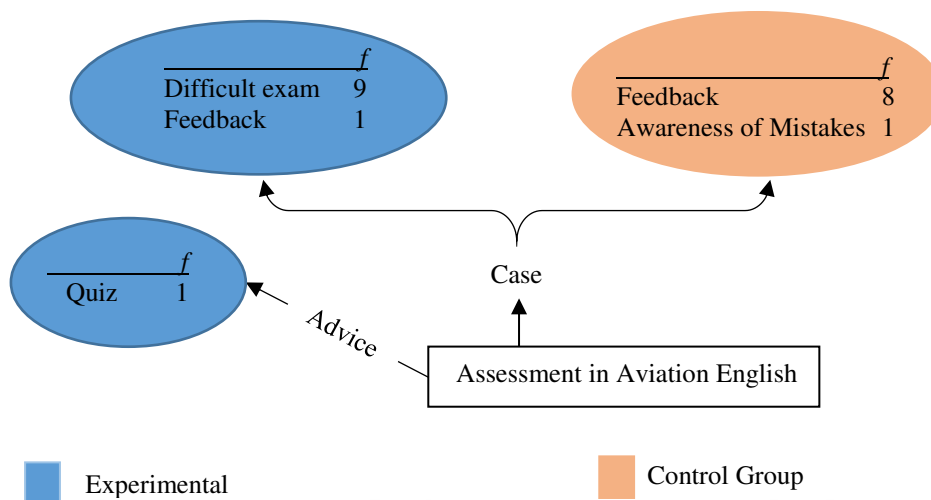


Figure 8. Students' ideas about assessment in aviation English

According to these opinions, nine out of 52 students of experimental group stated that exams in Aviation English were so difficult. In relation to this, they requested more quiz as a suggestion to cope with this difficulty. One of the student in experimental group stated that feedback was useful to see the progress of themselves during teaching and learning period. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"..., the lessons were funny but exams are very difficult (ES49), receiving feedback contributed my learning (ES44)..."

Likewise, eight out of 47 students in control group stated that feedback was beneficial for their improvement in this course. In line with this situation, one of the students in control group stated that awareness of mistakes made in aviation English increased their motivation about the course. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

"...aviation English is a very useful course in terms of feedback (CS34), I improved my awareness related to my mistakes (CS42)..."

4.6.7. Quality of study in aviation English. The positive ideas of students in experimental group and control group about the quality of the study in aviation English were given in figure 9.

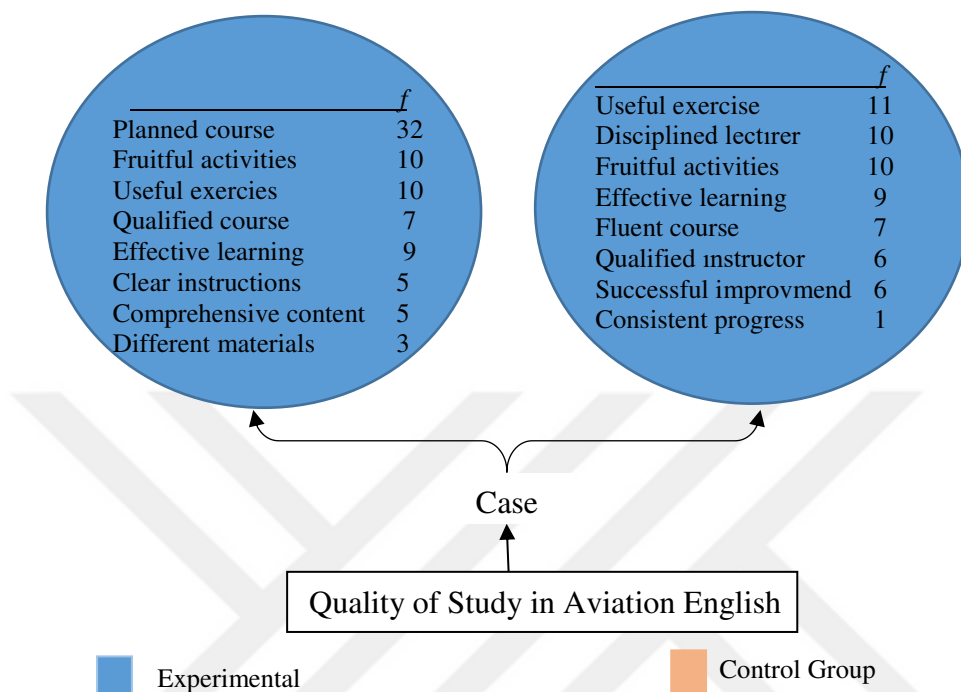


Figure 9. Students' ideas about quality of study in aviation English

According to these opinions, 32 out of 52 students in experimental group stated that activities at this course were planned; ten students thought that activities were fruitful. 10 students in experimental group stated that exercises were useful. Moreover, seven students in experimental group stated that the course was qualified and nine students thought that learning was effective. According to five students in experimental group, instructions were clear and content was comprehensive and three of them stated that materials were different. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"... In this course, our teacher made practical and useful online interactive exercises compared to other courses (ES48), the course was followed based on a plan (ES7), our course is informative, useful with online activities (FGES4)..."

According to these opinions, 11 out of 47 students in control group stated that activities were useful, ten students thought that activities disciplined, 10 students in control group thought that activities were fruitful. Nine students thought that activities were effective for their learning. Seven students of control group stated that activities were fluent during the course, Six students in this group thought that instructor was qualified. Six of them thought that they were successful and one of them stated that activities were consistent in terms of progress. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...course and vocabulary in course were beneficial and fruitful for us (CS27), lessons were taught theoretically in the classroom under discipline (CS36), and we learnt many new words which are useful for our department (FGCS6)...”

4.6.8. Characteristics of lecturer. The positive ideas of students in experimental group and control group about the Characteristics of Lecturer were given in figure 10.

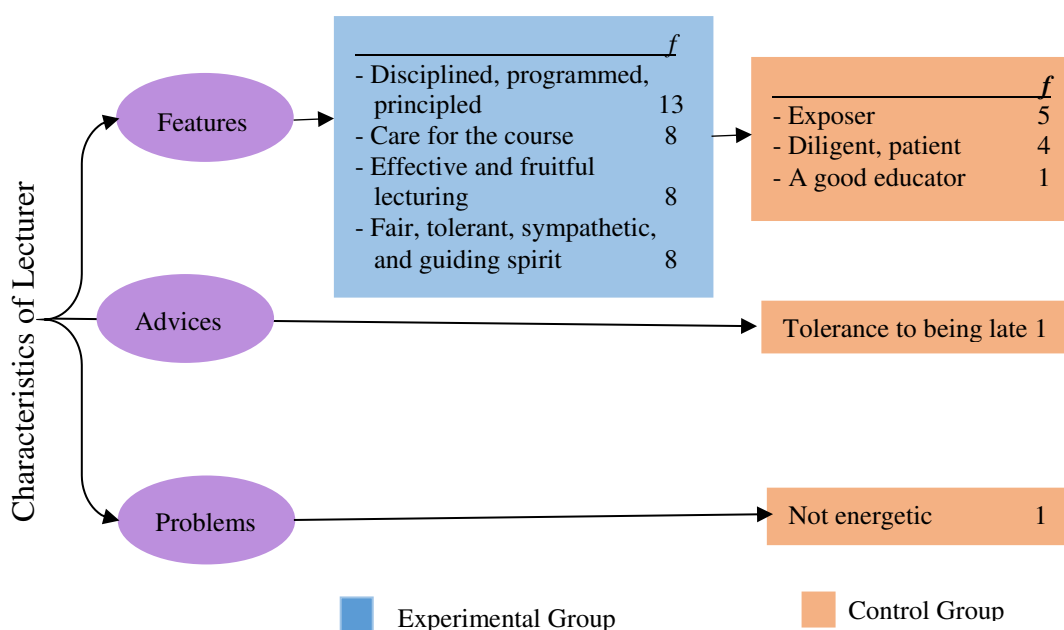


Figure 10. Students' ideas about characteristics of lecturer

According to these opinions 13 out of 52 students in experimental group stated that lecturer at this course was disciplined, programmed and principled, and eight of them stated that the lecturer lectured the aviation English course effectively and fruitfully. Besides, another eight of them in the same group stated that the lecturer cared about the course. Likewise, eight of them thought that the lecturer was fair, tolerant, sympathetic and inspiring. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

“...our lecturer is very good (ES39), I am sure that our teacher did his best to be effective and efficient (ES32)...”

As for the ideas of control group, five out of 47 students in control group stated that the lecturer was an expositor to course for their learning aviation English and four of them stated that the lecturer was diligent and patient. In addition, one of them stated that the lecturer was a good educator. Apart from the positive ideas related to the lecturer in aviation English course, students in control group had some advice and problems about the course lecturer. To illustrate, one of the student in this group suggested that the lecturer should be tolerant for students' being late to class. As for the problem of students in control group in terms of the course lecturer, one of them stated that the course lecturer was not energetic. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...I'm afraid to make a mistake because the teacher will get angry (CS21), the lecturer is a very good person (CS43), and he should be tolerant for students' being late to course (CS5)...”

4.6.9. Deficiencies of students. The ideas of students in experimental group and control group about the deficiencies of students were given in figure 11.

Deficiencies of Students

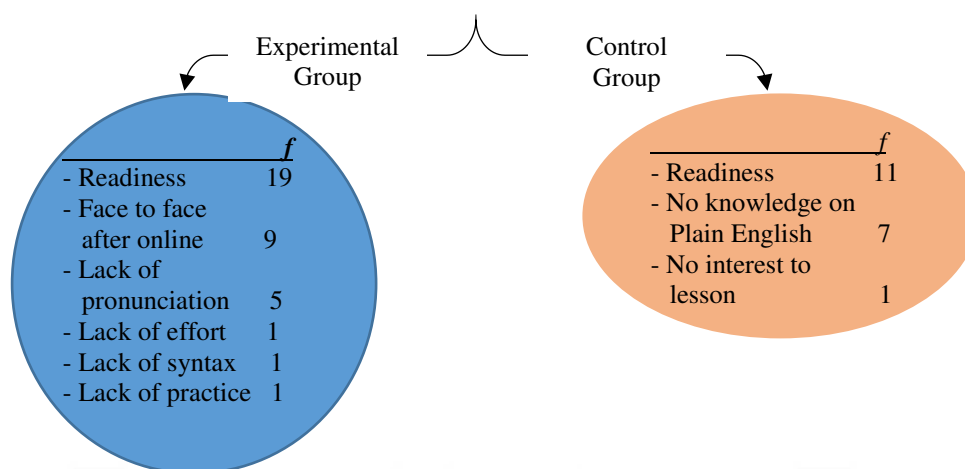


Figure 11. Students' ideas about deficiencies of students

19 out of 52 students in experimental group stated that their background and readiness for aviation English course was not enough. Besides, nine of the students in experimental group stated that they experienced difficult tasks when they studied face-to-face education after online course in their previous study year and five students in the same group thought that they were bad at pronunciation. In addition, one of the students in this group stated that s/he lacked of effort, another one in the same group stated that s/he lacked of syntax and one of them in the same group stated that s/he lacked of adequate practice in aviation English. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"... Our background was not strong anyway. First grade was distance education and we came here without knowing anything, English lesson should not be distance education in first grade (ES38), I am very bad at pronunciation in English (ES51), my pronunciation is not enough in aviation English course (FGES5)..."

11 out of 47 students in control group stated that their readiness and background for this course was not sufficient. Furthermore, seven students in this group stated that they did not have any knowledge in plain English and one of them stated that s/he had no interest to lesson. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“... since the way the course is taught is disciplined and organized, it was difficult for me to put it in such an order in the classroom environment after online education (CS18), I do not like English so much (CS22), I have almost no knowledge in English before this course (FGCS3)... ”

4.6.10. Contribution to other fields. The ideas of students in experimental group and control group about the contribution of activities in this course to other fields as personally and professionally were given in figure 12.

