GRAMMAR TEACHING BASED ON BLOOM'S TAXONOMY AND CRITICAL THINKING

Müge SAĞKOL
181113122

MASTER'S THESIS

Department of Foreign Language Education
English Language Teaching Program with Thesis
Advisor: Asst. Prof. Dr. Hakan DILMAN

İstanbul
T.C. Maltepe University
Graduate School
September, 2022

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JÜRİ VE ENSTİTÜ ONAYI

Bu belge, Yükseköğretim Kurulu tarafından 19.01.2021 tarihli "Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge" ile bildirilen 6698 Sayılı Kişisel Verilerin Korunması Kanunu kapsamında gizlenmiştir.

ETİK İLKE VE KURALLARA UYUM BEYANI

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Müge SAĞKOL

September, 2022

ÖZ

BLOOM TAKSONOMİSİNE VE ELEŞTİREL DÜŞÜNMEYE DAYALI DİL BİLGİSİ ÖĞRETİMİ

Müge Sağkol
Yüksek Lisans Tezi
Yabancı Diller Eğitimi Anabilim Dalı
İngiliz Dili Eğitimi Tezli Yüksek Lisans Programı
Danışman: Dr. Öğr. Üyesi Hakan Dilman
Maltepe Üniversitesi Lisansüstü Eğitim Enstitüsü, 2022

İngiliz dili eğitimi Türkiye'de her zaman önemli bir konu olmuştur; ancak öğrencilerin sınıf dışında İngilizce diline maruz kalmadıkları bir ortamda yabancı dil olarak öğrenmeleri ve geleneksel öğretim yöntemleri ve öğretim politikaları öğrencilerin dil öğrenme yeterliliğini engelleyen nedenler arasındadır. Bloom taksonomisinin eleştirel düşünme becerileri ile birlikte uygulandığında öğrencilerin geleneksel öğretim yöntemlerinden uzaklaşmalarına ve belirli seviyeleri kullanarak yeterli bir dile ulaşmalarına yardımcı olduğuna inanılmaktadır. Bu çalışma, Bloom taksonomisi ve eleştirel düşünme becerilerinin dilbilgisi öğretimi üzerindeki etkisini ortaya çıkarmayı amaçlamaktadır. Ayrıca, bu çalışma, eleştirel düşünme becerileri ile birlikte Bloom taksonomisine dayalı dilbilgisi öğretimi ve geleneksel dilbilgisi ile öğrenim gören öğrenciler arasında anlamlı bir fark olup olmadığını ortaya çıkarmayı hedeflemektedir. Nicel araştırma çerçevesinde uygulanan bu çalışma için deney grubu (N=15) ve kontrol grubu (N=15) olmak üzere toplam iki grup örneklem olarak kullanılmıştır. Çalışmanın başında öğrencilerin dilbilgisi yeterliklerini belirlemek amacıyla ön test uygulanmıştır. Deney grubuna 15 haftalık eleştirel düşünme becerileri ile Bloom taksonomisine dayalı dilbilgisi öğretimi uygulandıktan sonra, iki grubun arasında anlamlı bir fark olup olmadığını belirlemek amacıyla bir son test uygulanmıştır. Verilerin analizi, deney grubunun dilbilgisi yeterliklerinin geliştirilmesinde kontrol grubundan daha iyi performans sergilediğini ortaya koymuştur. Bu çalışmanın sonuçlarından elde edilen bulgular, Bloom taksonomisinin ve eleştirel düşünme becerilerinin dilbilgisi öğretiminde kullanılmasının öğretmenlerin daha üst düzey düşünme süreçlerini geliştirmelerine ve öğrencilerinin zihinsel yeteneklerini ve düşünme yetilerini geliştirmelerine yardımcı olduğunu ortaya çıkarmıştır.

Anahtar Sözcükler: Yabancı Dil Öğrenimi, Yabancı Dil Olarak İngilizce Öğretimi, Dil Bilgisi Öğretimi, Bloom Taksonomisi, Eleştirel Düşünme, Üst Düzey Düşünme Becerileri

ABSTRACT

GRAMMAR TEACHING BASED ON BLOOM'S TAXONOMY AND CRITICAL THINKING

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Maltepe University Graduate School, 2022

Teaching English has always been a significant issue in Turkey; however, learning it as a foreign language is challenging in a non-English speaking environment, where students are not exposed to the language out of the classroom; and traditional teaching methods and instructional policies are other reasons which hinder students' language learning process. Bloom's taxonomy together with critical thinking skills is believed to help learners move away from the traditional teaching methods and reach a sufficient level of language with using certain levels. The present study aims to find out the impact of using Bloom's taxonomy and critical thinking skills on grammar teaching. Besides, this current study aims to investigate whether there is a significant difference between students who were treated with grammar teaching based on Bloom's taxonomy together with critical thinking skills and students who were taught with explicit way of grammar teaching. This study has been conducted in a quantitative research design. Two groups were used as a sample for this study. The sample group consisted of the experimental group (N=15) and the control group (N=15). To identify the grammar competency of the students before conducting the research, a pre-test and a written task were implemented. After applying a 15-week treatment which is grammar teaching based on Bloom's taxonomy with critical thinking skills to the experimental group, the results of a post-test and a final written task were gathered from both groups of students to identify whether there was a difference between their pre and post test scores. The analysis of data revealed that the experimental group outperformed the control group in the development of their grammar competency. In accordance with the findings obtained from the results of this study, using Bloom's taxonomy and critical thinking

skills in grammar teaching helps teachers to develop higher levels of thinking process and improve their students' intellectual ability and thinking capacity.

Keywords: Foreign Language Learning, Teaching English as a Foreign Language, Grammar Teaching, Bloom's Taxonomy, Critical Thinking, Higher-order Thinking Skills

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ABBREVIATIONS

EFL **:** English as a Foreign Language

GTM **:** Grammar-Translation Method

DM **:** Direct Method

ALM **:** Audio-Lingual Method

CLT **:** Communicative Language Teaching

CEFR : Common European Framework of Reference for Languages

1. INTRODUCTION

This chapter presents some background information about the study titled as 'Grammar Teaching based on Bloom's Taxonomy and Critical Thinking'. In this regard, the background of the study, the statement of the problem, the research questions that are aimed to be answered, the purpose and the significance of the study, assumptions, limitations, and definitions of key terms are provided.

1.1 Background of the Study

In the world of globalization and technology, English language has increasingly become the medium of communication in every aspect of life and the demand for using English has been increasing all over the world. Teaching and learning English has gained more importance to cope with international demands for language skills. In Turkey, English is considered as a foreign language and the demand for learning has been rising. Therefore, learning English has become a crucial part of the education system.

It is generally accepted that there are four main language skills in learning a foreign language, which are listening, speaking, reading, and writing. In addition to these main language skills, grammar and vocabulary are also important components for the mastery of all four skills. In order to communicate effectively in the target language, using accurate grammar provides the learners to organize words and ideas in a comprehensible form (Alghanmi & Shukri, 2016). Grammar not only affects how units of language are combined but also affects their meaning. The role of grammar teaching is a controversial issue which is believed to be one of the least understood components of a language. This controversy focused on teachers' different beliefs and ways of teaching grammar (Thornbury, 2002). Every teacher has a different way of teaching and belief. While the grammar-translation method was commonly used in the past, there is a tendency among new generation in using a communicative approach to teach the target language. Teaching practices in grammar also vary among teachers based on their beliefs. There has been a considerable focus of attention between explicit grammatical knowledge and implicit grammatical knowledge and how they affect language development. Explicit grammar instruction is considered as a main method in traditional grammar teaching, followed by a grammar-translation method. It is defined as focusing

on presentation of language forms, explaining the grammar rules, and practicing the structures through drilling. On the contrary, implicit grammar instruction is defined as teaching the grammatical structures in an accidental manner, with no awareness of what has been taught. Zeicher & Tabachnick (1981) states that a teacher's teaching beliefs have an impact on his/her classroom behaviour and teaching practices. Teaching practices will therefore affect the language teaching methods and the learners' results in language competency. However, there is still no certainty about which impact these different practices have on the grammatical knowledge of students (Van Vooren et al., 2012). Therefore, it is significant to determine the appropriate method of teaching based on students' levels to improve their language learning competency and activate student learning by using a well-designed teaching practice. As it is observed in the previous policies that teachers' way of teaching grammar directly affects students' language learning proficiency.

In the 21st century, teaching higher-order thinking skills such as analysing, evaluating, and creating together with critical thinking skills is also another important goal of educators. Critical thinking is defined as a mental process that promotes reasoning, analysing, and evaluation. It is a very complex and higher-order thinking skill which includes a variety of responses and functions as a facilitator. Additionally, promoting critical thinking in classrooms offers learners many benefits who are in need of deep understanding and it provides students with many benefits which are improving the quality of our thinking and understanding the world to evaluate the given facts (Hill, 2013). In accordance with the significant role of critical thinking in education, it has recently started to be highlighted in the field of teaching English as a foreign language and grammar teaching.

Bloom's taxonomy has also maintained its important place since the 1950s in the field of education. It has been one of the most widely used sources by researchers and educators in order to organize well-designed learning objectives (Seddon, 1978; Forehand, 2005). Even though the original Bloom's taxonomy has been revised through time, Bloom's revised taxonomy still focuses on learning by classifying instructional outcomes in a certain way. In the light of the background information provided above,

the impact of using Bloom's taxonomy integrated with critical thinking skills on students' grammatical competence constitutes the base of this study.

1.2 Statement of the Problem

Teaching English has always been a significant issue in Turkey; however, learning English as a foreign language is very difficult in a non-English speaking environment where students are not exposed to this language. Ineffective educational policies together with traditional teaching methods and instructional activities can be considered as other main reasons of failure in students' language learning competency (Öztürk, 2019). Due to the increasing need for English language usage in academic studies and social relationships, it is very important to learn the language accurately. It is believed that learners can use the target language accurately with the help of accurate grammar. Bloom's taxonomy enables learners to move away from the traditional teaching methods and reach a sufficient level of language using certain levels which are low-order thinking skills (remembering, understanding, applying) and high-order thinking skills (analysing, evaluating, creating). In addition to following the levels of Bloom's taxonomy, the importance of critical thinking needs to be raised awareness in the context of language teaching.