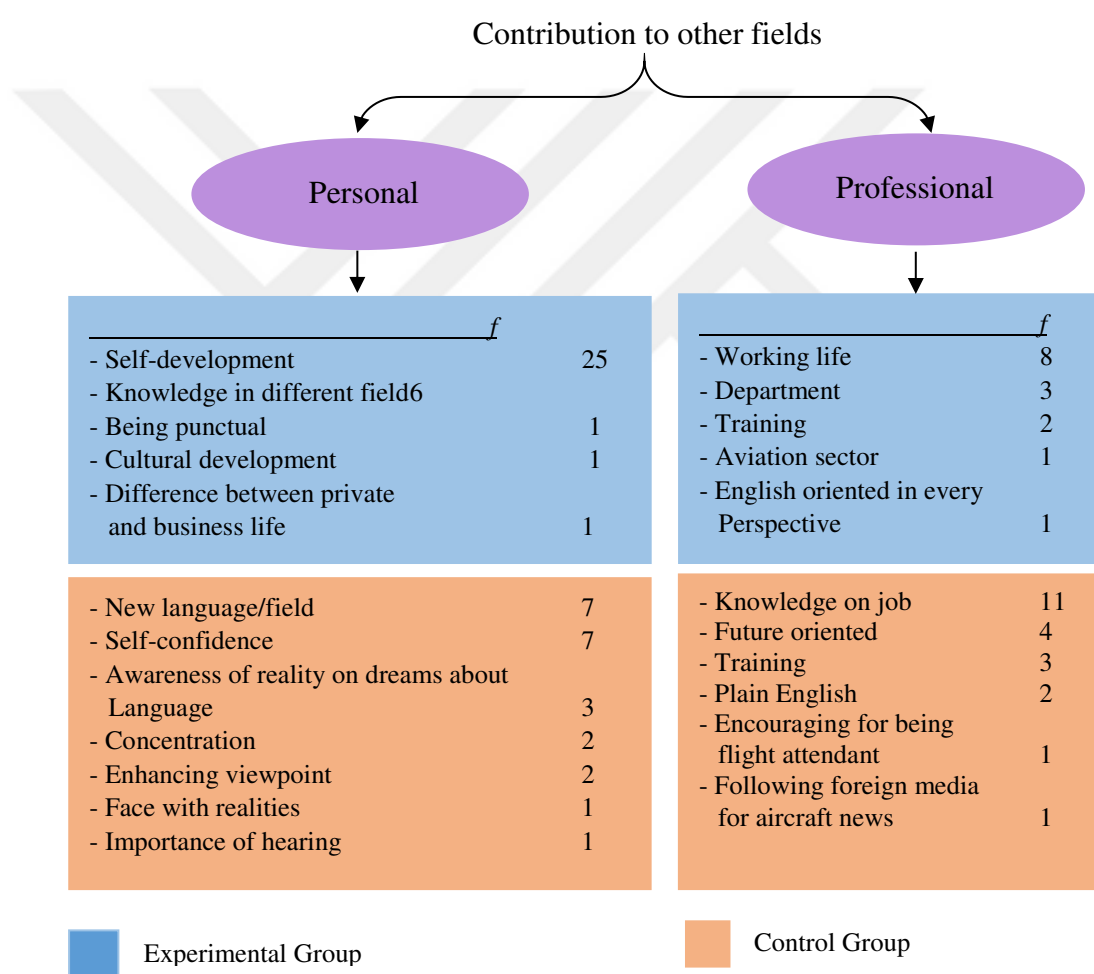


Figure 12. Students' ideas about contribution to other fields

In terms of personal contribution, 25 out of 52 students in experimental group stated that they gained self-development thanks to this course and six of them stated that they acquired knowledge in a different field as aviation and aviation English. In addition, one of them stated that s/he learnt to be punctual in terms of course and exam schedule,

another one of them stated that s/he gained cultural knowledge about the people who speak English by means of dialogue in course book and one of them in the same group stated that s/he realized the difference between private and business life in aviation sector.

As for the professional contribution, eight of the students in experimental group stated that the course prepared them for working life in the future and three of them stated that they improved themselves related to aviation department. Besides, two of them claimed that the course had a good impact on training in the field of aviation and one of them stated that s/he had knowledge on aviation sector. Another one of them in experimental group stated that this course was English oriented in every perspectives. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

“...this course will be useful for my job after school (ES29), I developed myself in aviation, which is a different branch, and I gained professional knowledge by learning the terms (ES45), I will use vocabulary knowledge in this course while working in the airport (FGES1)... ”

Seven students in control group stated that they had knowledge in a new language and field as aviation and aviation English and seven other students stated that they gained self-confidence. In addition, three of them in the same group stated that they could realize how to reach their dream with language and two of them said that they improved their concentration thanks to this course. Besides, two of the students in control group claimed that they developed their viewpoint in terms of future life and aims and one of them stated that s/he faced with realities by comparing the period before course and after course. Another one of them in the same group stated that s/he understood the importance of hearing thanks to the listening activities in this course.

11 students in control group stated that they gained knowledge about their future job and four of them stated that this course was future oriented as it focused on the language which will be used in working life. Three of them in the same group stated that the course prepared them for training during the summer after school and two of them thought that they improved their plain English as well. Furthermore, one of the students stated that s/he inspired from the course for being a flight attendant and another one of them stated that s/he could follow foreign media and journals related to

aviation. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“... The teacher and course allowed us to broaden our perspective of learning English in a different professional field and to have knowledge in a different field (CS25), the teacher provided self-confidence (CS12), and this course prepare us for our future job (FGCS5)... ”

4.6.11. Changes in Fear, Prejudice and Self-confidence. The ideas of students in experimental group and control group about the changes in their feeling in terms of fear, prejudice and self-confidence were given in figure 13.

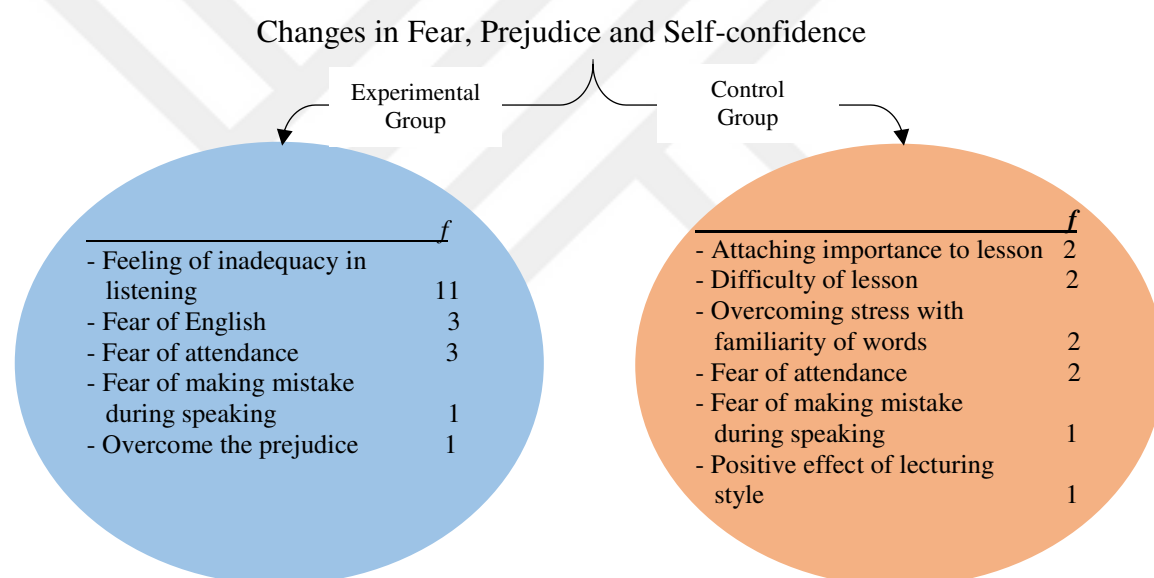


Figure 13. Students' ideas about changes in fear, prejudice and self-confidence

In terms of the changes in students' fear, prejudice and self-confidence 11 out of 52 students in experimental group stated that they felt inadequate at the beginning of the course and three of them in the same group stated that they were afraid of English when they started the course. Besides, three of them stated that they were hesitant in participation to course activities and likewise one of them stated that s/he was afraid of making mistakes while answering questions. Another one of them in experimental group stated that s/he could overcome his/her prejudice against the course. The direct

quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

“... The teacher is very entertaining, even if I don't like English, he made me like it a little bit (ES49), I feel insufficient in listening and I do not understand what I heard (ES18)... ”

As for the ideas of control group, two of them stated that they cared the course realized the importance of it and two of the students in the same group mentioned that the course was so difficult at the beginning of the study. Furthermore, two of them stated that they could overcome the stress by means of familiarity of words and terminology in aviation English. Besides, two of the students stated that they were afraid of participation to activities and one of them stated that s/he had fear of making mistakes during speaking activities. Another one of the students in the same group stated that s/he felt well thanks to the positive impact of lecturing style of the course. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“... I am afraid of the difficulty of the course (CS45), it seemed authoritative at first, but then I realized that the lesson was not boring. (CS16)... ”

4.6.12. Suggestions about course and factors concerning the course. The ideas of students in experimental group and control group about the suggestions in terms of course and factors concerning the course were given in figure 14.

Suggestions about course and factors concerning the course

Experimental	Control																																						
<table> <tr> <th></th><th><i>f</i></th></tr> <tr> <td>- No online class</td><td>16</td></tr> <tr> <td>- Solution to training</td><td>16</td></tr> <tr> <td>- More practise</td><td>12</td></tr> <tr> <td>- Extra classes</td><td>4</td></tr> <tr> <td>- Classes more than one day</td><td>3</td></tr> <tr> <td>- Aviation English 1st and 2nd Year</td><td>2</td></tr> <tr> <td>- Larger classrooms</td><td>2</td></tr> <tr> <td>- Lecturing in conversation style</td><td>2</td></tr> <tr> <td>- Research oriented in all skills</td><td>2</td></tr> <tr> <td>- Classes according levels of students</td><td>1</td></tr> </table>		<i>f</i>	- No online class	16	- Solution to training	16	- More practise	12	- Extra classes	4	- Classes more than one day	3	- Aviation English 1 st and 2 nd Year	2	- Larger classrooms	2	- Lecturing in conversation style	2	- Research oriented in all skills	2	- Classes according levels of students	1	<table> <tr> <th></th><th><i>f</i></th></tr> <tr> <td>- More visuals and audios</td><td>8</td></tr> <tr> <td>- Models in relation to department</td><td>4</td></tr> <tr> <td>- Extra use of computer, internet and projector</td><td>3</td></tr> <tr> <td>- Extra activities in books, classes and school</td><td>1</td></tr> <tr> <td>- Knowledge on general English</td><td>1</td></tr> <tr> <td>- Less Class hours</td><td>1</td></tr> <tr> <td>- No online class in the 1st year</td><td>1</td></tr> </table>		<i>f</i>	- More visuals and audios	8	- Models in relation to department	4	- Extra use of computer, internet and projector	3	- Extra activities in books, classes and school	1	- Knowledge on general English	1	- Less Class hours	1	- No online class in the 1 st year	1
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- No online class in the 1 st year	1																																						

Figure 14. Students' ideas about suggestions related to course and factors concerning the course

16 students out of 52 students in experimental group stated that online classes should be turned into face-to-face education in their first year and another 16 of them in the same group requested from the school management that they should find a solution to their training during summer after school. Besides, 12 of them stated that they should be tested with extra practice and four of them requested extra classes for aviation English course. Moreover, three of them stated that their school should organise the course schedule by dividing and placing course hours into multiple days. Two of them in the same group suggested that aviation English should be both in their first and second year of studying. Another two of them suggested that they should have larger classrooms. In addition, two of the students stated that classes should be in conversation style during the course and another two of them suggested that the course should be in research oriented in all skills. One of them suggested that classes should be arranged according to students' levels. The direct quotations from the questionnaire form of students in experimental group were translated into English and given below without any changes.

"...The necessary resources and equipment related to aviation, which is our department, should be increased (ES9), the course should not be on a single day, its hours should be increased and put on different days (ES17), and we should be exposed to online activities frequently (FGES3) ..."

When the results of students' ideas in control group in terms of suggestions were checked, eight of them suggested that there should be more visuals and audios related to course, four of them requested models in relation to their department. Besides, three of them stated that computer, projector and internet should be used frequently, and one of them offered that extra activities should be integrated to books, classes and schools. Furthermore, one of them stated that they should have background in relation to plain English. In line with this, one of them stated that there should not be online class in their first year in terms of English. Another one of them stated that there should be less class hours. The direct quotations from the questionnaire form of students in control group were translated into English and given below without any changes.

“...more vocabulary-based lessons can be taught (CS33), different activities can be available in course books, and classroom and school (CS43), visuals related to our department should be demonstrated like models (FGCS2)... ”

To summarize, based on the the qualitative result of this study it can be deduced that students in experimental group mostly satisfied with the learning aviation English course with online interactive vocabulary activities. At first, although they perceived that the course is difficult and has a different terminology, they got used to the course by regular participation and activities reinforcing their learning. They also mentioned that they like the materials and they regretted to study previous year general English as distant education without face-to-face education in classrooms. As the course is specific in terms of terminology, they had some prejudice against course and exams in this course, yet it changed in time by studying and being exposed to activities every week. Last but not least, as a suggestion they offered to school management that they should give more aviation course and training inside and outside the school for their development and success in their study period at school and future jobs.

As for the general ideas and suggestions of the students in control group, it can be understood from the results of the qualitative data that they were glad to study new course related to their department in a foreign language. The only lack according to some students is that they were always exposed to course book along the teaching period, so they requested different materials such as internet, projector, videos etc. They perceived the school insufficient in terms of providing large classrooms and necessary materials related to their department for their education. They requested

field trips to airports and training agreement with companies in airports for their compulsory training during summer. Moreover, they have some prejudice against the course in terms of the difficulty of content, organised, and disciplined side of the course lecturer. Related to those topics, they also suggested that the course hours should be shortened and being late to course should be tolerated.



CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

In the previous chapter, our data analysis and the results of this study were presented. In this chapter, a brief discussion of the topic and conclusion, and also suggestions for further studies will be provided.

5.1. Discussion and Conclusion

The present study was designed to investigate the effects of online interactive vocabulary activities with games and course book-based activities in terms of enhancing vocabulary learning in civil aviation students. In order to find out the effects of both activities, mixed method sequential explanatory design was used. In relation to this, quantitative data and qualitative data were collected respectively. Quantitative data were collected through a placement test and aviation vocabulary test. The data were collected from 84 second grade students studying in the department of civil aviation at Burdur Mehmet Akif Ersoy University, whereas the qualitative data were collected from 99 students individually and 18 students as focus group through a written questionnaire form under the control of researcher.

The main research question of the study is: “What are the effects of online interactive vocabulary activities and course book-based activities on the vocabulary comprehension of students in Civil Aviation and students’ viewpoints based on online and course book-based vocabulary teaching period?” At the end of the studies, the results revealed that the score of experimental group whose courses were lectured with online interactive vocabulary activities with games was risen. In other words, the experimental group obtained a significant score difference between the two tests. As a result, the findings proved that game-based online interactive vocabulary activities conducted in experimental group increased the success of students’ vocabulary comprehension in experimental group compared to traditional course book activities in control group. However, the results showed that the score of students in control group course book-based activities were conducted also increased. According to Wilkins (as quoted in Thornbury 2002, p. 13) “without grammar very little can be

conveyed, without vocabulary nothing can be conveyed.” Consequently, in order to understand its significance, English language teachers reserve a big place in their curriculum and in-class activities for vocabulary teaching (O’Del, 1997). In a study carried out by Alvin and Kwan (2006) the benefit of online games in vocabulary teaching for undergraduate students were investigated. The result obtained from those tests showed that the group using interactive online games had a better score than the control one.

The first sub-research question is: “Is there a statistically significant difference between pre-test and post-test scores of the students in experimental group?” According to results of the study, it was determined that online interactive vocabulary activities in aviation English conducted in experimental group increased the students’ success in terms of vocabulary improvement in English. According to Schmitt (2000), when learners meet and use a word in a different way they first encountered it, they can learn more effectively. In other words, it was revealed that those student-centred activities in this group rather than traditional course book activities were more efficient with respect to increasing the students’ success. Wood (2001) searched the usage of games as learning instrument and stressed that game-like designs can be more efficient at drawing students’ attention rather than traditional tools such as course books. According to Hutchinson and Waters (1987), having essential knowledge for learners is not enough to understand the language, they need to use it. It was clear that the difference between the pre and post-tests of both groups was significant statistically in favour of the post tests. The findings proved that online interactive vocabulary activities with games conducted in experimental group increased the success of students’ learning significantly. However, it was clear that online interactive vocabulary activities conducted in experimental group were more efficient than the activities based on course book conducted in control group in terms of increasing the success of students.

The second sub-research question is: “Is there a statistically significant difference between pre-test and post-test scores of the students in control group?” According to the analysed data, it was determined that activities based on course book in control group increased the students’ success significantly. It was found out that the success of students increased in control group course book activities were applied. As the

course book includes the units from simple to complex and each unit consists of key words related to aviation English, this can be attributed to the benefit of course book in favour of learners. Learners of English usually use dictionaries not grammar-based books, in order that vocabulary teaching aids students communicate and understands others in English successfully (Hadi, 2017).

The third sub-research question is: “Is there a statistically significant difference between the score difference of the students in experimental group and the students in control group?” According to the study, before beginning to apply activities, students’ level of English in both groups were similar based on the test in general English and aviation vocabulary pre-test. During the teaching processes, in experimental group online interactive vocabulary activities via games were conducted and in control group activities based on course book were used. Along the ten weeks period of teaching same topics and course book were used in both groups. At the end of teaching period same aviation pre-test as post-test after reordering the questions were applied as post-test again. According to the result of this test, it was found that there was a significant increase in the success of students in both experimental and control groups, yet the increase is higher in experimental group when compared to control group. This result might be interpreted as student-centred online interactive vocabulary activities based on games in experimental group have a profound role in enhancing comprehension of new ESP words. In a similar study performed by Dinçer and Dinçer (2021), whether one of the simulation game had an impact on the learning experiences on vocabulary in aviation was investigated. The results proved that there was a considerable positive effect of gaming on students’ success and learning. Students who attended the interview also indicated that the game was useful for their learning. In another study carried out by Alvin and Kwan (2006) the benefit of online games in vocabulary teaching for undergraduate students were investigated. The result obtained from pre and post-tests showed that the group using interactive online games had a better score than the control one. In a study using games as a learning tool was investigated and concluded that game-like forms can be more efficient than traditional text books in terms of capturing attention in learning (Wood, 2001). In another study by Pinem (2009), if gaming in vocabulary learning supported students’ knowledge and upgrade their score in vocabulary was searched by comparing routine learning. The result

obtained from pre and post-tests showed that the group using online games had a better score than the control one. In the study of Fainman and Tokar (2019), in aviation English course, vocabulary teaching sessions were conducted with different groups. According to results, all types of vocabulary instruction had positive impact on learning and remembering aviation vocabulary.

The last sub-research question is: “What are the opinions of students about online interactive vocabulary activities and course-book based activities?” Additionally, the study sets out to investigate students' perspectives and opinions regarding the use of online interactive vocabulary activities versus course book-based activities in their learning process. In relation to this, students' positive ideas on online interactive vocabulary activities in experimental group and their opinion on course book-based activities in control group were determined in the qualitative study when they answered the question about the difference between aviation English and other courses in their departments. Depending on the results of qualitative study, it was revealed that students in experimental group mostly showed satisfaction in terms of learning aviation English course with online interactive vocabulary activities. As the system and aviation English course were new for them, they had prejudice and fear towards the course and online interactive vocabulary activities at first as they stated in qualitative study. In time, their negative perception changed and they gained positive viewpoint and self confidence through the participation in these activities and having fun. In language teaching, games have frequently been used in order to stimulate learners' motivation and create authenticity for communicative activities (Anyaeibu et. al., 2012). Thanks to this opportunity, they could compare the English course they studied last year and aviation English conducted in their second year. Consequently, they requested extra courses related to aviation English including extra online interactive vocabulary activities as they thought their background knowledge was not sufficient. It was suggested that the course book is a global part in English teaching and it appears that without relevant course book, learning-teaching issue is not complete (Hutchinson & Torres, 1994).

In foreign language teaching, student-centred education is significant which stresses that the students should be engaged in learning and teaching process actively in order to learn the language meaningfully and efficiently in recent years. Students learn by

trial and error and accordingly they may have experiences in activities. Kolb (1984) states that experiences, environmental factors and emotions affect the learning process significantly. Therefore, creating such an atmosphere and making students participate in activities by applying their skills, using interactive online vocabulary games have a great importance in teaching vocabulary especially in aviation English concept. According to Tebeweka (2021), vocabulary supports students to improve themselves and become sufficient in four basic skills, in this context they are listening, speaking, reading and writing.

On the other hand, that teacher-centred activities based on course book in control group increased students' success as well. This can be attributed to habits of students in terms of traditional methods of learning coming from the previous school experiences. Course books are significant sources for teachers in helping learners to teach all the subjects which include English. They comprise the fundamentals of school instruction and the first information resource for teachers (Khosravany, et. al., 2014). In addition, teachers as facilitators or coaches whose duty is to help a student's attempt to find and construct knowledge with their performance creates the core role of teachers in the process of pedagogy (Mascolo, 2009). When the opinions given to the questions in interview form were looked over, we can understand that students in aviation English course who have similar study habits in other courses focused on grammar and translation leading to memorisation a lot. Therefore, it proved that traditional learning strategies were transferred to aviation English course and increased their success in quantitative study in a parallel way. In addition, the findings demonstrated that students in control group were glad to study a new course as aviation English, but they claimed that they had fears to the course as it has a different terminology and system after studying general English conducted online in their previous year. When the result of qualitative study were checked, it was clear that the negative thoughts of students in control group to the course changed positively. In addition, students in the same group, requested different materials such as videos, visuals, internet, and games etc. as they complained about being always exposed to course book. Direct quotation in the qualitative study proved this idea.

There could be a few reasons that student-centred activities in experimental group and course book-centred activities in control group affected the students' successes

positively without doubt. Firstly, it can be deduced that students of experimental group were accustomed to internet and online games accordingly their transferring between the games and teaching methods may have a positive impact on their learning. Games chosen in a good way are indispensable since they provide learners to use language skills and present students a break at the same time (Muhanna, 2012). As the students have smart phones and they all play online games in their daily life as a routine, this activity can be charming instead of reading books or doing homework. While we were lecturing the aviation English course along a ten-week period of teaching, we had the chance of observing participation to course both in experimental and control group. It was clear that there was a great difference in favour of experimental group in participation rather than control group. This can be attributed to fun and effective educational function of online interactive vocabulary activities based on gaming. For fun or motivational purposes games are usually used. In language teaching, games have frequently been used in order to stimulate learners' motivation and create authenticity for communicative activities (Anyaegbu et. al., 2012). On the other hand, course book based activities such as gap filling, matching words with their definitions etc. in control group have a positive rise in the success of students significantly as well. Hence, it can be attributed that control group might be successful at a high level as they are accustomed to traditional teaching and learning activities and assessment methods before.

However, when the results obtained from the qualitative side of the study were checked, it appeared that student-centred online interactive vocabulary activities based on sequential design made the students in experimental group feel happier than students in control group and those activities in experimental group were more pragmatic and efficient than the ones in control group when it was looked at the score difference students of experimental group gained in post-test. The positive impact of those online interactive vocabulary activities on students can be also seen when it is looked at the direct quotations of students in the results of qualitative study. In a study, using games as a learning tool was investigated and concluded that game-like forms can be more efficient than traditional text books in terms of capturing attention in learning (Wood, 2001). This result might be interpreted as activities in experimental group influenced the students' learning skills positively and therefore removed their

prejudice against language learning which was accepted as a difficult course based on their views in interview forms as they stated that they felt relaxed and their negative thoughts changed compared to the beginning of the study in qualitative study. Hutchinson and Waters (1987) stated that learners were accepted to have various interests and needs that would have a significant impact on their motivation to learn and consequently on their learning effectiveness.

5.2. Recommendations

Based on the results of this study, the following suggestions are presented in order to enhance the success of students and improve the learning environment in teaching Aviation English.

Although studies in both experimental and control groups developed the students' successes similarly, the number of the students as sample in our study is limited and the study contained only aviation English as ESP and civil aviation students. The findings of this study may not be generalised to all English language learners as it is a study in Aviation English as a sub-branch of ESP but it can be accepted as a model in order to determine the needs of students in other aviation schools and universities in Turkey and as the findings showed that there was a significant increase in the post test score of the experimental group, the contribution of online interactive vocabulary activities can be used in teaching aviation English course in terms of raising the success of students in aviation schools and universities. However, it was obvious that students in experimental group were satisfied with the teaching process thanks to online interactive vocabulary activities more positively than control group course book-based activities were applied. According to this result, in different teaching environment students should be given opportunity to learn English with different methods and accordingly they may like the lesson, and so practices that improve other skills should be applied.

Students should be helped for getting rid of prejudice against language learning by providing student-centred learning environment and interactive teaching methods rather than teacher-centred education making them inactive. For this purpose, applied researches should be done regarding natural English learning methods. According to

results of this study, universities and Ministry of National Education in Turkey should take the necessary precautions in order to benefit from these practices at every level of schools.