Another problem in language learning is that the outcomes of language teaching do not completely match the objectives set in the curriculum. One of the causes of this failure is not implementing or not knowing how to integrate critical thinking skills in English lessons. This situation results in the need of raising awareness of critical thinking skills in teaching English as a foreign language and how to integrate them into the lessons. Some empirical studies (Barjesteh & Vaseghi, 2012; Mirioğlu, 2002; Keihaniyan, 2013) have shown that there is a strong relationship between the integration of critical thinking strategies into language classrooms and language learning competency. Therefore, the search for an effective model in teaching English grammar to preparatory school students by integrating Bloom's taxonomy and critical thinking exercises into language classrooms and the case of little research conducted to find out whether there is any correlation between students' success and the use of Bloom's taxonomy and critical thinking in grammar teaching have led the researcher to carry out a study in this field.

1.3 Research Questions

The following research questions are addressed in this study:

- Does using Bloom's taxonomy and critical thinking skills in grammar teaching have an impact on students' language learning proficiency?

- Is there a significant difference between using critical thinking integrated with Bloom's taxonomy in teaching grammar and explicit grammar teaching?

1.4 Purpose of the Study

This study seeks to explore the impact of using Bloom's taxonomy and critical thinking skills on teaching grammar. Firstly, it aims to find out whether there is a correlation between using critical thinking skills together with Bloom's taxonomy in grammar teaching and students' grammatical competence. Secondly, it investigates whether there is a significant difference in students' grammatical competence between using critical thinking skills together with Bloom's taxonomy and explicit grammar teaching. The final goal of this research is to clarify if there is a positive impact of using Bloom's taxonomy and critical thinking skills in grammar teaching on students' grammatical competency.

1.5 Significance of the Study

The concept of 'teaching' is considered as a puzzle including a huge number of unique pieces and even without one missing piece, the puzzle cannot be completed since each piece of the puzzle is related to the other. Therefore, it is significant for a teacher to decide how to convey information to the students and which approach and method to use. The aim of teaching is not just about meeting the demands of students. It should also be to teach them how to set educational goals to reach certain standards of learning and achieve them. One of the ways of setting certain goals is following a specific set of objectives to reach the target level of language.

Bloom's taxonomy is a model of teaching that categorizes the levels of learning according to six cognitive levels. While the lowest levels are remembering, understanding and applying; higher-level of thinking consists of analysing, evaluating

and creating during the language learning process. Therefore, it is essential to integrate this taxonomy into language teaching since it helps educators identify certain learning objectives and develop plans to meet the demands of learners. In addition, it is seen that critical thinking is one of the new concepts in EFL since there is little research having been carried out on how to integrate critical thinking into EFL instruction for better teaching and learning.

The significance of this study is to improve our understanding of the correlation between using critical thinking skills together with Bloom's taxonomy in grammar teaching and students' grammatical competence. This knowledge helps teachers make better instructional decisions while teaching grammar to EFL students, which could help and assist many teachers and educators how to teach in an effective way. These research findings will contribute to the areas of research concerning teaching and learning in respect of grammar. In addition, this research will help English language teachers working in non-English speaking environments to reconsider their methods and techniques of teaching grammar. Data gathered in this study and the results will also shed light on differentiating grammar teaching from a traditional way of teaching and providing a more effective language education in the classroom environment.

1.6 Assumptions

In this study, it is assumed that using critical thinking skills together with Bloom's taxonomy in grammar teaching has a positive impact on students' language learning competency and there would be a significant difference between traditional grammar teaching and using Bloom's taxonomy and critical thinking skills in teaching grammar.

1.7 Limitations of the Study

This study has some limitations due to the limited data it contains. One of them is the limited number of participants who take part in this study. Due to the experimental nature of research, it is limited to the preparatory school students of a foundation university located in Istanbul. To make more reasonable standardization, only two classes will be analysed which means that there is a limited number of students which reduces the generalizability of results about the whole students' learning English as a foreign language in non-English environment settings.

Another limitation of the study is time constraints. The study is limited to 14 weeks. The reason of this limitation is the school curriculum. As each term consists of 14 weeks, data can only be collected during this teaching period.

The third and final limitation that needs to be taken into consideration is that students have a range of variation in their English language performances depending on their previous educational backgrounds. In each classroom, there are students who graduated from private schools which provide more hours of English language instruction than public schools. Those students may show better performances in the target language.

1.8 Definitions of Key Terms

English as a foreign language (EFL):

It refers to a situation in which students have little or no authentic opportunity to demonstrate or use the language in the community they live (Harmer, 2007).

Grammar:

It refers to any systematic account of the structure of a language, the patterns that it describes, and the branch of linguistics concerned with such patterns (Matthews, 2014).

Prescriptive grammar:

It aims to prescribe what is judged to be correct rather than to describe actual usage (Matthews, 2014).

Descriptive grammar:

It is a non-judgemental grammar that does not have the aim of determining the good or bad language, correct or incorrect structures, or grammatical or ungrammatical forms (Hinkel, 2018).

Grammatical competence:

It refers to the unconscious knowledge of grammar that provides a learner to use and understand a language (Nordquist, 2020).

Communicative competence:

It is a speaker's knowledge of the total set of rules, and conventions governing the skilled use of language in a society (Matthews, 2014).

Performance:

It is an actual use of language in concrete situations (Matthews, 2014).

Incidental learning:

It is defined as an interpersonal interaction by sensing the organizational culture such as trial-and-error experiment (Marsick & Watkins, 2001).

Explicit teaching:

It is an approach in which students receive information about a language directly from the teacher or the course book (Richards and Schmidt, 2013).

Implicit teaching:

It is a type of instruction that aims to interact learner's attention and avoid metalinguistic discussion by minimizing any interruption to the communication of meaning (Doughty & Williams, 1998).

Bloom's taxonomy:

It is a model of classifying thinking according to six cognitive levels of complexity. The lowest three levels are: remembering, understanding, and applying. The highest three levels are: analysing, evaluating, and creating (Forehand, 2010).

Factual knowledge:

It is defined as the terminologies, specific details, and basic elements within any domain (Kratwohl, 2002).

Conceptual knowledge:

It is defined as knowing the interrelationships and functions among the details and elements that constitute a larger structure (Kratwohl, 2002).

Procedural knowledge:

It is a knowledge of subject-specific skills and algorithms, subject-specific techniques and methods, and criteria for determining when to use the right procedures (Kratwohl, 2002).

Meta-cognitive knowledge:

It is defined as strategic knowledge, knowledge about cognitive tasks and self-knowledge (Kratwohl, 2002).

Critical thinking:

It is skilled and active interpretation and evaluation of observations and communications, information and argumentation (Fisher, 2011).

Analytical thinking:

It is defined as the ability to think in a thoughtful way in order to solve problems, analyse data, and recall and use information (Amer, 2005).

Creative thinking:

It is a type of thinking that makes people be able to sense problems, search for potential solutions, draw conclusions, evaluate, and discuss results with others (Torrance, 1969).

Reflective thinking:

It is an active, constant, and careful consideration of any belief or assumed form of knowledge in the light of the grounds that promotes it and the further consequences to which it tends (Lee, 2005).

2. LITERATURE REVIEW

This chapter deals with language teaching and grammar teaching including the nature of grammar, approaches to grammar teaching, and the importance of grammar teaching in English Language Teaching. Following this, Bloom's Original Taxonomy, the reasons which led to the revision of the taxonomy, the detailed information about its structure, and the application of it in language teaching will also be discussed. In addition, the concept of critical thinking in teaching English as a foreign language will be introduced.

2.1 Language Teaching

Language teaching was accepted as a profession in the 20th century and it was developed during the early part of the 20th century by seeking to develop principles and procedures for the design of teaching methods and materials. The field of language teaching has been subject to tremendous fluctuations and dramatic changes over the years.

Prior to the 20th century, the classical languages, first Greek and then Latin, were used as lingua francas. These languages were taught in higher institutions all over Europe to promote their speakers' intellectuality. They were also used in other fields like philosophy, theology, politics, and business. It is assumed that the language teachers used direct approaches to transform the form and meaning of the target language and they used texts written by hand or dictionaries listing correspondent words without language textbooks. The language teaching methodology had remained between two approaches: one type of approach focusing on using a language (speaking and understanding) and the other type of approach focusing on analysing a language (learning the grammatical rules). During the 17th century, the emphasis on language teaching focused on analysis rather than utility. Some of the techniques that were used are using imitation, repetition, practicing reading and speaking, and teaching language through pictures (Celce-Murcia, 2001). With the entrance of "modern" languages into the curriculum of the European education system in the 18th century, the same basic methods used for teaching Latin were used to teach these languages. Textbooks included abstract grammar rules, lists of vocabulary, and sentences for translation. The aim was not focusing on speaking the foreign language and oral practice was restricted

only to reading the sentences learners had translated aloud. These translated sentences were formulated to clarify the grammatical system of language and there was no relevance with the real communication. In the mid-nineteenth century, the content of the textbooks was organized based on grammar points. Grammar points were explained by listing the rules and clarified with example sentences while oral production was limited (Richards & Rodgers, 2001). This approach in language teaching led to the Classical Method which is also known as the Grammar-Translation Method. This method was mainly initiated to study foreign languages in the 19th century. The Grammar-Translation Method focuses on reading, translation and analysis of grammar rules, with form over meaning in foreign language grammar teaching. While accuracy is emphasized with translation from the target language, the teacher has a role as the authority to control the accuracy and manages deductive grammar explanations. As there is very little interaction among students, oral production skills in the target language are neglected (Johansen, 1999). Since the Grammar-Translation Method was not very effective in preparing students to use the target language communicatively, the Direct Method gained popularity. During the 19th century and the beginning of the 20th century, increasing trade, travel, commerce and science in Europe aroused interest in speaking and this reviving interest led the language teachers to establish the Direct Method, which is also called as the Natural Method. It receives its name from the fact that the use of mother tongue and translation are not permitted. The teacher's goal is to teach how to communicate in the target language directly and the focus is on oral production and everyday language; thus, conversational materials and idioms are used. Grammar is mostly taught inductively and explained in the target language (Larsen-Freeman, 2000). During the 1940s in the middle of the 20th century, the Audio-Lingual Method was proposed by the principle that a language is, first and foremost, a system of sounds which is used for social communication and writing is a kind of system which is used for recording the spoken language. Hence, the aim of the Audio-Lingual Method is to use the target language communicatively and the emphasis is on oral production. New vocabulary and structural patterns are conveyed through dialogues and dialogues are learned with imitation and repetition. Thus, drills are mainly used to learn these patterns (Carroll, 1963). There is no explicit grammar instruction in this method as the lessons are built on drills where the students have little control of their own output.