Various instructional designs making students actively participate in activities should be done in teaching English and teachers working in this field should be encouraged for using them in teaching English. In relation to students' background in general English, they should have knowledge about English grammar and vocabulary at a higher level rather than basic one in order to understand and comprehend Aviation English well. "Aviation English" is not only limited to pilots or ATCOs, it is also related to English on more general terms in aviation or aeronautical universities. It may be designed for students in the area of aviation as an integrated English for Specific Purposes curricula (Wang, 2008). Materials and environment fulfilling the needs of students such as internet, computer, projector, class, smart board, lighting etc. in Aviation English teaching process should be provided in order to enhance the success of students.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Problem Durumu

Havacılık kazalarının tarihine baktığımızda kazaların nedenlerinin çoğunun taraflar arasındaki iletişim bozukluğu ve yanlış anlamadan kaynaklandığını kolayca görebiliriz. Bu sorunların ana nedenlerinden birisi ortak dile yeterli hâkimiyetin olmaması ve bu bağlamda havacılığın dilinin İngilizce olmasıdır. Bununla birlikte, havacılık endüstrisinde konuşulan dil genel İngilizce değildir aksine kendine özgü jargon ve terminolojisi olan havacılık İngilizcesidir. Aslında, bu sektördeki problemlerin kaynağı alanla ilgili öğrencilerin dil eğitime yorulabilir. Yabancı bir dilin öğrenme sürecinde, kelimenin rolü büyük önem arz etmektedir. Kelime dört temel beceri olan okuma, yazma, dinleme ve konuşmanın temel faktörüdür. Öğrenciler iletişim kurabilmek için yeterli kelime bilgisine sahip olmalıdır. Kelime öğrenimi genellikle temel iletişim olarak düşünülüp aynı zamanda öğrenenler tarafından dilin en zor bölümü olarak Kabul edilir. Öğrenciler dil öğrenirken kelimenin önemini bilmelerine rağmen, Türk öğrenciler birçok faktör nedeniyle bu öğrenimi pasif olarak yerine getirirler. Öncelikle kelime öğrenmenin sadece bilinmeyen kelimenin anlamını bulmak olduğunu düşünürler. İkinci olarak, genellikle yeni kelimeleri öğretmen ders kitabı veya çalışma yaprağı ve ödev gibi etkinlikleri kullanırken öğrenirler. Sonrasında, kelimenin anlamını bulamadıklarında ya da sözlüğe bakmak istemediklerinde öğretmene sormayı tercih ederler. Son ve en önemlisi ise öğrendikleri kelimeyi yazılı veya sözlü olarak kullanmada risk alma konusunda kendilerine güven duymazlar. Oxford (1990), kelime öğrenme tekniklerini öğrencilerin hedef dili kullanarak kavrama ve içselleştirmede ilerlemelerini geliştirmek için çoğunlukla bilinçsiz kullandığı eylem, davranış, adımlar ve teknikler olarak tanımlar. Bu çalışmada esas problem, Burdur Mehmet Akif Ersoy Üniversitesi'ndeki Sivil Havacılık öğrencilerinde çevrimiçi etkileşimli kelime etkinlikleri ile geleneksel ders kitabı tabanlı etkinliklerin kelime dağarcığı gelişimine etkilerini araştırmayı ve karşılaştırmayı amaçlamaktadır.

Problem Cümlesi

Sivil Havacılıkta çevrimiçi etkileşimli kelime etkinlikleri ve ders kitabı tabanlı etkinliklerin öğrencilerin kelime anlamalarına etkileri ve çevrimiçi ve ders kitabına dayalı kelime öğretimi sürecine dayalı öğrenci görüşleri nelerdir?

Alt Problemler

1. Deney grubu öğrencilerinin ön test ve son test puanları arasında istatistiksel olarak anlamlı bir fark var mıdır?
2. Kontrol grubu öğrencilerinin ön test ve son test puanları arasında istatistiksel olarak anlamlı bir fark var mıdır?
3. Deney grubu öğrencileri ile kontrol grubu öğrencilerinin başarı puanı skorları arasında istatistiksel olarak anlamlı bir fark var mıdır?
4. Öğrencilerin etkileşimli çevrimiçi kelime bilgisi etkinlikleri ve ders kitabı temelli etkinliklere ilişkin görüşleri nelerdir?

Araştırmanın Amacı

Bu araştırma, Burdur Mehmet Akif Ersoy Üniversitesindeki Sivil Havacılık öğrencilerinde çevrimiçi etkileşimli kelime bilgisi etkinliklerinin ve geleneksel ders kitabı tabanlı etkinliklerin kelime dağarcığı gelişimine etkilerini araştırmayı ve karşılaştırmayı amaçlamaktadır.

Araştırma, karşılaştırmalı bir çalışma ile bu iki yaklaşımın etkililiğini belirlemeyi ve hangi yöntemin kelime dağarcığı gelişimini daha etkili bir şekilde geliştirdiğini belirlemeyi amaçlamaktadır.

Ek olarak, çalışma, öğrencilerin öğrenme süreçlerinde çevrimiçi etkileşimli etkinliklerin kullanımına karşı ders kitabına dayalı etkinliklerin kullanımına ilişkin bakış açılarını ve görüşlerini araştırmayı amaçlamaktadır.

Bu araştırma, istatistiksel analiz ve öğrencilerin bakış açılarını toplayarak, Sivil Havacılık eğitimi bağlamında dil öğretimi ve öğrenimi alanına değerli içgörüler katmayı amaçlamaktadır.

Araştırmanın Önemi

Havacılıkta Anlaşılabilirliği sağlamak için yapılması gereken en önemli şey, farklı alfabe, telaffuz kuralları ve gerekli bazı kodlamaları da içerek havacılık terminolojisine

sahip olmaktır. Bu doğrultuda dilbilgisi bilmek sadece iletişim kurmak için tek başına bir faktör değildir, yeterli kelime bilgisine sahip olmak etkileşimi düzgün bir şekilde sürdürmek için daha önemlidir. Bu çalışma, havacılık endüstrisinde dil yeterliliklerini ve etkili iletişimlerini geliştirmek amacıyla, çevrimiçi etkileşimli kelime etkinliklerinin ve ders kitabına dayalı etkinliklerin sivil havacılık öğrencilerinin sözcük dağarcığını anlamaları üzerindeki etkilerini araştırması ve karşılaştırması açısından önemlidir.

Yöntem

Araştırmanın Yöntemi

Bu çalışmada veriler hem niceliksel hem de niteliksel araştırma yöntemleriyle toplanmıştır. İlk olarak veriler niceliksel yöntem ile toplanıp ardından hem deney grubu hem kontrol grubuyla niteliksel yöntem olarak görüşme yapılmıştır.

Çalışma Grubu

Çalışma Burdur Mehmet Akif Ersoy Üniversitesi, Sivil Hava Ulaştırma İşletmeciliği bölümü ikinci sınıfta öğrenim gören seksen dört normal öğretim ve ikinci öğretim öğrencisiyle gerçekleştirilmiştir. Niteliksel çalışma olan görüşmeye ise gönüllü olarak toplam doksan dokuz öğrenci katılmıştır. Odak görüşmeye ise her iki gruptan dokuz öğrenci katılmıştır.

Veri Toplama Araçları

Öğrencilerin başlangıçta genel İngilizce seviyelerini belirlemek için Macmillan yayınları tarafından hazırlanan *The Straightforward Beginner and Elementary Placement test* kullanılmıştır (Ek1). Sonrasında havacılık İngilizcesinde kelime bilgilerini ölçmek için yine başlangıçta uzman görüşü alınarak araştırmacı tarafından hazırlanan elli maddelik alan kelime testi (Aviation Vocabulary Pre-test) (Ek2) ön test olarak kullanılmıştır. On haftalık eğitim uygulamasından sonra aynı havacılık alan kelime testi (Aviation Vocabulary Post-test) (Ek3) soruların yerleri değiştirilerek son test olarak uygulanmıştır. Son olarak da niteliksel yöntem olan görüşme formu (Interview Form) (Ek4) gönüllü öğrencilere sunulmuş ve ardından da aynı form odak görüşme olarak uygulanmıştır.

Verilerin Analizi

Veri toplama araçları olan giriş testi ve havacılık kelime testlerinden elde edilen verilerin sonuçlarının normal dağılım gösterip göstermediği Kolmogorov-Smirnov and Shapiro-Wilk testleri ile kontrol edilmiştir. Her iki gruba da uygulanan bu testlerin sonuçları normal dağılım göstermediği için parametric olmayan Wilcoxon işaretli sıra testi grupların kendi içinde kıyaslaması için Mann Whitney U testi ise grupların birbirleriyle kıyaslanması amacıyla kullanılmıştır.

Bulgular

Karma metotlardan açımlayıcı sıralı desen ile yürütülen çalışmanın sonucunda Niceliksel ve niteliksel bulgular aşağıda sırayla verilmiştir.

Bu çalışmada ön test olarak kullanılan havacılık kelime testinden elde edilen deney grubu ve kontrol grubu öğrencilerinin ortalama puanları kıyaslanmıştır. Bu kıyaslamada grupların ön test ve son testleri arasındaki farkın anlamlı olarak değişiklik gösterip göstermediği parametrik olmayan testlerle ölçülmüş ve sonuçlar sırayla verilmiştir.

4.1. Deney ve Control Gruplarının Havacılık Kelime Testinden Aldıkları Puanlara Dayalı Betimsel İstatistikler

Deney ve control gruplarının havacılık kelime testinden aldıkları puanlara dayalı betimsel istatistikler Tablo 5’da verilmiştir.

Tablo 5.

Deney ve control gruplarının havacılık kelime testinden aldıkları puanlara dayalı betimsel istatistikler

		Havacılık Kelime Testi							
		Giriş Testi		Ön Ölçüm		Son Ölçüm		Fark (Son-Ön)	
Gruplar	N	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
Deney	42	45,57	14,00	32,10	10,36	46,29	14,75	14,19	10,63
Kontrol	42	40,43	10,01	30,81	7,72	38,24	12,01	7,43	11,91

Ön test olarak uygulanan havacılık kelime testinden Deney grubu 32, 10 kontrol grubu ise 30, 81 puan almıştır. Çalışmaların sonunda dersleri çevrimiçi etkileşimli kelime etkinlikleri ile yürütülen deney grubunun puanı 46, 29'a yükselirken dersleri kitaba dayalı olarak yürütülen control grubunun puanı ise 38, 24'e yükselmiştir. Her iki grubun da ilerleme puanlarına bakıldığında, deney grubu 14, 19 puanlık ilerleme gösterirken control grubu 7, 43 puanlık bir ilerleme kaydetmiştir.

4.2. Wilcoxon İşaretli Sıra Testi ile Deney Grubu Ve Control Grubunun Ön Test Ve Son Test İlerleme Puanları Arasındaki Farkın Kıyaslanması

Grupların kendi içindeki bu ilerlemenin anlamlı olup olmadığı Wilcoxon işaretli sıra testi ile ölçülmüş ve bulgular Tablo 6'de verilmiştir.

Tablo 6.

Wilcoxon işaretli sıra testi ile deney grubu ve control grubunun ön test ve son test ilerleme puanları arasındaki farkın kıyaslanması

Gruplar		N	Mean Rank	Sum of Ranks	Z	p
Deney	Negative Ranks	0 ^a	,00	,00	-5,516 ^b	,000
	Positive Ranks	40 ^b	20,50	820,00		
	Ties	2 ^c				
	Total	42				
Kontrol	Negative Ranks	10 ^a	11,30	113,00	-3,874 ^b	,000
	Positive Ranks	29 ^b	23,00	667,00		
	Ties	3 ^c				
	Total	42				

a. Posttest < Pre-test; b. Posttest > Pre-test; c. Posttest = Pre-test

Deney grubu ve control grubunun kendi içinde anlamlı ilerleme kaydedip etmediği açısından Tablo 6'ye bakıldığında ön test ve son test arasındaki farkın son test yararına anlamlı olduğu açıktır. Bu bulgu kanıtlamaktadır ki deney grubunda yürütülen çevrimiçi etkileşimli kelime etkinlikleri öğrencilerin başarısını anlamlı derecede artırmıştır. Öte yandan, ders kitabı odaklı etkinliklerin yürütüldüğü control grubunda da bu etkinlikler öğrencilerin başarılarını artırmıştır. Her iki grubun ilerleme puanları arasındaki anlamlı farkın hangi grubun yararına olduğu Mann Whitney U testi ile test edilmiş ve bulgular aşağıda verilmiştir.

4.3. Deney Grubu ve Control Grubu Öğrencilerinin Fark (İlerleme) Puanlarının Mann Whitney U Testi ile Karşılaştırılması

Tablo 7.

Deney Grubu ve Control Grubu Öğrencilerinin Fark (İlerleme) Puanlarının Mann Whitney U Testi ile Karşılaştırılması

Groups	N	Mean Rank	Sum of Ranks	U	Z	p
Experimental	42	50,86	2136,00	531,000	-3,149	,002
Control	42	34,14	1434,00			

Deney grubunun 14, 19'lük ilerlemesi ile control grubunun 7, 43'lük ilerlemesi arasındaki fark, deney grubu lehine 0, 05 düzeyinde anlamlı olarak sonuçlanmıştır. Deney grubunda gerçekleştirilen çevrimiçi kelime etkinliklerinin kontrol grubunda gerçekleştirilen ders kitabına dayalı etkinliklere göre öğrenci başarısını artırmada daha etkili olduğu belirlenmiştir.

4.4. Görüşme ve Odak Grup Görüşmelerinin Analizi Sonucunda Geliştirilen Temalar ve Alt Temalar

Hem deney grubu hem de control grubu ile yapılan görüşme ve odak grup görüşmelerinin analizi sonucunda geliştirilen temalar ve alt temalar sırasıyla aşağıda verilmiştir.

Öğrenme

Deney grubundaki 52 öğrenciden 42'sine göre dinleme becerisi gelişme açısından en yüksek orana sahipken, kontrol grubundaki 47 öğrenciden 16'sı benzer şekilde dinleme becerisinin geliştiğini belirtmiştir. Deney grubundaki 42 öğrenci yazma becerisinin gelişmesi konusunda hemfikirken, kontrol grubundaki 26 öğrenci ise aynı görüştedir. Okuma becerisiyle ilgili olarak deney grubundaki öğrencilerden otuz biri okuma becerisini geliştirdiklerini düşünürken, kontrol grubundaki öğrencilerden on yedisi de aynı görüştedir. Ayrıca deney grubundaki 29 öğrenci telaffuzlarını geliştirdiğini belirtirken, kontrol grubundaki 15 öğrenci bu fikre katılmıştır. Bununla ilgili olarak deney grubundaki 25 öğrenci konuşma becerilerini geliştirdiğini, kontrol grubundaki 4 öğrenci de aynı şekilde düşündüğünü belirtmiştir. Ayrıca deney grubundaki sekiz

öğrenci seslere aşına olduklarını ve aynı gruptaki bir öğrenci o dilde farklı şiveler duymaktan memnun olduğunu belirtmişlerdir.

Sonuçları bilgi açısından kontrol ettiğimizde, kelime öğrenme konusunda iki grup arasındaki büyük farkı görebiliriz. Deney grubundaki 43 öğrenci kelime dağarcığını geliştirdiğini belirtirken, kontrol grubundaki 19 öğrenci aynı fikirdedir. Deney grubundaki 14 öğrenci ve kontrol grubundaki 15 öğrenci, havacılık İngilizcesi terminolojisinde gelişme konusunda fikir birliğine varmıştır. Deney grubundaki on öğrenci ve kontrol grubundaki üç öğrenci bölümleriyle ilgili birçok teorik bilgi edindiklerini belirtmişlerdir. Kontrol grubundaki üç öğrenci İngilizce kelimelerin yazılı ve sözlü halleri arasındaki farkı anladığını, kontrol grubundaki bir öğrenci ise genel İngilizce ile havacılık İngilizcesi arasındaki farkı anladığını ifade etmiştir.

Öğrenmenin Niteliği

Deney grubundaki elli iki öğrenciden onuna göre kalıcılık ve tekrar, öğrenmeleri için çok önemliydi. Aynı gruptaki on öğrenci, havacılık İngilizcesinde öğrenim görmekten memnun olduklarını belirtmişlerdir. Yedi öğrenci de aktif katılımın kendilerini motive etmeye teşvik ettiğini, beşi ise başarıya olan hevesin amaca ulaşmak için dikkatlerini çektiğini belirtmiştir. Ayrıca deney grubundaki öğrencilerden dördü karşılıklı etkileşimin öğrenme için hayati önem taşıdığını, dördü ise pekiştirmenin daha iyi öğrenme için önemli olduğunu belirtmiştir. Ayrıca öğrencilerden ikisi derste uygulanan tekniklerin işlevsel olduğunu düşünürken, biri hatalarının azaldığını belirtmiştir. Kontrol grubunda ise yedi öğrenci derse ilişkin sorumluluklarının arttığını, dört öğrenci ise dersin öğrenmeye yönelik olduğunu belirtmiştir. Ayrıca üçü ödevlerin öğrenmelerini pekiştirdiğini, kontrol grubundaki öğrencilerden biri ise aktif katılımın ve tekrarın öğrenme için yararlı olduğunu belirtmiştir. Deney ve kontrol grubu öğrencilerinin bu olumlu düşüncelerinin yanı sıra kontrol grubu öğrencilerinin de bazı önerileri bulunmaktadır. Örneğin kontrol grubundaki öğrencilerin dokuzu ders öncesi hazırlık ve araştırmanın aktif katılım ve anlama için çok önemli olduğunu belirtmişlerdir. Öğrencilerden biri öğrenmeleri için zorunlu takibin gerekli olduğunu iddia ederken, bir öğrenci de sürekli etkinlikler yapılmasını istemiştir. Biri daha çok alıştırma yapılması gerektiğini söylerken, diğeri daha çok kelime tekrarı yapılmasını istedi. Ayrıca bir tanesi teorik bilgilerin daha fazla anlatılması gerektiğini belirtmiştir.

Öğretim Yolları

Deney grubundaki 52 öğrenciden 31'i çevrimiçi kelime etkinliklerinin öğrenmeleri için faydalı olduğunu, benzer şekilde 17'si de etkinliklerle öğrenmenin gelişimleri için etkili olduğunu belirtmiştir. Ayrıca 10 kişi ders öncesi hazırlık yapmanın ve ödev yapmanın anlamalarını ve katılımlarını artırdığını düşünmüştür. Dokuz tanesi çeviri alıştırmalarının öğrenmeleri için yararlı olduğunu iddia etmiştir. Ayrıca deney grubundaki bir öğrenci tartışma ve soru-cevap tekniklerinin anlamalarında etkili olduğunu belirtmiştir. Deney grubundaki öğrencilerden ikisi, sık sık okuma ve konuşma ile karşılaşmanın kendilerini havacılık İngilizcesi üretimi açısından geliştirdiğini belirtmişlerdir. Ancak kontrol grubunda elli iki öğrenciden on dördü çeviri etkinliklerinin öğrenmeleri için etkili olduğunu belirtmiştir. Ayrıca öğrencilerden ikisi dört beceri ve etkinliğin işlenmesinin dersi kavramada yararlı olduğunu belirtmişlerdir. Ayrıca aynı gruptaki bir öğrenci de derste akıcılık ve soru-cevap tekniğinin becerilerini geliştirdiğini iddia etmiştir. Her iki gruptaki öğrenciler de öğretme-öğrenme sürecinden tamamen memnun kalmadıkları için dersin hocasına ve okul yönetimine bazı önerilerde bulunmuşlardır. Örnek olarak deney grubundaki altı öğrenci ve kontrol grubundaki iki öğrenci havacılık ile ilgili gezinin öğrenmeleri için faydalı olacağını belirtmişlerdir. Deney grubundaki öğrencilerin dördü benzetim etkinliklerinin dersin daha iyi anlaşılması için kullanılması gerektiğini, üçü ise iyi bir iletişim için konuşma etkinliklerinin gerekli olduğunu ve derse hazırlanmak için fazladan çalışma ve araştırma yapılması gerektiğini belirtmişlerdir. Deney grubundaki bir öğrenci kendini geliştirmek için derse sosyal etkinlikler, zorunlu ödevler, ekstra kelime ve çeviri ve ekstra çevrimiçi kelime aktiviteleri eklenmesini önermiştir. Kontrol grubunun tavsiyelerine gelince, bu gruptan sekiz öğrenci fazladan dinleme ve konuşmanın gerekli olduğunu ve dördü fazladan okuma ve yazmanın öğrenmeleri için önemli olduğunu belirtmiştir. Ayrıca öğrencilerden ikisi fazladan kelime bilgisi ve alıştırma verilmesini önermiştir. Kontrol grubundaki öğrencilerden biri öğrenmeleri için katılımın ve katılımın teşvik edilmesinin gerekli olduğunu belirtmiştir. Dersin özellikleri ve öğrenci tavsiyeleri bir yana, öğrencilerin bu derste ve dersle ilgili okul yönetiminde ileri sürdükleri bazı sorunlar da olmuştur. Deney grubundaki öğrencilerden 11'i havacılık İngilizcesinde yazmanın zorluğundan şikâyet ederken, beşi dinleme seslerinin anlamak için çok hızlı olduğunu düşünmüştür. Sekizi

konuşmada iyi ilerleyemediğini, beşi ise okumada herhangi bir katkı alamadığını belirtmiştir. Ancak kontrol grubundaki öğrencilerin yirmi dördü konuşmada ilerleyemediğini ifade etmiştir. Yedisi dinleme becerisine katkısı olmadığını, altısı okuma ve yazma becerisine katkısı olmadığını ifade etmiştir. Üçü kelime bilgisi almadıklarını, ikisi ise genel İngilizceye katkısı olmadığını belirtmiştir. Ayrıca kontrol grubundaki öğrencilerden ikisi dersin ders kitabı ağırlıklı olmasından şikâyetçi olmuştur.

Dersin Özellikleri

Deney grubundaki 52 öğrenciden 27'sine ve kontrol grubundaki 47 öğrenciden 11'ine göre havacılık İngilizcesi dersleri güzel, eğlenceli, iyi ve öğrenmeleri için mükemmeldi ve altısı bu dersin anlatım tarzı açısından diğer derslerden farklı olduğunu belirtti. Ayrıca aynı gruptaki altı öğrenci havacılık İngilizcesi dersinin genel İngilizce dersine göre daha zor olduğunu düşünmektedir. Ayrıca bir tanesi ekstra ders vermenin anlamaları açısından çok faydalı olduğunu ifade etmiştir. Kontrol grubundaki öğrencilerin 15'i ise bu dersin disiplinli, ciddi ve özverili olduğunu düşünmektedir. Ayrıca 11 tanesi havacılık İngilizcesi dersinin diğer kurslara göre daha kapsamlı olduğunu belirtmiştir. Öğrencilerden üçü dersin didaktik ve faydacı olduğunu, aynı gruptaki öğrencilerden ikisi ise bu dersin basitten karmaşığa doğru ilerlediğini ve öğrenme için ideal olduğunu belirtmiştir. Öğrencilerin dersle ilgili iyi notlarının yanı sıra kontrol grubunun da bazı önerileri bulunmaktadır. Örnek vermek gerekirse, kırk yedi öğrenciden on biri, eğitimlerinin ilk yılında çevrimiçi İngilizce eğitimini şiddetle reddetti. Ancak öğrencilerden biri havacılık İngilizcesi ders süresinin kısaltılmasını önermiştir. Aynı şekilde aynı gruptaki bir öğrenci ders süresinin daha fazla olmasını ve bir dönem havacılık İngilizcesi çalışmak yerine birden fazla dönem çalışılmasını önermiştir. Her iki grup tarafından da deneyimlenen sorunlar da bulunmaktadır. Örneğin deney grubundaki öğrencilerden biri İngiliz aksanından dinleme sırasında zorluk çektiğinden yakınmıştır. Aynı şekilde kontrol grubundaki 11 öğrenci de havacılık İngilizcesi dersinin çok zor olduğunu belirtmiştir. Kontrol grubundaki öğrencilerden ikisi bu dersin sıkıcı olduğunu, diğer ikisi ise çevrimiçi eğitim sonrasında zorluk yaşadıklarını belirtmişlerdir. Kontrol grubundaki öğrencilerden biri bu dersin süresinin çok uzun olduğunu, aynı gruptaki bir diğeri ise çok fazla kelime olduğunu ve zaman alıcı olduğunu belirtmişlerdir.

Materyaller

Deney grubundaki elli iki öğrenciden onuna göre çevrimiçi kelime etkinlikleri öğrenmeleri için faydalıydı. Ayrıca aynı gruptan altı kişi havacılık İngilizcesindeki radyo iletişiminin ilerideki çalışma hayatları için çok etkili olduğunu, üçü ise farklı aksanları anlamak için dinleme yazısının önemli olduğunu belirtmişlerdir. uğunu ifade etmiştir. Ayrıca bir tanesi kaynak kitabın çok faydalı olduğunu ifade etmiştir. Kontrol grubundaki öğrencilerden biri ise ek kaynakların yararlı olduğunu, aynı gruptaki bir öğrenci ise bu derste konuların ilgi çekici olduğunu belirtmiştir. Ayrıca bu gruptaki öğrencilerden biri radyo iletişimi ve dinlemenin öğrenmeleri için faydalı olduğunu belirtmiştir.

Bu fikirlerin yanı sıra her iki gruptaki öğrencilerin ders sırasında kullanılan materyallerle ilgili bazı tavsiyeleri vardır. Deney grubundaki öğrencilerin altısı daha fazla araç kullanımını talep ederken, dördü daha fazla görsel ve video kullanılmasını önermiştir. Benzer şekilde kontrol grubundaki 10 öğrenci derse fazladan görsel ve işitsel olarak yer verilmesini önermiş ve aynı gruptaki 7 öğrenci derste öğrendiklerini teorik olarak pekiştirmek için okul yönetiminden uçak ve hava alanı maketleri istemiştir. Ayrıca üçü bilgisayar, projektör ve internetin sık kullanılması gerektiğini, biri kitap, derslik ve okullardaki ekstra etkinliklerden yararlanılması gerektiğini belirtmiştir. Her iki gruptaki öğrencilerin materyal konusunda yaşadıkları sorunlarla ilgili olarak, deney grubundaki 27 öğrenci, kontrol grubundaki 11 öğrenci okulun araç-gereç eksikliğinden şikâyetçi olmuştur. Ayrıca deney grubundaki beş öğrenci, okullarının bölümlerini desteklemediğini belirtmişlerdir.