Students infer the language rules through practice. Thus, the approach to grammar teaching is mostly inductive. Despite having learnt languages through the Audio-Lingual Method, students' not being able to readily transfer the habits they had mastered in the classroom to communicative use outside resulted in the emergence of a new method which is the Silent Way in the 1970s. The basic principle of this method is 'Teaching should be subordinated to learning'. In other words, it is believed that teaching should serve the learning process rather than dominate it. The purpose of using this method is to help students use the language for self-expression and develop their own criteria for correctness. The teacher, therefore, provides them with what they really need to promote their learning and set up learning situations which focus their attention on new structures. When the teacher presents language structures in this way, learners learn the rules of grammar through a process of induction (Larsen-Freeman, 2000). The belief about the reason of inefficiency in language learning was thought due to setting up psychological barriers to learning and not using the full mental powers that we have and these barriers need to be 'desuggested' so as to use our capacity better. Suggestopedia was developed to help students overcome their psychological barriers to learn with eliminating the feeling through music rhythm and a comfortable environment. The purpose of this method is to help students feel relaxed and enjoy during the learning process. Students learn the target language both from direct and indirect instruction. Various grammatical information that is changed regularly are presented in the language environment of posters and decoration (Harmer, 2007). In the early 1970s, a new education model was developed which is called Community Language Learning that encourages teachers to view their students as 'whole' persons. The aim of this method is to teach students how to use another language communicatively and tries to make them get more responsibility for their own learning and make them learn about their own learning (Larsen-Freeman, 2000). Krashen (1981) states that the tasks of foreign language learners are to understand the language sound system, assign essential meanings to individual lexical units and form a basic grammar. In order to reduce the foreign language learning anxiety of the students, the Total Physical Response method was developed. This method is based on listening and is linked to physical actions that are designed to support comprehension of basic items. The use of commands is the main teaching technique in this method. Grammar is

learned by induction instead of explicit instruction. Students acquire the grammatical structure by being exposed to spoken language input and decoding the messages to discover their meaning (Asher, 1969). Since the last decade of the 20th century, the Task-Based Approach, which has roots in Communicative Language Teaching has gained popularity in the field of ELT. The teaching process is mainly done through communicative tasks so as to completely acquire the target language in a natural context. Students complete authentic tasks using their target language which leads to fluent communication with accomplishing each task and reducing immediate mistake correction. At the end of each task, teachers provide recordings or texts of familiar contexts for grammar teaching. Students are most likely to see grammar rules in use, learn them explicitly, and practice the grammatical structures (Richards & Rodgers, 2014). In the late 1970s and early 1980s, the observations on the requirement of communicative competence more than linguistic competence contributed to a change in the field from a linguistic-centred approach to a Communicative Approach. This approach aims to make students communicate in the target language by using real-life situations. The content of language lessons includes semantic notions and social functions, not only linguistic structures and the teacher's goal is to have students become communicatively competent (Celce-Murcia, 2001). When grammar teaching is considered, the Communicative Approach focuses on communicative competence instead of mastery of grammatical structures (Chang, 2011). There is no doubt that the Communicative Approach dominates language teaching since it both makes language learning more intriguing and helps learners develop not only their linguistic but also communicative competence.

Each of the different approaches has contributed new concepts to language learning. Therefore, educators should take some issues into consideration in teaching practice in order to apply them in an effective and efficient way. These are who the learners are, their current proficiency level of language, the sort of communicative needs, and the circumstances where the target language is used. It should be noted that no single approach or method guarantees successful results in language learning.

2.2 Grammar Teaching

In terms of language teaching, grammar instruction takes an important role in literature. Teaching of foreign languages emphasized the studying of grammar rules and their application in translation exercises in medieval times and later on teaching of Latin and Greek languages. Influential linguists carried on considering grammar as the essential component of language. The Audio-lingual language teaching method was developed after the combination of structuralist theories with behaviourism and the transformational generative grammar which is a set of grammar rules used for producing the grammatical sentence of a language shifted language teaching towards more cognitive and analytical methods. However, a mastery of the grammatical system of the target language together with its phonology, lexis and communicative function was constantly the main aim of language teaching (Ur, 2011).

It is known that there is a considerable number of techniques and methodologies used to teach a language to fulfil the learners' needs such as developing skills, coming through negative factors or supporting the study of language. Language teachers use different ways in grammar teaching. It is essential to state that they need to adjust their ways of grammar teaching according to students' needs. That's why, it is significant not to ignore the importance of grammar teaching in language learning.

2.2.1 The definition of grammar

Grammar is defined in the Oxford Concise Dictionary of Linguistics (2014) as any systematic account of the structure of a language, the patterns that it describes, and the branch of linguistics concerned with such patterns. Grammar in the widest sense was a set of rules that is said to be internalized by members of a speech community and this internalized grammar is later called I-language (Matthews, 2014). It is generally considered as a set of rules for choosing words and putting them together to make meaningful sentences. It is a fact that each language has grammar. If a language is seen as a building, the words should be regarded as bricks and the grammar as the architect's plan. No matter how many millions of bricks you have, you cannot construct a building without a plan (Chang, 2011). Therefore, it can be stated that even if a person knows

countless words, he cannot communicate in the target language without knowing how to put them together.

2.2.2 The types of grammar

Linguistics is the scientific study of language and its structure that consists of the study of grammar, syntax, and phonetics. With regard to studying grammar, there are two fundamental approaches that are prescriptive grammar and descriptive grammar.

2.2.2.1 The prescriptive grammar

Prescriptive grammar prescribes rules on how a language should be used by the speakers. It includes a set of rules teaching the speakers the most accurate manner to use the language and highlights what should be used and what type of language should be avoided so that a speaker can use language in a very proper and correct way. It mainly focuses on standard forms of grammar and syntactic structures (Hinkel, 2018). The term prescriptive grammar, also called as traditional grammar, refers to the set of prescriptive rules and concepts about the language structure and is mainly based on the principles of Latin grammar. Theories are originated from ancient Greece and Rome that gained popularity in the 18th century before the appearance of comparative grammar. It uses old language as a model and the emphasis is on the written language, not oral production. The focus of attention is not on meaning, but on surface structure. The main benefit of applying prescriptive grammar in teaching is that it provides learners a basic understanding of the structures of language (Xia, 2014). The objections to prescriptive grammar are about not working as a theory of English structure, and not as a set of conventions to describe educational usage. There are some examples of prescriptive grammar.

- In English, ‘less’ is used with mass nouns (‘less air’) and ‘fewer’ is used with countable nouns (‘fewer biscuits’).
- In English, infinitives should not be split (‘e.g. We want truly to understand English grammar’) instead, it should be used as ‘We truly want to understand English grammar’.

2.2.2.2 The descriptive grammar

Another type of grammar is descriptive grammar including rules that are made according to the daily usage of the language by the speakers. It focuses on a set of rules based on how they are actually used, instead of how they should be used. Descriptive grammar does not have an aim of determining the correct or incorrect grammatical structures (Leech, Deuchar, & Hoogenraad, 2006). While prescriptive grammar is used in schools, descriptive grammar is studied by linguists, and researchers in order to find out how the grammar of a language is actually used in various contexts. According to Tamasi & Antieau (2014), descriptive grammar deals with how native English speakers actually communicate in daily life and it focuses on describing the English language as it is used. That's why, there is no right or wrong way to use the language. There are some examples to clarify how descriptive grammar works.

Some native speakers say:

'I ain't got nothing to say' instead of 'I have not got anything to say'.

'I am faster than her' instead of 'I am faster than she'.

'He graduated English language program' instead of 'He graduated from English language program'.

Descriptive and prescriptive grammars are two different approaches to grammar in a language. While descriptive grammar is non-judgemental, prescriptive grammar attempts to impose certain accurate use of language in order to reach the accepted standard of the language.

2.2.3 Approaches to grammar teaching

Teaching grammar in English as a Foreign Language (EFL) has an important place to achieve linguistic competence. However, whether grammar should be taught deductively through a formal presentation of grammatical rules or inductively through natural exposure to meaningful language use is one of the most controversial issues regarding language learning (Nassaji & Fortos, 2011).

2.2.3.1 The deductive approach

There are two main approaches to grammar teaching: the deductive approach and the inductive approach. The deductive approach derives from deductive reasoning which works from general to specific. First, rules, principles, concepts, or theories are presented, and then they are used in examples. It is also known as rule-driven teaching. In the deductive approach, grammar rules are explicitly presented to the students and then related examples are provided to practice the rule. When learners comprehend the rules, they are asked to apply the rules in various examples of sentences. Eisenstein (1987) suggests that learners have their own control during practice and have less anxiety about drawing an incorrect conclusion about how the target language is functioning. Rule-explanation, translation, doing a worksheet, and self-study grammar are some possible activities in the deductive approach (Silvia, 2004).

2.2.3.2 The inductive approach

On the other hand, the inductive approach is student-centred as compared to the deductive approach and makes students get involved in the target language. Teachers present examples at the beginning and then generalize rules from the provided examples. Knowing that students can find out the rules from given examples by themselves increases students' motivation and makes them more enthusiastic about the learning process instead of being passive learners (Ke, 2008).

Explicit and implicit approaches to grammar teaching are two other controversial instructional methods that can also support each other in a balanced way in language learning. The concept of 'explicit learning' and 'implicit learning' was first proposed in 1967. While 'explicit learning' refers to learning grammar with a process conscious and controlled method, 'implicit learning' refers to unconscious learning.

2.2.3.3 Explicit grammar teaching

Explicit grammar instruction is regarded as a rule-governed practice that involves memorisation. The aim of this instruction is to teach the learner accurate speech production by using accurate grammatical structures. Explicit rules in grammar are provided in order to formulate correct sentences (Ling, 2015). The teacher aims at helping students to understand how the target language works by explaining rules, and

giving corrective feedback (Cutrone, 2016). According to Ellis (2009), explicit instruction can be defined as being made aware of language rules during the language learning process. He also mentioned a number of investigations into the effectiveness of instruction and error-correction and it can be concluded that explicit type of instruction is more effective than implicit instruction and the effect of this type of instruction on language learning is everlasting. He added that form-focused instruction can help learners develop their language learning by helping build their linguistic output. Ling (2015) defines explicit grammar teaching as learning the grammatical rules purposeful in order to use language efficiently and accurately. It is a main method in traditional grammar teaching that is a representation of the Grammar-Translation Method. Explicit grammar teaching provides students in-depth comprehension of the grammatical items. Moreover, conscious learning helps learners to become aware of the problems or weaknesses they have in the target language. It also helps learners to evaluate the efficiency of the instruction and feedback provided by the teacher (Klein, 1986). On the one hand, Batstone & Ellis (2009) assert that explicit grammar instruction, which helps to raise awareness of the grammatical rules of the language, is essential for learners' linguistic development as it leads to the self-realization of their own errors. Hence, this causes learners to reconstruct their own understanding of grammatical structures. On the other hand, Krashen (2008) claims the ineffectiveness of explicit grammar instruction because students have shown to be capable of acquiring grammatical structures implicitly through repeated exposures to input, without being aware of the rules.

2.2.3.4 Implicit grammar teaching

Unlike explicit teaching, implicit grammar teaching is considered as a teaching approach that involves learning tasks in which learners are presented with language context with a focus on meaning and expected to infer the grammatical rules from the content (Ellis, 2009). Similarly, Doughty & Williams (1998) define it as an instruction purpose of which is taking students' attention and avoiding from any intervention to sustain meaningful interaction in the target language. Brown (2007) suggests that it is also called incidental learning. Implicit grammar instruction provides learners communicative samples of grammatical structures and helps students understand the logic behind it. It is believed by the proponents of implicit instruction that providing

students target language samples is sufficient to understand the rationale behind the linguistic forms to use them in their target language practices (Cutrone, 2016). The aim of implicit instruction is not equipping students with metalinguistic knowledge which is the aim of explicit instruction, but making students acquire language forms incidentally without paying attention to learning them (Ellis, 2015). Moreover, implicit instruction provides students exposure to authentic language in communicative tasks in meaningful contexts to help them learn and use the target language. A teacher does not often involve in the process and language is considered only as a medium to achieve meaningful communication (De Graaff & Housen, 2009).

The correct usage of grammar is accomplished when learners are capable of using accurate grammatical structures in an appropriate context (Hedge, 2001). However, the question of whether grammar should be taught in an implicit or an explicit way is still a topic that is being debated in the field of teaching English as a foreign language. This depends on many factors, including the knowledge of the teacher and the students' proficiency level in the target language.

It can be seen that there may be no single best approach to grammar teaching that would be suitable for various types of learners that a teacher can come across. Nonetheless, when a teacher becomes familiar with different approaches to grammar teaching, it can provide a teacher to apply the most effective blend of features that each approach offers. What is more, being familiar with a variety of approaches can bring about recognition which most of the approaches share mutual features of an eclectic view of grammar teaching.

2.2.4 The place of grammar in earlier approaches and methods

The approaches and methods in teaching grammar have emerged over the decades and each approach and method has its own advantages and disadvantages. Richards and Rodgers (2001) compile the approaches and describe the place of grammar in earlier methods and approaches.

In Grammar-Translation Method (GTM) (19th to mid-20th centuries), grammar rules are taught explicitly, and language forms are paid attention to. However, there is a lack

of communicative practice and translation is relied on. Due to the emphasis on reading and translating texts, it leads to not being able to read in learners' first language. In the first part of the 20th century, Direct Method (DM) was introduced and grammar is introduced with inductive presentation such as beginning the lesson with dialog or a story in the target language of using visuals to convey meaning. Learners deduct the rules from linguistic forms in the target language. In Audiolingual Method (ALM) which emerged between the 1950s and 1970s, drills are used in order to reinforce grammatical patterns; however, repeated exercises reduce cognitive engagement. ALM and DM are similar to each other in terms of grammar teaching practices. It is believed that students should be taught the language directly without explaining some of the words or grammar rules. However, Audio-lingual Method differs from Direct Method by not focusing on teaching vocabulary. Instead, the teacher uses drills for grammar teaching through the memorization of forms. In ALM, there is no explicit grammar instruction, just simply memorized forms (Dalil & Harrizi, 2013). Then, the Cognitive Approach in the 1970s emphasized the importance of grammar in language learning. This approach suggests grammar as a must-teach component no matter how it is taught, either inductively or deductively. There is an emphasis on analysing structure at the expense of communicative practice. In Natural Approach (the 1980s), even though many adult learners are in need of grammar instruction, it is not overtly taught. In other words, little attention is given to grammar and the lack of teaching grammar in this approach has led to serious problems for students' writing and speaking performances. In the 1970s, Communicative Language Teaching (CLT) emerged and it still preserves its popularity today. Communication is the main aim of instruction in this approach and the emphasis is on meaningful interaction. However, focusing on communication results in ignoring grammar and emphasis on fluency at the expense of accuracy may lead to not achieving correct grammar. The lack of grammar exercises has resulted in students' not being able to speak the accurate and meaningful language (Silvia, 2004).

2.2.5 The importance of grammar teaching in English language teaching

Grammar teaching is an essential aspect of foreign language teaching and should not be ignored since accurate understanding of the language structures is one of the most important parts of this learning process. Tabbert (1984) suggests that the effort can be

spent on convincing believers who are against grammar teaching about the useful role of grammar in language teaching. Grammatical knowledge must be acquired so as to be able to speak a language effectively and to be able to express what people really want to mean. Learners of a foreign language benefit from learning grammar skills in order to organize their words and make meaningful sentences; hence, they should study grammar to be effective language users. In addition, being more competent in grammar will provide learners to perform better in speaking and writing skills. Proper use of grammar also helps learners to make clear sentences to be understood adequately. Tabbert (1984) emphasized the significance of grammar by giving examples of frequently confused structures such as 'lie' and 'lay', 'who' and 'whom', saying 'infer' instead of 'imply', using double negatives and these mistakes prove that language learners need to study grammar. Therefore, it can be concluded that speech gets meaningless without grammar in order to establish meaningful communication. Additionally, grammar will enable learners the language competence how to combine words in order to create sentences. When grammar is taught accurately, it guides learners to use the language appropriately. Azar (2007) emphasizes the importance of teaching grammar by highlighting the similarity with the fabric. It is considered as the fabric that is created by weaving. He added that it helps learners for the discovery of the nature of language and we would only have individual words and sounds to communicate meaning without grammar. Ellis (2006) asserted that grammar teaching is so significant in language teaching that it includes instructional techniques that help learners to understand the metalinguistic of a language and process it in comprehension and production in order to internalize it. Richards and Renandya (2002) suggested two good reasons for teaching grammar. One of them is comprehensibility. Knowing how to use certain structures enables us to communicate common types of meaning in a successful way. Without these accurate grammatical structures, it is difficult to form comprehensible sentences. Therefore, it is important to teach grammar well. The second reason is acceptability. A person who forms inaccurate structures may not be taken seriously in social environments and even they can be regarded as uneducated. Thus, learners need a high level of grammatical correctness. Azar (2007) states the benefits of grammar teaching as helping students gain an understanding of grammar concepts such as subordination and coordination; concepts of expressing time relationships with the

use of verb forms, concepts of nouns and adjectives, subjects and verbs, clauses and phrases. It can be noted that grammar skills will provide learners to realize parts of a language such as verbs and nouns. Mulroy (2003) agrees on the importance of grammar teaching as stating that learners who understand the concepts of language have an advantage over other learners. As grammar is considered as a significant element of language learning, it has played an important role in the mastery of language learning. Without grammar knowledge, all language skills such as listening, speaking, reading and writing cannot be improved. Grammar helps people express their ideas and messages meaningfully (Sun, 2017). It can be concluded that grammar teaching cannot be ignored, rather it should take an important role in language teaching. Students can improve their proficiency in English with a good knowledge of grammar. Therefore, foreign language teachers should reconsider the current conditions of neglecting grammar teaching and seek for grammar teaching methods in order to promote students' English proficiency level.

2.3 Bloom's Taxonomy

The taxonomy of educational objectives was pioneered by Benjamin Samuel Bloom with the hope that it would reduce the labour of overwhelming work of preparing assessments. To help in his effort, he met with a group of educators who had faced with similar problems. They agreed to make a contribution to make a plan by attending conferences between 1949 and 1953. Their final draft was developed in 1956 under the title of The Taxonomy of Educational Objectives: The Classification of Educational Goals, which is also called as Bloom's taxonomy based on Benjamin Samuel Bloom's precious effect on teaching and learning processes (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). Thereafter, this is referred to as the original taxonomy. B. S. Bloom considered the original taxonomy as beyond the measurement tool. He pointed out that it could function as a common language about learning objectives to help communication among people, a basis for determining the standards of a particular course or curriculum, and a general view of the variety of educational possibilities (Krathwohl, 2002).

Bloom's taxonomy is a classification system that is used to define and distinguish different levels of human cognition which are thinking, learning, and understanding. It

classifies thinking according to six cognitive levels of complexity. The levels have been described as a stairway which leads teachers to help their students to climb to a higher level of thought. The taxonomy is hierarchical and each level is followed by a higher level (Forehand, 2005).

Originally developed as a method used for classifying educational goals for the performances of students' evaluation, Bloom's taxonomy has gone through changes and has been revised throughout the years and is still used in education. The taxonomy was originally created with the intention of focusing on three main domains of learning which are cognitive, affective, and psychomotor. The cognitive domain focuses on intellectual skills such as critical thinking, problem-solving, and creating a knowledge base. The affective domain focuses on the attitudes, values, interests, and appreciation of learners. The psychomotor domain involves the ability of learners to physically accomplish the tasks and perform movements and skills (Coffey, 2008). In spite of the intention to address all three domains, Bloom's taxonomy applies merely to acquiring knowledge in the cognitive domain that includes intellectual skill development. The reason for applying Bloom's taxonomy for educational purposes is that it focuses on an assessment by levelling the cognitive domains and ensuring consistency. In this sense, Bloom's taxonomy is a great convenience in making effective objectives, and using the goals of a course in order to determine the appropriateness of tasks (Krathwohl, 2002). Thus, it can be noted that the taxonomy enables teachers to notice the relationship between the desired goals and the observed goals.

2.3.1 Bloom's original taxonomy

The original Bloom's taxonomy was published by Benjamin Samuel Bloom and his associates in 1956 (Bloom, et al., 1956). It contained six major levels in the cognitive domain which are knowledge, comprehension, application, analysis, synthesis, and evaluation. It was intended to enable the classification of educational objectives, particularly to help teachers, administrators and researchers to discuss curricular and evaluation problems (Bloom, 1994, p.10).