Aynı gruptan 3'ü okul binalarının eski olduğunu düşünürken, 2'si okullarının donanım ve hijyen eksikliğinden şikâyetçi oldu. Kontrol grubundaki öğrencilerden dördü sınıflarında internet bağlantısının olmadığını, ikisi ses sistemi ve altyapısının kötü olduğunu belirtmiştir. Ayrıca ikisi sınıflarının kalabalık ve küçük olduğunu belirtmişlerdir.

Değerlendirme

Bu görüşlere göre deney grubundaki 52 öğrenciden dokuzu Havacılık İngilizcesi sınavlarının çok zor olduğunu belirtmiştir. Bununla ilgili olarak bu zorlukla başa çıkabilmek için bir öneri olarak daha fazla bilgi yarışması talebinde bulunmuşlardır.

Deney grubundaki bir öğrenci geri bildirimin kendi ilerlemelerini görmek için faydalı olduğunu belirtmiştir. Aynı şekilde kontrol grubundaki 47 öğrenciden sekizi geri bildirimin bu dersteki gelişimleri için faydalı olduğunu belirtmiştir. Bu durum doğrultusunda kontrol grubundaki bir öğrenci hatalarının farkında olmanın derse karşı motivasyonlarını artırdığını ifade etmiştir.

Uygulamanın Niteliği

Bu görüşlere göre deney grubundaki 52 öğrenciden 32'si bu dersteki etkinliklerin planlı olduğunu, kontrol grubundaki 47 öğrenciden 11'i disiplinli olduğunu belirtmiştir. Hem deney hem de kontrol grubunda 10 öğrenci etkinliklerin verimli geçtiğini düşünmüştür. Deney grubundaki 10 öğrenci etkinliklerin yararlı olduğunu belirtirken, kontrol grubundaki 11 öğrenci de benzer şekilde aynı görüşü paylaşmıştır. Ayrıca deney grubundaki 7 öğrenci ders içi etkinliklerin nitelikli olduğunu belirtmiş, aynı fikir için bu sayı kontrol grubunda 6'dır. Hem deney hem de kontrol grubunda dokuz öğrenci etkinliklerin etkili olduğunu düşünmüştür. Deney grubundaki beş öğrenciye göre etkinlikler anlaşılır ve kapsamlıydı ve üçü farklı olduğunu belirtmiştir. Kontrol grubundaki yedi öğrenci ise etkinliklerin akıcı olduğunu, altısı başarılı olduğunu ve biri etkinliklerin tutarlı olduğunu belirtmiştir.

Öğreticinin Özellikleri

Bu görüşlere göre deney grubundaki 52 öğrenciden 13'ü bu dersteki öğretim elemanının disiplinli, programlı ve ilkeli olduğunu, 8'i öğretim elemanının dersi etkili ve verimli işlediğini belirtmiştir. Ayrıca aynı gruptan sekiz kişi daha öğretim elemanının dersi önemseydiğini belirtmişlerdir.

Aynı şekilde sekizi öğretim elemanını adil, hoşgörülü, sempatik ve ilham verici bulmuştur. Kontrol grubunun fikirlerine gelince, kontrol grubundaki kırk yedi öğrenciden beşi öğretim elemanının öğrenmeleri için derse maruz bırakıcı olduğunu, dördü öğretim elemanının çalışkan ve sabırlı olduğunu belirtmiştir. Ayrıca bir tanesi öğretim elemanının iyi bir eğitimci olduğunu belirtmiştir.

Havacılık İngilizcesi dersinde öğretim elemanı hakkında olumlu görüşler dışında kontrol grubundaki öğrencilerin bazı tavsiyeleri ve sorunları olmuştur. Örnek vermek gerekirse, bu gruptaki öğrencilerden biri öğretim elemanının öğrencilerin derse geç kalmalarına karşı hoşgörülü olması gerektiğini önermiştir. Kontrol grubundaki

öğrencilerin ders hocası açısından sorununa gelince, bir tanesi ders hocasının enerjik olmadığını belirtmiştir.

Öğrenci Eksiklikleri

Deney grubundaki 52 öğrenciden 19'u ve kontrol grubundaki 47 öğrenciden 11'i bu derse hazırbulunuşluklarının yeterli olmadığını belirtmiştir. Ayrıca deney grubundaki öğrencilerden dokuzu çevrimiçi ders sonrasında yüz yüze eğitimle karşılaştıklarında zorluk yaşadıklarını, aynı gruptaki beş öğrenci ise telaffuz eksikliklerinin olduğunu düşündüklerini belirtmişlerdir. Ayrıca bu gruptaki öğrencilerden biri çaba eksikliğini, aynı gruptaki bir öğrenci sözdizimi eksikliğini ve aynı gruptaki bir öğrenci de uygulama eksikliğini belirtmiştir. Ayrıca kontrol grubundaki 7 öğrenci genel İngilizce bilgisinin olmadığını, 1 öğrenci ise derse ilgi duymadığını belirtmiştir.

Diğer Alanlara Katkı

Kişisel katkı açısından deney grubundaki 52 öğrenciden 25'i kişisel gelişim sağladıklarını, 6'sı ise havacılık gibi farklı bir alanda bilgi edindiklerini belirtmiştir. Ayrıca bir tanesi dakik olmayı öğrendiğini, bir diğeri kültürel bilgi edindiğini ve aynı gruptan bir tanesi özel hayat ile iş hayatı arasındaki farkı anladığını ifade etmiştir. Kontrol grubundaki yedi öğrenci yeni bir dil ve alanda bilgi sahibi olduklarını, yedi öğrenci ise özgüven kazandıklarını belirtmişlerdir. Ayrıca aynı gruptan üçü hayallerine nasıl ulaşacaklarını dil ile gerçekleştirebildiklerini, ikisi konsantrasyonlarını geliştirdiklerini belirtmişlerdir. Ayrıca kontrol grubundaki öğrencilerden ikisi gelecek hayata bakış açısı geliştirdiğini, biri gerçeklerle yüzleştiğini ifade etmiştir. Aynı gruptan bir diğeri de bu derste işitmenin önemini anladığını ifade etmiştir. Mesleki katkı açısından deney grubundaki öğrencilerin sekizi dersin kendilerini çalışma hayatına hazırladığını, üçü ise havacılık bölümü ile ilgili kendilerini geliştirdiğini belirtmiştir. Ayrıca ikisi kursun havacılık alanındaki eğitime iyi bir etkisi olduğunu, biri de havacılık sektörü hakkında bilgi sahibi olduğunu belirtmiştir. Deney grubundaki diğer bir öğrenci ise bu dersin her yönüyle İngilizce odaklı olduğunu belirtmiştir. Kontrol grubundaki 11 öğrenci gelecekte yapacakları iş hakkında bilgi sahibi olduklarını ve dördü bu dersin geleceğe yönelik olduğunu belirtmiştir. Aynı gruptan üçü kursun kendilerini eğitime hazırladığını, ikisi de sade İngilizcelerini geliştirdiğini düşündüklerini belirtmişlerdir. Ayrıca öğrencilerden biri uçuş görevlisi olmak için kurstan ilham aldığını, bir diğeri ise havacılıkla ilgili yabancı

medya ve dergileri takip edebildiğini belirtmiştir.

Korku, Önyargı ve Kendine Güvendeki Değişimler

Öğrencilerin korku, ön yargı ve özgüvenlerindeki değişimler açısından deney grubundaki 52 öğrenciden 11'i dersin başında kendilerini yetersiz hissettiklerini, aynı gruptan 3'ü ders başladığında İngilizce'den korktuklarını belirtmişlerdir. Ayrıca üçü katılım konusunda çekingen davrandığını, biri de aynı şekilde hata yapmaktan korktuğunu belirtmiştir. Deney grubundaki bir diğer öğrenci ise ön yargısını yenebileceğini belirtmiştir. Kontrol grubundaki öğrencilerden ikisi dersi önemseyemediğini, aynı gruptaki öğrencilerden ikisi çalışmanın başında dersin çok zor olduğunu belirtmişlerdir. Ayrıca ikisi kelime ve terminoloji aşinalığı sayesinde stresi aşılabildiklerini belirtmişlerdir. Ayrıca öğrencilerden ikisi derse katılmaktan korktuğunu, biri ise konuşma sırasında hata yapmaktan korktuğunu belirtmiştir. Aynı gruptaki bir diğer öğrenci ise ders anlatma tarzının olumlu etkisi sayesinde kendini iyi hissettiğini belirtmiştir.

Derse ve Dersi Etkileyen Unsurlara Dayalı Öneriler

Deney grubundaki elli iki öğrenciden 16'sı çevrimiçi derslerin yüz yüze eğitime dönüştürülmesi gerektiğini belirtmiş, aynı gruptaki 16 öğrenci ise okul yönetiminden eğitimlerine bir çözüm bulmalarını istemiştir. Ayrıca 12'si ek uygulama ile test edilmeleri gerektiğini belirtirken, 4'ü de ek ders talebinde bulunmuştur. Ayrıca üçü okullarının ders programını bir güne dağıtarak düzenlemesi gerektiğini belirtmişlerdir. Aynı gruptaki iki kişi, havacılık İngilizcesinin eğitimlerinin hem birinci hem de ikinci yılında olması gerektiğini önerdi. Diğer ikisi, daha büyük sınıflara sahip olmaları gerektiğini önerdi. Ayrıca öğrencilerden ikisi derslerin sohbet tarzında olması gerektiğini, diğer ikisi ise dersin tüm becerilerde araştırma ağırlıklı olması gerektiğini belirtmişlerdir. Bunlardan biri derslerin öğrencilerin seviyelerine göre düzenlenmesini önerdi. Kontrol grubundaki öğrencilerin önerilerine ilişkin sonuçları kontrol ettiğimizde sekizi görsel ve işitselliğin daha fazla olmasını önerirken, dördü bölümüyle ilgili maket talebinde bulunmuştur. Ayrıca üçü bilgisayar, projektör ve internetin sık kullanılması gerektiğini belirtirken, biri kitaplara, sınıflara ve okullara ekstra etkinliklerin entegre edilmesini önermiştir. Ayrıca bir tanesi genel İngilizce ile ilgili altyapıya sahip olması gerektiğini belirtmiştir. Bu doğrultuda bir tanesi ilk sınıfta çevrimiçi ders yapılmaması gerektiğini belirtmiştir. Bir diğeri ders saatlerinin daha az

olması gerektiğini belirtmiştir.

Sonuç, Tartışma ve Öneriler

Yabancı dil öğretiminde son yıllarda yabancı dilin anlamlı ve verimli bir şekilde öğrenilebilmesi için öğrencilerin öğrenme ve öğretme sürecine aktif olarak katılmaları gerektiğini vurgulayan öğrenci merkezli eğitim önem taşımaktadır. Öğrenciler deneme yanılma yoluyla öğrenirler ve buna bağlı olarak etkinliklerde deneyimler edinebilirler. Kolb (1984) deneyimlerin, çevresel faktörlerin ve duyguların öğrenme sürecini önemli ölçüde etkilediğini belirtmektedir. Bu nedenle, böyle bir atmosferin yaratılması ve öğrencilerin etkileşimli çevrimiçi kelime oyunları kullanarak becerilerini uygulayarak etkinliklere katılmalarını sağlamak, özellikle havacılık İngilizcesi alanında kelime öğretiminde büyük önem taşımaktadır.

Bu çalışma, Burdur Mehmet Akif Ersoy Üniversitesi'ndeki Sivil Havacılık öğrencilerinde çevrim içi etkileşimli kelime etkinlikleri ile geleneksel ders kitabı tabanlı etkinliklerin kelime dağarcığı gelişimine etkilerini analiz etti. Araştırma, karşılaştırmalı bir çalışma ile bu iki yaklaşımın etkililiğini belirlemeyi ve hangi yöntemin kelime dağarcığı gelişimini daha etkili bir şekilde geliştirdiğini belirlemeyi amaçlamaktadır. Ek olarak, çalışma, öğrencilerin öğrenme süreçlerinde çevrimiçi etkileşimli etkinliklerin kullanımına karşı ders kitabına dayalı etkinliklerin kullanımına ilişkin bakış açılarını ve görüşlerini araştırmayı amaçlamaktadır.

Deney grubunda gerçekleştirilen etkileşimli çevrimiçi havacılık İngilizcesi kelime etkinliklerinin öğrencilerin İngilizce kelime anlama başarılarını artırdığı belirlenmiştir. Diğer bir ifadeyle bu gruptaki öğrenci merkezli etkinliklerin geleneksel ders kitabı etkinliklerine göre öğrenci başarısını artırmada daha etkili olduğu ortaya çıkmıştır. Hutchinson ve Waters'a (1987) göre, öğrenenlerin temel bilgilere sahip olmaları dili anlamak için yeterli değildir, onu kullanmaları gerekir. Ancak kontrol grubunda ders kitabına dayalı etkinliklerin de öğrencilerin başarısını önemli ölçüde artırdığı belirlenmiştir.

Etkinlikleri uygulamaya başlamadan önce, genel İngilizce testi ve havacılık kelime bilgisi ön testine göre her iki gruptaki öğrencilerin İngilizce seviyeleri benzerdi. Öğretim süreçlerinde deney grubunda oyunlar aracılığıyla etkileşimli çevrimiçi kelime etkinlikleri, kontrol grubunda ise ders kitabına dayalı etkinlikler kullanılmıştır. On

haftalık öğretim süresi boyunca her iki grupta da aynı konular ve ders kitabı kullanılmıştır. Öğretim süresi sonunda sorular yeniden sıralandıktan sonra aynı havacılık ön testi son test olarak tekrar uygulanmıştır. Bu test sonucunda hem deney hem de kontrol grubundaki öğrencilerin başarılarında anlamlı bir artış olduğu, ancak artışın deney grubunda kontrol grubuna göre daha fazla olduğu ortaya çıkmıştır. Bu sonuç, deney grubundaki öğrenci merkezli oyunlara dayalı etkileşimli çevrimiçi kelime etkinliklerinin yeni ESP kelimelerinin anlaşılmasını geliştirmede derin bir role sahip olduğu şeklinde yorumlanabilir. Öte yandan kontrol grubunda ders kitabına dayalı öğretmen merkezli etkinliklerin de öğrenci başarısını artırdığı görülmüştür. Bu durum, öğrencilerin önceki okul deneyimlerinden gelen geleneksel öğrenme yöntemleri açısından alışkanlıklarına bağlanabilir. Deney grubundaki öğrenci merkezli etkinliklerin, kontrol grubundaki ders kitabı merkezli etkinliklerin öğrenci başarılarını olumlu yönde etkilemesinin kuşkusuz birkaç nedeni olabilir. İlk olarak, deney grubu öğrencilerinin internete ve çevrimiçi oyunlara alışkın oldukları, buna bağlı olarak oyunlar arasında geçiş yapmalarının ve öğretim yöntemlerinin öğrenmelerini olumlu yönde etkileyebileceği çıkarımı yapılabilir. Öte yandan, kontrol grubunda boşluk doldurma, sözcükleri tanımlarıyla eşleştirme vb. ders kitabı temelli etkinlikler de öğrencilerin başarılarını önemli ölçüde olumlu yönde artırmaktadır. Dolayısıyla kontrol grubunun geleneksel öğretme-öğrenme etkinliklerine ve ölçme-değerlendirme yöntemlerine daha önceden alışkın oldukları için yüksek düzeyde başarılı olabilecekleri söylenebilir.

Ancak çalışmanın nitel tarafından elde edilen sonuçlara bakıldığında sıralı desene dayalı öğrenci merkezli etkileşimli çevrimiçi kelime etkinliklerinin deney grubundaki öğrencileri kontrol grubundaki öğrencilere göre daha mutlu ettiği ve deney grubundaki bu etkinliklerin kontrol grubundakilere göre daha faydalı ve verimli olduğu ortaya çıkmıştır. Bu sonuç, deney grubundaki etkinliklerin öğrencilerin öğrenme becerilerini olumlu yönde etkilediği ve dolayısıyla görüşme formlarındaki görüşlerine göre zor bir ders olarak kabul edilen dil öğrenimine karşı ön yargılarını ortadan kaldırdığı şeklinde yorumlanabilir Hutchinson & Waters (1987), öğrenenlerin, öğrenme motivasyonları ve dolayısıyla öğrenme etkinlikleri üzerinde önemli bir etkiye sahip olacak çeşitli ilgi ve ihtiyaçlara sahip olduklarının kabul edildiğini belirtmiştir.

Bu çalışmanın sonuçlarına dayalı olarak, Havacılık İngilizcesi öğretiminde öğrencilerin başarılarını artırmak ve öğrenme ortamını iyileştirmek için aşağıdaki öneriler sunulmuştur. Hem deney hem de kontrol grubundaki çalışmalar, öğrencilerin başarılarını benzer şekilde geliştirmiş olsa da, deney grubundaki öğrencilerin, etkileşimli çevrimiçi kelime etkinlikleri sayesinde öğretim sürecinden, ders kitabı temelli etkinliklere dayalı kontrol grubuna göre daha memnun oldukları görülmüştür. Bu sonuca göre öğrencilerin farklı öğretim ortamlarında İngilizceyi farklı yöntemlerle öğrenmeleri sağlanmalı ve buna göre dersi sevmeleri sağlanmalı ve diğer becerilerini geliştirici uygulamalar yapılmalıdır. Öğrenci merkezli öğrenme ortamı ve etkileşimli öğretim yöntemleri sağlanarak, öğretmen merkezli ve onları pasifleştiren bir eğitim yerine öğrencilerin dil öğrenimine yönelik ön yargılarından kurtulmaları sağlanmalıdır. Bu amaçla doğal İngilizce öğrenme yöntemleri ile ilgili uygulamalı araştırmalar yapılmalıdır. Bu çalışmanın sonuçlarına göre Türkiye'deki üniversiteler ve Milli Eğitim Bakanlığı bu uygulamalardan okulların her kademesinde yararlanılabilmesi için gerekli önlemleri almalıdır. İngilizce öğretiminde öğrencilerin etkinliklere aktif katılımını sağlayacak çeşitli öğretim tasarımları yapılmalı ve bu alanda çalışan öğretmenlerin İngilizce öğretiminde bunları kullanmaları teşvik edilmelidir. Öğrencilerin genel İngilizce geçmişleri ile ilgili olarak, Havacılık İngilizcesini iyi anlayıp kavrayabilmeleri için İngilizce dilbilgisi ve kelime bilgisine temelden ziyade daha yüksek düzeyde sahip olmaları gerekir. Havacılık İngilizcesi öğretim sürecinde internet, bilgisayar, projektör, sınıf, akıllı tahta, ışıklandırma vb. gibi öğrencilerin ihtiyaçlarını karşılayacak materyal ve ortamlar öğrencilerin başarılarını artırmak için sağlanmalıdır.



APPENDICES

Appendix 1

Straightforward Beginner and Elementary Placement test

The *Straightforward* Beginner and Elementary Placement test has been designed to help you decide whether the *Straightforward* Beginner course would be suitable for your students or whether they would qualify for using the *Straightforward* Elementary Course.

The *Straightforward* test has 50 questions, each worth one point. The first 40 are grammar questions and the final 10 are vocabulary questions. The conversion chart below has been designed to assist you in making your decision but please note, however, that these bandings are a guide.

Total score	Level
0 – 35	Beginner
36 – 50	Elementary

This test can also be used to diagnose the grammar of the Beginner level that your students need clarification on.

Grammar

- ____'s your name? Thomas
 - How
 - Who
 - What
 - Where
- This is Lucy and her brother, Dan. ____ my friends.
 - We're
 - I'm
 - You're
 - They're

3. ____? I'm from Italy.
a Where are you from?
b Where you are from?
c Where from you are?
d From where you are?
4. I'm from Milan. ____ is in Italy.
a They
b It
c He
d She
5. Excuse me, how ____ your last name? R-I-L-E-Y
a spell
b you spell
c do you spell
d spell you
6. Oh, ____ are my keys!
a This b These c That d It
7. I'd like ____ omelette, please.
a a b — c an d two
8. And here is your ____.
a desk
b desks.
c a desk
d an desk
9. My name's Pete and this is Sylvia. ____ doctors from France.
a I'm
b We're
c She's
d They're

10. Sorry, ____ Paul. My name's Eric.

- a I isn't
- b I is not
- c I aren't
- d I'm not

11. ____? No, he isn't.

- a Are they teachers?
- b Are you from Italy?
- c Is Mr Banning a teacher?
- d Is this your phone?

12. ____ is the school? It's 50 years old.

- a How many years
- b How much years
- c What years
- d How old

13. What is ____?

- a job Mary
- b Mary job
- c Mary's job
- d job's Mary

14. Your bag is next ____ the table.

- a on
- b to
- c in
- d of

15. ____ are the keys? On the table.

- a What
- b When
- c Where
- d Who

16. I go to work ____ train.

- a with b by c for d in

17. She ____ a dog.

- a not have
b don't have
c don't has
d doesn't have

18. Stephen ____ in our company.

- a work
b works
c is work
d working

19. ____ they live in London?

- a Are b Is c Do d Does

20. ____ to the cinema.

- a We not often go
b We don't go often
c We don't often go
d Often we don't go

21. When do you play tennis? ____ Mondays.

- a On b In c At d By

22. What time ____ work?

- a starts he
b do he starts
c does he starts
d does he start

23. ____ two airports in the city.

- a It is
- b There is
- c There are
- d This is

24. There aren't ____ here.

- a a restaurants
- b any restaurants
- c any restaurant
- d a restaurant

25. I'm afraid it's ____.

- a a hotel expensive
- b expensive hotel
- c expensive a hotel
- d an expensive hotel

26. They ____ popular TV programmes in the 1980s.

- a are b were c was d is

27. ____ at school last week?

- a Do you were
- b Was you
- c Were you
- d You were

28. Brad Pitt is a popular actor but I don't like ____.

- a Him b his c her d them

29. We ____ the film last week.

- a see b saw c sees d were see

30. He ____ tennis with me yesterday.

- a doesn't played
- b didn't played
- c not played
- d didn't play

31. She was born ____ May 6th, 1979.

- a in b at c on d from

32. Where ____ last summer?

- a you went
- b did you went
- c do you went
- d did you go

33. Were you at the shops at 5 p.m. yesterday? No, I ____

- a didn't
- b am not
- c wasn't
- d weren't

34. Excuse me, ____ is the T-shirt? It's £25.99.

- a what expensive
- b how much
- c how many
- d how price

35. She's only four but she ____.

- a can read
- b cans read
- c can reads
- d cans reads

36. This party is boring. We ____ a good time.

- a don't have
- b aren't having
- c don't having
- d aren't have

37. Sorry, I ____ you at the moment.

- a can't help
- b don't can help
- c can't helping
- d can't helps

38. I ____ my computer very often.

- a am not using
- b don't use
- c doesn't use
- d am not use

39. It's my mum's birthday next week. I ____ her a present.

- a buy
- b buys
- c am going to buy
- d buying

40. What ____ do after school today?

- a are you going to
- b are you
- c do you
- d you

Vocabulary

41. Gina is married to John. He's her ____

- a uncle
- b husband

- c wife
- d parent

42. We usually ____ the shopping in a supermarket.

- a make
- b do
- c have
- d go

43. I love this watch! It's ____.

- a cheap
- b small
- c beautiful
- d ugly

44. He doesn't have a car so he often uses public ____.

- a taxi
- b transport
- c car
- d bus

45. I don't go to ____ on Sundays.

- a job
- b office
- c factory
- d work

46. Do you like Chinese ____?

- a kitchen
- b meal
- c food
- d cook

47. They hardly ____ visit us.

- a ever
- b sometimes
- c never

d usually

48. I'm Jeff Caine. Nice to ____ you, Mr Caine.

- a speak
- b talk
- c meet
- d watch

49. Can I help you? Thanks, but I'm just ____.

- a watching
- b looking
- c seeing
- d shopping

50. Mandy is over there. She's ____ a blue T-shirt and jeans.

- a having
- b wearing
- c doing
- d walking

Appendix 2

Aviation Vocabulary Pre-test

1. A structure supporting aircraft while not in flight _____.
a. aileron b. rudder c. landing gear d. spoiler
2. The central part of an aircraft's body _____.
a. wings b. tail c. landing gear d. fuselage
3. The front part of an aircraft _____.
a. tail b. nose c. wing d. landing gear
4. A _____ is a rolling part that allows a vehicle, such as an airplane, to move smoothly along the ground.
a. tire b. landing gear c. wheel d. fuselage
5. A (n) _____ is one of two structures attached to the fuselage of an aircraft that create the lift needed to fly.
a. flap b. slat c. wing d. elevator
6. A _____ is a surface on the leading edge of an aircraft wing that is used to adjust velocity.
a. flap b. rudder c. slat d. spoiler
7. A (n) _____ is a hinged part of a vertical stabilizer that guides an aircraft left or right.
a. rudder b. elevator c. slat d. flap
8. A (n) _____ is a hinged part of a wing that changes the amount of force produced.
a. flap b. slat c. aileron d. elevator
9. A (n) _____ is the hinged part of a horizontal stabilizer that guides an aircraft up and down.
a. Rudder b. stabilizer c. aileron d. elevator
10. A (n) _____ is a hinged part of a wing that rolls an aircraft from side to side.
a. Slat b. flap c. rudder d. aileron
11. A (n) _____ is a specific rate of oscillation of radio waves assigned to a specific radio station to carry radio signals.
a. transceiver b. frequency c. unable d. transponder
12. To _____ a device is to activate it by pressing a specific key.