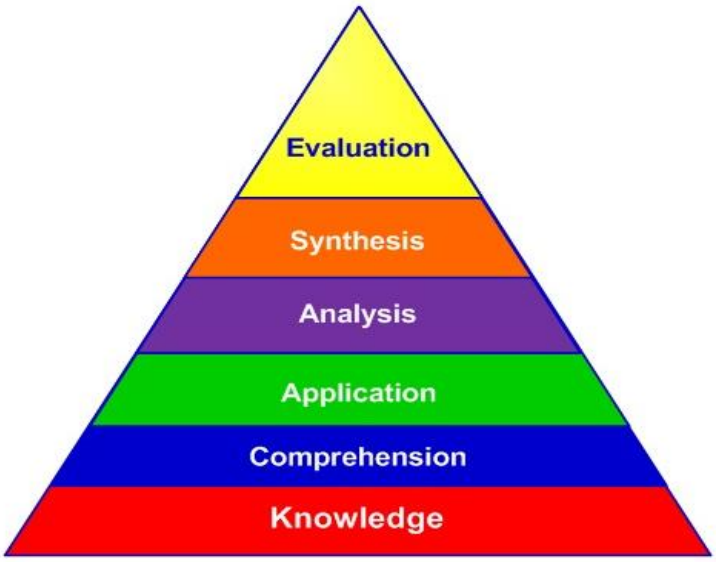


Figure 1. Bloom's Original Taxonomy (Armstrong, 2016)

The first level in the taxonomy emphasized knowledge acquisition and it includes the recall of information. The second level is comprehension level and it refers to a type of understanding that the student knows what is being communicated. Students classify, describe, identify, and explain information in this level. The level of application refers to the use of abstractions in particular situations. Students demonstrate, interpret and use the information that they have learnt to solve the problems. The application level is followed by the level of analysis. In this level, students identify components by comparing, contrasting, distinguishing, and examining the information with the previously learnt one. In the subsequent level which is the level of synthesis, students put the elements and parts together in order to make a new product that requires creativity and originality. Students argue, defend, support, and evaluate their opinion based on the information that they have learnt. The highest level in the original model of Bloom's taxonomy is the level of evaluation which enables students to make judgements in terms of evidence and external criteria. At this level, teachers help students understand the ideas that have complexity in order to make them realize how concepts are logically consistent and developed. Bloom's original taxonomy has been used to classify curricular objectives and test items so as to indicate the breadth or lack of breadth of the objectives and items based on the six categories.

2.3.2 The reasons of revision on the original taxonomy and the changes in the revised taxonomy

Despite being translated into 22 languages, the original taxonomy received criticism for some reasons. The first one is its hierarchical structure that learners cannot proceed to higher levels without being successful at previous levels and this situation hinders organizing educational objectives (Seddon, 1978). In contrast, there is no hierarchical structure in the revised taxonomy. The second reason is the category of 'evaluation' which is involved in the category of 'synthesis. Yet, evaluation is not more complicated than synthesis as learners are expected to produce something new in the synthesis category. Thus, it can be said that synthesis category should be more demanding than evaluation category. Another criticism that led to the revision of the original taxonomy is about the categories' being single dimension (Furst, 1994). While the original taxonomy includes levels only in the cognitive process, the educational outcome contains a verb and a noun. As the cognitive process dimension handles verbs, knowledge dimension deals with nouns. As a result of this, knowledge dimension is also needed. Taking these criticisms into account, the team led by David Krathwohl initiated the process of revision in 1955 and the revised Bloom's taxonomy was announced in 2001 (Anderson, 2005). While revising the original taxonomy, some points were considered that the original taxonomy was taken as a basis, a common language was constructed, the educational theories and the psychological needs of the modern world were taken into consideration, and the revised model was strengthened by proposing applicable examples (Anderson & Krathwohl, 2001).

The revised version of Bloom's taxonomy slightly differs from the original taxonomy. The changes are mainly based on the terminology, structure and emphasis in the revised model. The first main change is on the terminology. The categories have been turned into verb forms to be in coherence with the educational outcomes. To give an example, the noun 'analysis' has been converted to 'analyze'. In addition, 'knowledge, comprehension, synthesis' have been renamed as respectively 'remember, understand, create'. The image below is provided to make a clear comparison between the two versions.

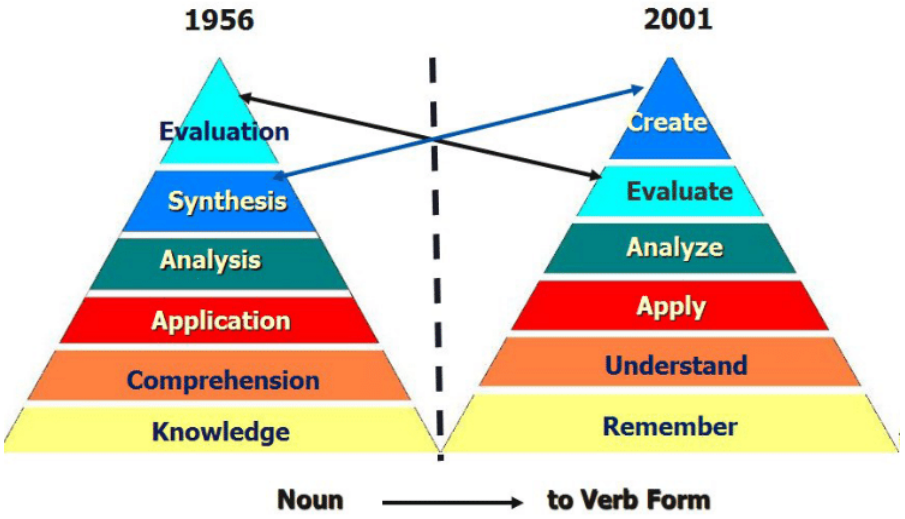


Figure 2. Bloom's Original vs. Revised Taxonomy of Cognitive Domain (Anderson & Kratwohl, 2001)

Another difference between the original taxonomy and the revised taxonomy is based on the structure. While the original taxonomy is one-dimensional, the revised Bloom's taxonomy takes a two-dimensional form which is the Knowledge Dimension and the Cognitive Process Dimension. The Knowledge Dimension deals with the knowledge to be learned and the Cognitive Process Dimension deals with the process used to learn. As the Knowledge Dimension on the left includes four levels which are factual, conceptual, procedural, and meta-cognitive, the Cognitive Process Dimension across the top of the grid is composed of six levels which are remember, understand, apply, analyse, evaluate, and create. The table is provided below to display the intersection of the six cognitive process defined dimensions with the four Knowledge Dimensions.

The Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge	List	Summarize	Classify	Order	Rank	Combine
Conceptual Knowledge	Describe	Interpret	Experiment	Explain	Assess	Plan
Procedural Knowledge	Tabulate	Predict	Calculate	Differentiate	Conclude	Compose
Meta-Cognitive Knowledge	Appropriate Use	Execute	Construct	Achieve	Action	Actualize

Figure 3. Bloom's Taxonomy: The Cognitive Process Dimension – The Knowledge Dimension (Forehand, 2010)

The third category of changes is in terms of emphasis. The revised version of the taxonomy is aimed at a much broader audience. While the original taxonomy was regarded as a tool applied to younger learners at school, the revised version is intended to address a larger audience and to use it as a more authentic tool for curriculum planning, instructional delivery, and assessment (Forehand, 2005).

The table below summarizes the changes under the related categories:

Table 1. Changes in Bloom's Revised Taxonomy (Anderson & Krathwohl, 2014).

Changes in Bloom's Revised Taxonomy		
Changes in Terminology	**Changes in Structure**	**Changes in Emphasis**
The major six categories in the cognitive process dimension were changed from noun to verb forms.	The knowledge dimension and cognitive process dimension was separated.	The revised taxonomy is intended to use it as a more authentic tool for curriculum planning, instructional delivery and assessment.
'Knowledge' was renamed as 'Remember'.	The strict hierarchical structure was relaxed.	A larger audience of educators was intended to be addressed.
'Comprehension' was renamed as 'Understand'.	Metacognitive knowledge was added to the knowledge dimension.	Simple assessments were included in order to make it clear to understand.
'Synthesis' was renamed as 'Create'.	The order of 'synthesis' was replaced by 'evaluate'.	The subcategories were emphasized.

2.3.3 Bloom's revised taxonomy

In the 1990s, Bloom's taxonomy was revised by a former student of Samuel Benjamin Bloom, Lorin Anderson with David Krathwohl and the revised version of the taxonomy was published in 2001. The categories in this revised taxonomy are arranged in increasing order, from lower order thinking skills to higher order thinking skills. While the lower order thinking skills involve the categories of remembering, understanding, and applying, higher order thinking skills involve analysing, evaluating, and creating. These levels are performed to be able to proceed to the next level. The figure below shows the categories of revised Bloom's taxonomy starting from low-order thinking skills to high-order thinking skills.

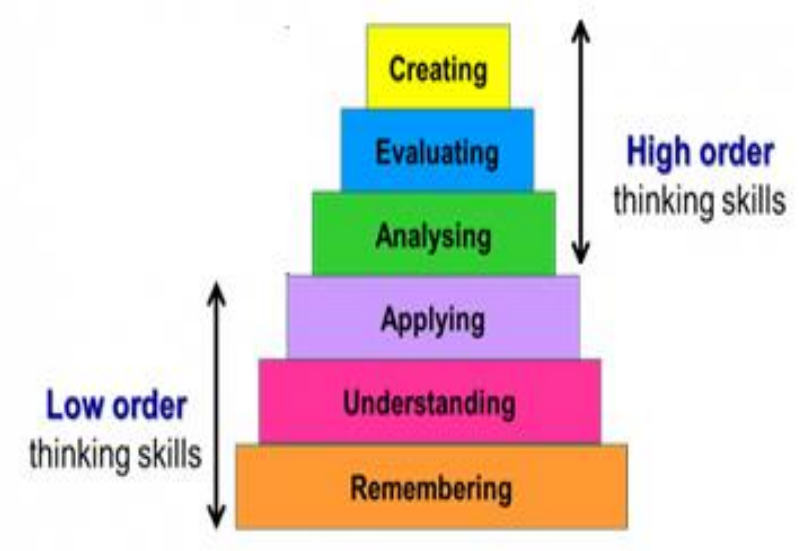


Figure 4. The Levels of Bloom's Revised Taxonomy

Remembering is the first level in the cognitive process dimension. It mainly refers to recalling or remembering specific information from long-term memory. The key terms in this level are recognising, listing, describing, identifying, naming, locating, and finding. In this cognitive process, learners are able to recall the previous knowledge from long-term memory. When a learner is presented a new information, a learner applies to his / her long-term memory in order to find out the information and bring that to working memory to process it. The possible activities in this level are making a story map showing the main events of the story, making a timeline of a typical day, making a concept map of the topic, or writing a list of keywords a learner recalls.

Understanding level refers to grasping the meaning of information by interpreting what has been learned. Anderson (2001) pointed out that students understand when they correlate the newly gained knowledge and the previously learnt one. To be more specific, students' previous cognitive frameworks are integrated with the incoming knowledge. The key terms in this level involve interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining. Learners are able to explain the new concepts in this process. Writing the newly gained information in their own words, illustrating a particular event in the story, reporting the information to the class, writing

a brief outline to explain the concept, summarizing the concepts, or outlining the main points can be suggested as possible activities in this level.

Applying level is the last step in low-order thinking skills before moving to high-order thinking skills. This level mainly refers to the use of information in a new context that is different from the one that was learned. The objective of this level is being able to use information in a new and familiar situation. Implementing, carrying out, using, or executing are the main key terms in this level. The suggested activities in applying level are constructing a model to demonstrate how the new information works, practicing the newly gained information, working on problem-solving tasks, or writing an explanation about the topic that is learned.

Analysing level is the first level in high-order thinking skills followed by the applying level. In this analysing level, learners are able to draw connections among ideas in order to explore relationships by distinguishing, comparing, and contrasting. Learners break learned information into its parts to have a better understanding of that information. The key terms in this level are comparing, organising, deconstructing, attributing, outlining, finding, structuring, and integrating. Using a Venn Diagram to show similarities and differences between two topics, designing a questionnaire to gather information and find out what their classmates think about a particular topic, making a family tree showing relationships, or creating a time chart to compare and contrast the storyline are some of the possible activities suggested in this level.

Evaluating is the fifth level that learners make decisions based on their in-depth reflection, criticism, and assessment. The learners are able to justify their own opinions by hypothesizing, arguing, judging, and convincing. The terms mainly used in this level are checking, hypothesizing, critiquing, experimenting, judging, testing, detecting, and monitoring. The suggested activities are preparing and conducting a debate, preparing a list of criteria to judge, writing a persuasive speech, convincing others by pointing out the rules that learners consider as important, or preparing a case to present their view about the topic.

Creating level is the highest level in Bloom’s revised taxonomy. This level mainly refers to the combination of parts to make a new whole. Learners put information

together to form a coherent or functional whole and reorganise information into a new pattern or structure by generating, planning, or producing. In this respect, learners are able to create new ideas or point of views using what has been previously learned. This level puts an emphasis on originality or uniqueness and the main objective is making students synthesize the information. The key terms in this level are designing, constructing, planning, producing, inventing, and making. Students can formulate sentences in newly learned grammatical structures as a classroom practice.

The following table summarizes the levels of Bloom's revised taxonomy, level of thinking, functions, key terms, and possible activities for classroom practice in each level.

Table 2. Bloom's Taxonomy: Levels, Thinking, Function, Key Terms and Activities

Level of Bloom's Taxonomy	**Level of thinking**	**Function**	**Key terms**	**Activities for classroom practice**
REMEMBERING	Low-order	Recalling or remembering the specific information from long-term memory	Recognising, listing, describing, identifying, naming, locating, finding	Making a story map showing the main events of the story, making a timeline of a typical day, making a concept map of the topic, writing a list of keywords a learner recalls
UNDERSTANDING	Low-order	Grasping the meaning of information by interpreting what has been learned	Interpreting, exemplifying, classifying, summarizing, inferring, comparing, explaining	Writing the newly gained information in their own words, illustrating a particular event in the story, reporting the

				information to the class, writing a brief outline to explain the concept, summarizing the concepts, outlining the main points
APPLYING	Low-order	The use of information in a new context that is different from the one that was learned	Implementing, carrying out, using, executing	Constructing a model to demonstrate how the new information works, practicing the new gained information, working on problem-solving tasks, writing an explanation about the topic that is learned
ANALYSING	High-order	Drawing connections	Comparing, organising,	Using a Venn Diagram to

		among ideas in order to explore relationships by distinguishing, comparing, and contrasting; breaking learned information into its parts to have a better understanding of that information	deconstructing, attributing, outlining, finding, structuring, integrating	show similarities and differences between two topics, designing a questionnaire to gather information and find out what their classmates think about a particular topic, making a family tree showing relationships, creating a time chart to compare and contrast the storyline
EVALUATING	High-order	Making decisions based on students' in-depth reflection, criticism, and	Checking, hypothesizing, critiquing, experimenting, judging, testing, detecting,	Preparing and conducting a debate, preparing a list of criteria to judge, writing a

		assessment	monitoring	persuasive speech, convincing others by pointing out the rules that learners consider as important, preparing a case to present their view about the topic
CREATING	High-order	Putting information together to form a coherent or a functional whole; reorganising information into a new pattern or structure	Designing, constructing, planning, producing, inventing, making	Formulating sentences in newly learned grammatical structures

As it was summarized in detail, Bloom's Revised Taxonomy provided educators systematic classifications of the thinking and learning processes. The hierarchical framework requires an achievement of the prior skill before proceeding to the next one.

Krathwohl (2002) suggested that the structure of the revised taxonomy table matrix provides a clear representation between standards and educational objectives.

2.3.4 The application of Bloom's taxonomy in language teaching

Bloom's taxonomy table provides a framework for teachers in order to reorganize and analyse their way of teaching. It helps them to learn that they can only evaluate the effectiveness of their teaching in terms of what students learn. The revised taxonomy clarified the points that objectives which are the learning goals are important to establish so that both teachers and students can understand the purpose of the interchange. In addition, teachers can get benefit from using frameworks in order to organize lesson objectives which provides clarity both for the teachers and the students. It can also be added that having an organized set of objectives provides planned and appropriate instruction (Armstrong, 2016).

The most important aspect of applying Bloom's taxonomy in teaching is that it defines and organizes learning objectives and classifies human cognition. In addition to the comprehension of specific skills that learners should develop, Bloom's taxonomy provides the framework for each lesson in order to determine goals (Forehand, 2005). To be more specific, when a teacher presents the grammatical structure such as present perfect tense, the goal of a lesson can be making students be able to use and interpret this grammar structure by talking about their life experiences. Additionally, the hierarchy of cognitive skills provides a teacher knowledge about their students' progress (Adams, 2015). To give an example, when a learner is able to remember the numbers in English language, it can be understood that a teacher can prepare his or her learners for telling time in the next level. Hence, it helps a teacher to determine the complexity of their next task to proceed to higher thinking levels when students' abilities are understood. A teacher can also encourage their students to continue progressing and do their best to produce a new work through this model.

2.4 The Concept of Critical Thinking

In the past, it was assumed that the only factor that distinguishes human beings from other living creatures is the ability to think. Yet, it is commonly agreed that thinking merely is not sufficient to have a broad vision and perspective in today's world. In

addition to this, most of the human thinking is biased. This may be regarded as one of the reasons why different ways of thinking have aroused to distinguish normal thinking from higher-order thinking types which are known as critical thinking, creative thinking, reflective thinking, analytical thinking, and scientific thinking. Owing to this separation, the differences between normal thinking and higher-order thinking can be more recognizable.

The word 'critical' derives etymologically from two Greek roots which are 'krikitos' and 'kriterion'. While 'krikitos' has a meaning of discerning judgment, 'kriterion' has a meaning of standards (Niedermeyer, 2008). In Oxford University Dictionary, the word 'critical' is defined as involving making fair, careful judgments about the good and bad qualities of somebody or something. When the word 'critical' is used with 'thinking', it means that it is a mental process such as logical reasoning, analysing, and evaluating. It is a higher-order thinking that offers a great number of opportunities for individuals who are in search of deep understanding. Critical thinking is a concept that provides learners improves the quality of their thinking by analysing, assessing, and reconstruction of any subject, content, or problem (Alijanovich, 2020). Nickerson (1988) illustrates a list of abilities and attitudes that describes the individual who thinks critically. A critical thinker is someone who organizes his or her thoughts concisely and coherently. In addition, s/he suspends judgment when there is a lack of enough evidence to support a decision. He added that critical thinkers can learn independently and apply problem-solving techniques in domains.

2.4.1 Teaching critical thinking skills in English as a foreign language

Critical thinking is associated with quality thinking and if it is developed, it helps learners to have a more skilful communication with other people. Vdovina & Gaibisso (2013) stated that learning in order to think is the main purpose of education and teaching critical thinking skills has recently started to take place in the curriculum. Individuals have to deal with many challenges not only at school but also in their daily life and it is obvious that they have to find solutions to these challenges. Therefore, it is inevitable that they have to make critical choices and reasonable decisions. Demir and Uluçınar (2012) suggested that information is spread quickly in the globalization age and keeping information under control has become a serious problem. There is an

uncertainty of information being relevant, irrelevant, real or wrong, and people are internalizing this information without questioning. This situation leads to a serious problem in educating individuals who have reliable and true information. In this respect, teaching critical thinking skills to learners should gain importance in order to get rid of this problem.

In the past, a person who had a good memory and information used to be regarded as an ideal person. However, with the rapid change and advancement of societies, science, and technology in an age of information, individuals are required to be taught critical thinking skills. It can be inferred that a good critical thinker is someone who makes logical inferences from what s/he knows and who knows how to find solutions to problems by putting information into practice, not a person who stored lots of information in his or her brain. Thus, this reason can justify why critical thinking skills ought to be integrated into the current education system. Aşılıoğlu (2008) conducted a study on the importance of teaching critical thinking skills and revealed that students had complaint about not finding the answers of the exam questions in their textbooks even though academicians preferred to ask questions that force their students' higher order thinking skills. The result of this study found out that teaching critical thinking skills has to start in primary school and it must be considered as a life-long process. Norris (1985) also remarked that learning how to think critically is a moral right of the learners. Therefore, teachers should make their students question, challenge, and demand reasons and justifications for the things that they learn. It should be noted that teaching critical skills will considerably eliminate unfairness, injustice, inequalities and the thing that are done wrongly.

Critical thinking has recently gained more importance in teaching English as a foreign language and incorporating it into the language teaching curriculum has recently aroused interest among teachers. As critical thinking skills provide learners to acquire the language effectively, improving this skill has become one of the duties of English language teachers (Shirkani & Fahim, 2011). Even though critical thinking is considered as a natural process that can be developed through the maturation process, students should be guided to become critical thinkers. Specific language training with integration of critical thinking activities should be provided to the students from the

beginning of language acquisition. Teaching students how to think critically in foreign language classrooms help them be aware of the significance of imagination, decision-making and other higher-order thinking skills (Bedir, 2013). Irawati (2014) suggests that critical thinking is one of the most necessary skills to be applied from low-level to high-level of education taught at school. It can be stated that the younger the students start getting critical thinking training, the better they can achieve in the future. It can be noted that teachers should be encouraged to integrate critical thinking skills into their foreign language lessons by choosing suitable materials, techniques or methods.

2.4.2 Bloom's taxonomy and critical thinking

Bloom's taxonomy involves three domains which are cognitive domain, effective domain and psychomotor domain. While cognitive domain consists of knowledge and intellectual attitudes' and skills' development, affective domain involves growth in feelings or emotions and psychomotor domain is related to manual or physical skills. Critical thinking skills are integrated with the taxonomy's first domain which is cognitive domain. Bloom's taxonomy is a framework that is utilized in educational environments in order to improve the quality of human thought. The levels of analysing, evaluating, and creating are regarded as essential levels to improve learners' higher-order thinking skills. These skills are more complex and challenging to learn. It can be stated that the higher an objective is, the more effort and time need to achieve it. Karadüz (2010) indicated that analysing, evaluating and creating that are accepted as higher-order thinking skills support critical thinking skills. Students having critical skills or not is based on their ability of analysing, evaluating, and creating. According to the revised Bloom's taxonomy, creating level in the educational field is accepted as the highest critical thinking skill.