- a. boom mike b. headphone c. key d. squelch control
13. _____ are a pair of small speakers worn close to a person's ear.
a. headphone b. speaker c. key d. handheld mike
14. A (n) _____ is a device that converts electrical audio signals into sound.
a. transponder b. addressing c. speaker d. headphone
15. A (n) _____ is a radio device that includes both a transmitter and a receiver.
a. transceiver b. transponder c. affirmative d. PTT handheld mike
16. A (n) _____ is a device that responds to radio frequency signals from air traffic controllers in order to communicate an aircraft's location.
a. radio signal b. transponder c. transceiver d. aviation phonetic alphabet
17. The _____ is a system of ensuring clear communication over radio by replacing letters with words.
a. roger b. wilco c. plain English d. aviation phonetic alphabet
18. _____ is a radio proword meaning the speaker received a message.
a. wilco b. roger c. affirm d. positive
19. A code that identifies an aircraft _____.
a. phonetic alphabet b. call sign c. ICAO d. pan
20. A proword indicating urgency _____.
a. mayday b. emergency c. pan d. help
21. _____ is a radio proword meaning that the speaker's aircraft is in immediate danger.
a. mayday b. pan c. emergency d. negative
22. A proword meaning the speaker will comply _____.
a. whiskey b. done c. carry out d. wilco
23. To announce one's name or call sign _____.
a. transmit b. identify c. say d. tell
24. To wait for further information _____.
a. break b. stand by c. stop d. pause
25. To _____ something is to keep something in a particular state or position.
a. step on b. stand c. hold d. cleared
26. If someone is _____ do something, he or she can do something safely or with permission from an authority.

- a. cleared to b. permitted c. allowed d. free
27. To _____ a person is to initiate a conversation with him or her.
a. address b. call c. say d. continue
28. A _____ is a facility that provides pilots with air traffic information before, during, and after flights.
a. tower b. flight service station c. ground d. center
29. _____ is a part of air traffic control that manages traffic en route between departure and arrival.
a. ground b. approach facility c. center d. departure facility
30. _____ is a part of air traffic control that manages taxiing traffic at an airport.
a. center b. departure facility c. approach facility d. ground
31. A building in which employees direct air traffic _____.
a. control tower b. apron c. terminal d. security checkpoint
32. A _____ is an aircraft intended for non-military uses.
a. wide-body airliner b. narrow-body airliner c. civil aircraft d. feederliner
33. A (n) _____ is a way of categorizing airline tickets and their corresponding seats according to their price and relative levels of comfort and service.
a. cabin class b. economy c. business d. first class
34. A _____ is a short-haul aircraft that carries fewer than twenty passengers.
a. feederliner b. commuterliner c. business jet d. regional airliner
35. A _____ is a passenger aircraft with one passenger aisle and a cabin width of three to four meters.
a. wide-body airliner b. feederliner c. narrow-body airliner d. commuterliner
36. A _____ is a turbine engine that propels an aircraft by driving a fan.
a. turboprop b. turbine c. propel d. turbofan
37. A road that connects part of a runway _____.
a. way b. taxi c. Terminal d. Taxiway
38. A place where passengers get off or on a plane _____.
a. aircraft b. stop c. terminal d. destination
39. An area where luggage from foreign destinations is checked _____.
a. arrival b. customs c. lost d. check-in
40. A (n) _____ is the location where passengers assemble to board their plane.
a. gate b. concourse c. apron d. runway

41. A (n) _____ is a special roadway that planes use when taking off and landing.
a. runway b. taxiway c. restricted d. apron
42. A _____ is an area of the airport where passengers and their luggage are checked for dangerous objects.
a. terminal b. screener c. security personnel d. security checkpoint
43. A (n) _____ is a person who is trained to fly an aircraft.
a. engineer b. pilot c. air marshal d. cabin crew
44. A person who ensures that planes run properly _____.
a. mechanic b. pilot c. co-pilot d. flight attendant
45. A person who ensures airports/airplanes are safe _____.
a. police officers b. air marshal c. screener d. security personnel
46. A (n) _____ is a person who is trained to fly an aircraft and is the head pilot's second in command.
a. operator b. co-pilot c. flight attendant d. pilot
47. The study of the atmosphere and its weather _____.
a. meteorology b. temperature c. forecast d. wind speed
48. A _____ states what the weather will most likely do during the day or week.
a. weather report b. wind direction c. weather front d. weather forecast
49. A _____ is a border that divided two masses of air that have different densities.
a. weather forecast b. weather front c. wind shear d. weather report
50. _____ is the velocity at which the wind is blowing.
a. wind shear b. wind direction c. wind speed d. visibility

Appendix 3

Aviation Vocabulary Post-test

1. _____ is the velocity at which the wind is blowing.
a. wind shear b. wind direction c. wind speed d. visibility
2. A _____ is a border that divided two masses of air that have different densities.
a. weather forecast b. weather front c. wind shear d. weather report
3. A _____ states what the weather will most likely do during the day or week.
a. weather report b. wind direction c. weather front d. weather forecast
4. The study of the atmosphere and its weather _____.
a. meteorology b. temperature c. forecast d. wind speed
5. A (n) _____ is a person who is trained to fly an aircraft and is the head pilot's second in command.
a. operator b. co-pilot c. flight attendant d. pilot
6. A person who ensures airports/airplanes are safe _____.
a. police officers b. air marshal c. screener d. security personnel
7. A person who ensures that planes run properly _____.
a. mechanic b. pilot c. co-pilot d. flight attendant
8. A (n) _____ is a person who is trained to fly an aircraft.
a. engineer b. pilot c. air marshal d. cabin crew
9. A _____ is an area of the airport where passengers and their luggage are checked for dangerous objects.
a. terminal b. screener c. security personnel d. security checkpoint
10. A (n) _____ is a special roadway that planes use when taking off and landing.
a. runway b. taxiway c. restricted d. apron

11. A (n) _____ is the location where passengers assemble to board their plane.
 a. gate b. concourse c. apron d. runway
12. An area where luggage from foreign destinations is checked _____.
 a. arrival b. customs c. lost d. check-in
13. A place where passengers get off or on a plane _____.
 a. aircraft b. stop c. terminal d. destination
14. A road that connects part of a runway _____.
 a. way b. taxi c. terminal d. taxiway
15. A _____ is a turbine engine that propels an aircraft by driving a fan.
 a. turboprop b. turbine c. propel d. turbofan
16. A _____ is a passenger aircraft with one passenger aisle and a cabin width of three to four meters.
 a. wide-body airliner b. feederliner c. narrow-body airliner
 d. commuterliner
17. A _____ is a short-haul aircraft that carries fewer than twenty passengers.
 a. feederliner b. commuterliner c. business jet d. regional
 airliner
18. A (n) _____ is a way of categorizing airline tickets and their corresponding seats according to their price and relative levels of comfort and service.
 a. cabin class b. economy c. business d. first class
19. A _____ is an aircraft intended for non-military uses.
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20. A building in which employees direct air traffic _____.
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21. _____ is a part of air traffic control that manages taxiing traffic at an airport.
 a. center b. departure facility c. approach facility d. ground
22. _____ is a part of air traffic control that manages traffic en route between departure and arrival.
 a. ground b. approach facility c. center d. departure facility
23. A _____ is a facility that provides pilots with air traffic information before, during, and after flights.
 a. tower b. flight service station c. ground d. center

24. To _____, a person is to initiate a conversation with him or her.
a. address b. call c. say d. continue
25. If someone is _____ do something, he or she can do something safely or with permission from an authority.
a. cleared to b. permitted c. allowed d. free
26. To _____, something is to keep something in a particular state or position.
a. step on b. stand c. hold d. cleared
27. To wait for further information_____.
a. break b. stand by c. stop d. pause
28. To announce one's name or call sign _____.
a. transmit b. identify c. say d. tell
29. A proword meaning the speaker will comply _____.
a. whiskey b. done c. carry out d. wilco
30. _____ is a radio proword meaning that the speaker's aircraft is in immediate danger.
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31. A proword indicating urgency _____.
a. mayday b. emergency c. pan d. help
32. A code that identifies an aircraft _____.
a. phonetic alphabet b. call sign c. ICAO d. pan
33. _____ is a radio proword meaning the speaker received a message.
a. wilco b. roger c. affirm d. positive
34. The _____ is a system of ensuring clear communication over radio by replacing letters with words.
a. roger b. wilco c. plain English d. aviation
phonetic alphabet

45. A _____ is a surface on the leading edge of an aircraft wing that is used to adjust velocity.
- a. flap b. rudder c. slat d. spoiler
46. A (n) _____ is one of two structures attached to the fuselage of an aircraft that create the lift needed to fly.
- a. flap b. slat c. wing d. elevator
47. A _____ is a rolling part that allows a vehicle, such as an airplane, to move smoothly along the ground.
- a. tire b. landing gear c. wheel d. fuselage
48. The front part of an aircraft _____.
- a. tail b. nose c. wing d. landing gear
49. The central part of an aircraft's body _____.
- a. wings b. tail c. landing gear d. fuselage
50. Structure supporting aircraft while not in flight _____.
- a. aileron b. rudder c. landing gear d. spoiler

Appendix 4

Görüşme Formu

Sevgili arkadaşlar

Dersimizde yaptığımız çalışmaları aşağıdakileri sorular ışında değerlendirmeniz bir daha ki çalışmalara yön vermesi açısından önemlidir. Her bir soruya vereceğiniz yanıtların az 100 kelime olmasına dikkat ediniz. Vereceğiniz cevaplar dersimizin değerlendirmesine katkı sağlayacağından lütfen samimi ve gerçekçi düşünce ve duygularınızı dile getiriniz. Vereceğiniz yanıtlar sadece bilimsel bir çalışma için veri kaynağı olarak kullanılacak başka hiçbir amaçla kullanılmayacaktır. Ayrıca yanıtlarını başka kişi ya da kurumlarla paylaşılmayacak ve kimliğiniz her şekilde gizli tutulacaktır.

Öğr. Gör. Kenan BOZKURT

Cinsiyet:

Yaş:

Bölüm:

- - - Sorular - - -

1. Havacılık İngilizcesi dersinin işleniş hakkında neler düşünüyorsunuz? Bu dersin işleniş ile diğer derslerin işleniş arasındaki benzerlik ve farklılıkları nasıl açıklarsınız? (En az 100 kelime):

2. Bu dersin işleniş biçimi sizin ders içeriğini öğrenmenizi nasıl ve hangi açılardan etkiledi? (En az 100 kelime):

3. Bu dersin işleniş biçiminin;
 - a. İngilizce kelime ve terminoloji öğreniminize katkıları nelerdir? (En az 100 kelime):

b. İngilizce okuma becerilerinize katkıları nelerdir? (En az 100 kelime):

c. İngilizce yazma becerilerinize katkıları nelerdir? (En az 100 kelime):

d. İngilizce dinleme becerilerinize katkıları nelerdir? (En az 100 kelime):

e. İngilizce konuşma becerilerinize katkıları nelerdir? (En az 100 kelime):

f. Kişisel gelişiminize katkıları nelerdir? (En az 100 kelime):

4. Dersin daha etkili ve verimli olması için önerileriniz nelerdir? (En az 100 kelime):

5. Yukarıdakilerden başka görüşleriniz varsa lütfen yazınız:

Appendix 5

Etik Beyan



ARAŞTIRMA PROJESİ DEĞERLENDİRME RAPORU

Toplantı Tarihi: 07.07.2021 Çarşamba

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Üniversitemiz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Ana Bilim Dalı İngiliz dili Eğitimi yüksek lisans öğrencisi Kenan BOZKURT' un Prof. Dr. Ferit KILIÇKAYA danışmanlığında yürüteceği "*Çevrimiçi Etkileşimli Kelime Araştırmalarının Sivil Havacılık Öğrencilerinin Kelime Kavrayışına Etkisi*" başlıklı proje önerisi araştırmanın gerekçe, amaç, yaklaşım ve yöntemleri dikkate alınarak incelenmiş olup, çalışmanın fikri, hukuki ve telif hakları bakımından sorumluluğu araştırma ekibine ait olması koşulu ile etik açıdan uygun bulunmuştur.

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