2.5 Previous Studies

The literature provides a source of studies on Bloom's taxonomy and critical thinking and their relationship with educational outcomes, and instructional activities. While the original taxonomy was employed in some studies, the revised Bloom's taxonomy was utilized in other studies.

The study conducted by Gündüz (2017) aimed to find out the effect of critical thinking based instruction on the critical thinking disposition, critical reading self-efficacy levels, L2 critical writing performance of EFL learners and also experimental group students' opinions about the effects of critical-based instruction was investigated. The outcome of this study indicated that there was no significant difference between the groups in terms of their perceived critical thinking disposition, critical reading self-efficacy level and L2 critical writing performance. However, there was a difference between the experimental group students' pre- and post- definitions on critical thinking.

Öztürk (2019) conducted a study with an aim to evaluate the outcome statements in the 9th grade English program and the coursebook activities in the 9th grade English coursebook based on the cognitive process and the knowledge dimensions of Bloom's revised taxonomy. The results of this study showed that the outcome statements in the 9th grade English program and the coursebook activities are categorized into the lower order thinking skills in the cognitive process dimension, and higher order thinking skills received limited attention in order to develop metacognitive knowledge.

Pishghadam and Ebrahimi (2019) conducted a study on teaching grammar through applicative teaching. The study intended to introduce an educational approach including various levels of senses. This approach that is called applicative teaching is a combination of application and reflection designed to teach students how to think critically, creatively, and futuristically. According to this approach, grammar teaching starts with theoretical, form-based aspects and continues with practical, function-based aspects, and tries to fix the rules by making students think about their previous knowledge. The results of this study showed that learners' awareness, creativity, and communicative competence are improved by including senses and cognition, and this improvement leads to their learning the grammatical rules better. In accordance with this result, teachers can apply those tasks in order to support their students' creative thinking and critical thinking skills to teach grammar in an applicative way.

In another study conducted by Cai (2020), creating teaching materials to improve students' motivation and ability to learn English instead of raising exam grades was aimed. The project is about creating a handbook which consists of two model units

based on Bloom's taxonomy. Each unit includes four model lesson plans based on language learning skills which are listening, speaking, reading, and writing and lesson plans that provide educators how to apply Bloom's taxonomy to their own teaching situations. This study helps teachers avoid using only one teaching approach and provides having a better interaction with their students. Therefore, the motivation of college students to learn English can be improved and they can achieve in learning English.

In the study conducted by Güde (2021), the outcome statements of Secondary School Preparatory Class English programs were aimed to be evaluated based on the cognitive process and knowledge dimension of Bloom's revised taxonomy. The data have been collected through document analysis and content analysis. The findings of this study showed that the outcome statement in the Secondary School Preparatory Class English program is not homogenously distributed in terms of lower and higher-order thinking skills. On the contrary, they are mostly categorized into lower-order thinking skills according to the cognitive process dimension. Another outcome of this study showed that the outcome statements mostly focus on the conceptual knowledge level and students' metacognitive knowledge is not developed.

3. METHODOLOGY

This chapter presents information about the methodology of this study including the research design, setting, participants, data collection instruments, procedure, and data analysis.

3.1 Research Design

This study has been conducted within the framework of quantitative research design to see whether integrating Bloom's taxonomy together with critical thinking skills has an impact on students' language learning proficiency or not. Quantitative research is defined by Cohen, Manion & Morrison (2002) as social research that employs empirical methods and empirical statements. They add that an empirical statement is defined as a descriptive statement about what the case is instead of what the case should be and they are expressed in numerical terms. Cresswell & Cresswell (2017) also defines quantitative research as explaining phenomena by gathering numerical data to be analysed. Taylor (2005) points out that the main aim of conducting quantitative research is to make more valid and objective descriptions of the subject of the research. As data is collected, analysed and presented in numbers, the results become more reliable.

This present study is an experimental study with a pre-test and a post-test which emphasized the analysis of quantitative data gathered from an experimental and a control group. Dörnyei (2007) describes an experimental study as a study design in which there are two main groups: one experimental group which is provided with the treatment and one control group which sets the baseline.

This study is based on the following research questions:

1) Does using Bloom's taxonomy and critical thinking skills have an impact on students' language learning proficiency?
2) Is there a significant difference between using Bloom's taxonomy together with critical thinking skills and explicit grammar teaching?

The scope of these research questions suggests that this study focused on the lesson evaluation in terms of the grammatical competence of language learners with the

application of Bloom's taxonomy together with critical thinking skills during teaching grammar. To achieve this aim, data was collected through grammar tests and the written output of students based on specific tasks.

The research was conducted with two groups. Students at the Preparatory School of Foreign Languages Department located in Istanbul were analysed as the main group of this study. One of the classes was the experimental group to be treated with Bloom's taxonomy together with critical thinking based grammar teaching and the other group was the control group to be instructed with the explicit grammar teaching. Data started being collected at the first week of school.

At the beginning of this present study, the pre-test was applied to both groups to measure their language competence. The piece of writing was also collected by students in order to analyse their grammatical knowledge within a content. During the teaching period, the experimental group was taught grammar by following the levels of Bloom's taxonomy together with critical thinking and the taxonomy was adapted to grammar units and the course syllabus. The control group was instructed with conventional explicit grammar teaching. At the end of this research period which is the end of the term, the post-test was applied to both groups and another writing task was gathered to find out the outcome whether applying Bloom's taxonomy together with critical thinking skills has an impact on students' grammatical competence or not.

3.2 Setting

This study was conducted at the Preparatory School of Foreign Languages Department of a foundation university located in Istanbul, Turkey. The aim of this program is to teach English language up to a level in which they can easily follow their courses, interpret academic publications in English, keep up with the scientific and technological developments and be able to communicate in a professional, cultural and social environment. The preparatory program that the study was conducted at consists of three streams based on the European Framework (CEFR) and aims upper-intermediate (B2) level as the exit level. The average number of students in each classroom is between 15-20. Students have 28 hours of lessons in a week. 24 hours are allocated for integrated skills which are grammar, reading, listening, and vocabulary. 4 hours are allocated for

speaking and writing skills in a week. Three teachers share each class with different teaching hours. Students take different kinds of exams during each academic year such as quizzes, mid-term exams, speaking exams, and take the proficiency exam to be successful in this program. In addition to these exams, students are assigned to do daily homework through an online platform. The current study took place in the integrated skills lesson with pre-intermediate (A2) level students. While the experimental group was taught grammar based on Bloom's taxonomy levels together with critical thinking skills, the control group was instructed with explicit grammar teaching.

3.3 Participants

At the time of the study, there were 10 pre-intermediate (A2) level of classes at the preparatory school, and two of them were chosen randomly for the present study. Both group of students' English language levels were determined by a placement test which assesses their language competency and makes students place in the appropriate level according to their level of language. In both classes, there were 30 students in total. With a total of 30 EFL students, classes were assigned as the experimental group (N=15) and the control group (N=15) in order to conduct this study. Throughout this study, grammar was conveyed to the experimental group with the incorporation of critical thinking skills based on Bloom's taxonomy and the control group was taught with the traditional way of explicit teaching method to determine the impact of using Bloom's taxonomy and critical thinking skills on grammar teaching.

3.4 Data Collection Instruments

There were four main instruments for data analysis in this study. The comprehensive Revised Taxonomy Verb Chart and the taxonomy table were employed as the main instruments in this study (Appendix 1). The verb list includes the categorization of learning levels and the taxonomy table helped to set objectives for each level during this teaching process. The lessons in the experimental group were designed based on this taxonomy. To collect data, a placement test was used as pre-test and post-test in order to measure students' grammatical competency at the very beginning and the end of this study (Appendix 2). The test was a placement test published by Macmillan Education that gives an idea about students' language competency levels. Another instrument is

students' written output which were collected from students at the beginning and end of the term (Appendices 3 and 4). To analyse the data, student analysis chart was created by the researcher that analyses students' written outputs based on the number of words and structures and the correct number of structures that they used (Appendix 5). Only the pre-test and post-test were used as an outsource. The test is open to the public on the net and it was prepared and published by Macmillan Education. (Placement Tests | Macmillan Straightforward, 2019). Other sources of data collection were prepared by the researcher itself.

3.5 Data Collection Procedure

On the first day of the first term, students were given a pre-test that measures their level of competency (Appendix 2). They were also asked to write a paragraph introducing themselves that helped us to analyse their sentences and grammatical competency (Appendix 3). While teaching grammar, the experimental group was conveyed grammar instruction through the levels of Bloom's taxonomy and exercises fostering their critical thinking skills (Appendix 1). The same teacher taught in both the experimental and the control groups. According to the syllabus that is covered during the term, weekly plans were made to reach the objectives of each taxonomy level. The researcher followed the same taxonomy levels starting with lower-order of thinking skills which are remembering, understanding and applying and continued with higher-order thinking skills which are analysing, evaluating and creating. Appropriate activities were designed and applied for each level of the taxonomy. While the experimental group was instructed with following taxonomy, the control group was delivered explicit grammar instruction. In week 15 which was the last week of the term, students were given out the same test that they completed at the beginning of the term and they were also asked to write an essay which let them use all the grammatical structures that they are believed to learn (Appendix 4). During the present study, the same weekly schedules were followed by both experimental and control groups. Both groups of students covered the same reading texts in their reading lessons, and the same audios in listening lessons; however, some extra materials and activities were used to teach grammar in the experimental group to follow Bloom's taxonomy objectives and to improve students' critical thinking skills as stated above.

Sample lesson plan applied in experimental group's grammar lessons was described below:

Level: Intermediate

Subject: Past Perfect Tense

Level of Bloom's taxonomy: Remembering

Level of thinking: Low-order

Objective: The learner is able to recognise, list, describe, identify, name and find the target grammatical structure within a context.

Task: Identify the new structure in sentences

A teacher enters the room and begins the lesson with telling students she has had a bad couple of days. She tells them her house has been burgled and reads the following sentences aloud to the students.

- Yesterday when I arrived home, I couldn't believe my eyes!
- Someone had broken into my house.
- They had broken the door and the window.
- They had stolen all my money.
- They had broken my TV and my computer.
- They had emptied my drawers.
- They had even eaten the food in the fridge.

Without giving any prior knowledge, a teacher can make students identify and recognize the new structure within a context.

Level of Bloom's taxonomy: Understanding

Level of thinking: Low-order

Objective: The learner is able to interpret, exemplify, infer, paraphrase, classify, compare and explain the new structure.

Task: Interpret the information

A teacher asks students to remember the sentences that she used and she writes them on the board. Together as a class she gets students to remember the various events and writes up the list on the board. Then, students can spend some time thinking about the form and meaning.

- When I arrived home, I saw the burglars...

A teacher makes students interpret the information and leads them by asking some questions like:

- Do students know the name of this tense? (past perfect)
- How is it formed? (had + past participle)
- Why do we use this tense and not the simple past in this example? (The starting point for the story is when the teacher arrives home from work. The burglars' actions all happen before this point in the past)
- How could we tell the same story using only the simple past? (The burglars broke down the door. They stole the laptop etc. The teacher arrived home.)
- Why do we use the past perfect in this story? (to show the order of two past events / for dramatic effect / to make the story more interesting)

Level of Bloom's taxonomy: Applying

Level of thinking: Low-order

Objective: The learner is able to use information in a context different from the one in which it was learned.

Task: Practice the newly learned structure in a new situation.

A teacher puts students into groups of three or four and assigns them to write sentences for each situation below.

- Parents arrive home from holiday having left their teenage son in charge of the house. They soon realize he's had a big party while they were away.
  Start: When they arrived home they saw...

- A man arrived home having left his new puppy on its own for the first time.
  Start: When he arrived home he saw...
- A teacher came back into the class and realized she shouldn't have left the students on their own for that long.
  Start: She walked back in and saw...

When students have written seven or eight sentences, a teacher stops the activity and passes the papers from group to group and each group should read the sentences and see if they can guess what the situation was from the sentences.

Level of Bloom's taxonomy: Analysing

Level of thinking: High-order

Objective: The learner is able to explore relationships by distinguishing, comparing and contrasting.

Task: Draw a diagram and break the sentences into the parts; compare and contrast 'Past Perfect' with other tenses

For the analysing stage, students break the sentences into its parts to understand it better. They can do it by drawing a diagram.

A teacher leads them to draw a diagram and asks them to tell the difference between past perfect and other tenses

What's the difference?

A. When I arrived they had had dinner.

B. When I arrived they were having dinner.

C. When I arrived they had dinner.

Level of Bloom's taxonomy: Evaluating

Level of thinking: High-order

Objective: The learner is able to justify their own opinion with hypothesizing, arguing, judging and convincing.

Task: Discuss the importance of using past perfect tense with their classmates

A teacher makes students discuss the importance of using past perfect tense with their classmates. They can make a list of ideas and convince their classmates that sentences cannot be formed without using the past perfect.

Level of Bloom's taxonomy: Creating

Level of thinking: High-order

Objective: The learner is able to create new ideas or point of view using what has been previously learned.

Task: Write an e-mail describing a series of events

A teacher shares with students a scenario about a disastrous party and first asks them to match the problems with the explanations.

Scenario:
A. Last weekend, Harry held a surprise birthday party for Jim, but it was a total disaster. Match the problems (1-5) with the explanations (a-e).

Problems:

1. Not many guests
2. No birthday cake
3. Nothing to eat or drink
4. Party finished early
5. No music

Explanations:

a) Neighbors complained to the police
b) DJ had an accident
c) Forgot to send out invitations
d) Forgot to go shopping
e) The bakery was closed

After the students have done that, they write an email about the party using the past simple to talk about the problems and the past perfect to explain what happened. Afterwards, students use the past simple and past perfect to write a reply to the email, detailing the unfortunate events that happened to someone else. Finally, the students read their completed emails to the class.

Hi Katie,

How are you? I'm not so good. Last weekend, I held a surprise birthday party for Jim, but it was a total disaster!

……
……

I hope your weekend was better.

See you soon.

Harry

As homework, a teacher also assigns writing a reply from Katie to Harry to describe the events that had happened to her.

(Adapted from British Council: Teaching English Activities (B1))

3.6 Data Analysis

In this current study, the chart was built by the researcher itself based on the categories that assess students' pre-test, post-test results and written outputs. Students' pre-test and post-test results showed us students' initial language level and how much they progressed during the implementation of this study. Students' performances were first analysed within their groups. The results of the experimental and the control group of students were compared to find whether using Bloom's taxonomy together with critical

thinking skills in grammar teaching has an effect on language learning development or not.

The written output provided insights about how much and to what extent they learned and progressed in English grammar during the implementation of this study. With these objectives, students' errors were classified into their source categories in order to have a better understanding of their progress.

4. FINDINGS AND DISCUSSION

4.1 Introduction

In this chapter, findings obtained from the research conducted on the title of 'Grammar Teaching based on Bloom's Taxonomy and Critical Thinking' are presented under the title of the research questions that they belong to. The current study has been conducted to answer the following research questions:

1) Does using Bloom's taxonomy and critical thinking skills have an impact on students' language learning proficiency?
2) Is there a significant difference between using Bloom's taxonomy together with critical thinking skills and explicit grammar teaching?

The participants are English language learners in a preparatory school of foreign languages in a foundation university located in Istanbul. In total, 30 students have participated in this study (N=30). Some variables such as the high schools they graduated from, their background knowledge of English language and grammar knowledge, their ages, and their gender have not been taken into account. In accordance with the research questions, the quantitative data gathering methods were employed, and the results of data and discussion of the findings are portrayed. More specifically, students' pre-test and post-test scores and their written outputs were analysed and compared individually and within their groups to find out whether using Bloom's taxonomy and critical thinking skills to teach grammar has a positive impact on grammar learning or not.

4.2 Results of Data before the Implementation of Bloom's Taxonomy and Critical Thinking Skills in Grammar Teaching

Before the implementation of Bloom's taxonomy and critical thinking activities, a pre-test was applied and students were asked to write a paragraph about themselves based on a rubric given by the researcher in order to identify students' current competency in grammar. In the following part, the results of pre-test and the first written task were documented in tables and demonstrated with figures and then discussed.

4.2.1 The results of the pre-test

The same pre-test was applied to both experimental and control group students in order to identify their grammatical competence at the beginning of the study. The students were coded as numbers. They were given a grammar test before the study was conducted (see Appendix 2). First, both experimental and control group of students' pre-test results were analysed and compared. Grammar test has 70 questions. Thus, students' scores were evaluated out of 70. The results were shown in the table below:

Table 3. Pre-test Results of Experimental and Control Groups

Student Number	**Experimental Group**	**Student Number**	**Control Group**
	Pre-test		**Pre-test**
S1	40	**S1**	55
S2	52	**S2**	32
S3	62	**S3**	40
S4	26	**S4**	47
S5	48	**S5**	28
S6	44	**S6**	40
S7	26	**S7**	48
S8	35	**S8**	39
S9	40	**S9**	43
S10	39	**S10**	27
S11	39	**S11**	37
S12	36	**S12**	34
S13	31	**S13**	47
S14	34	**S14**	38
S15	32	**S15**	49
AVERAGE:	**38,93**		**40,26**

As it can be understood from the results of this data, the average score of the experimental group was lower than the control group at the beginning of this study. The

differential rate between two groups is 3,41 % and this percentage shows that students in the control group showed better performance in their pre-test at the beginning of this study. The bar chart demonstrates the pre-test scores of each student in experimental and control groups and the average grade of each group as follows:

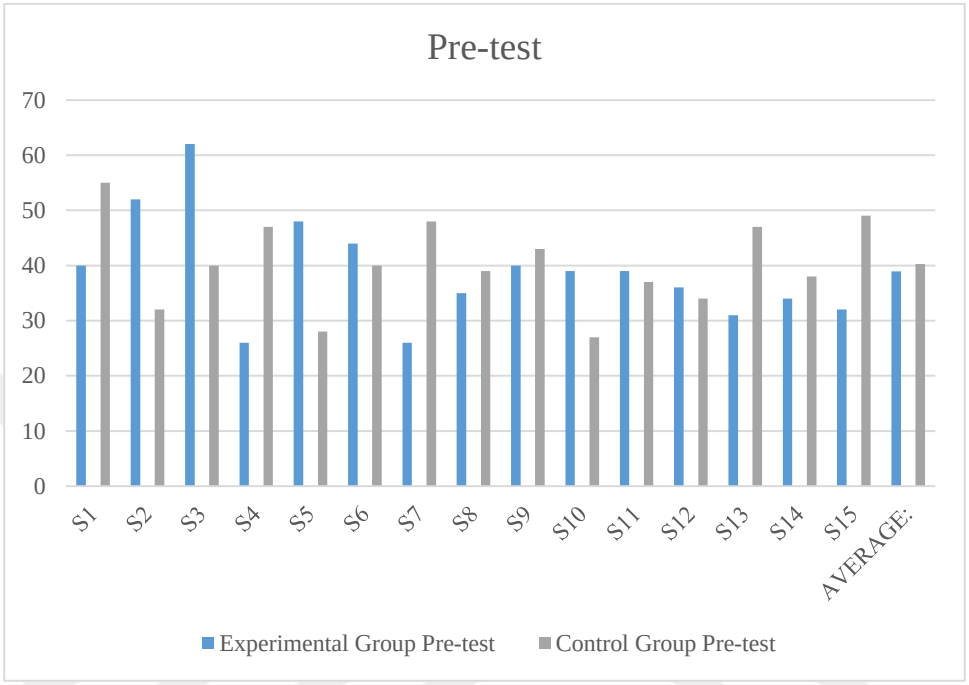


Figure 5. The Comparison of Pre-test Results of Experimental and Control Groups

As a second task before the implementation of grammar teaching integrated with Bloom's Taxonomy and critical thinking, students were asked to write a paragraph based on the rubric (see Appendix 3), then both experimental and control group students' written outputs were analysed based on categories determined by the researcher. The analysis of experimental and control groups' written outputs was shown below in separate categories:

Table 4. Written Pre-Task Analysis of an Experimental Group

Student Number	**Number of sentences**	**Number of words**	**Number of simple structures**	**Number of complex structures**	**Number of compound structures**	**Number of linking words**	**Correct number of sentences**
S1	9	67	7	2	0	2	7
S2	20	188	11	6	3	12	12
S3	12	123	8	3	1	5	7
S4	8	132	2	5	1	8	5
S5	13	177	7	4	2	7	8
S6	13	150	8	4	1	8	11
S7	12	111	10	2	0	2	5
S8	22	147	16	6	0	8	11
S9	15	109	10	1	4	8	12
S10	10	93	7	3	0	4	2
S11	12	107	9	0	3	5	5
S12	18	157	10	3	5	12	17
S13	16	132	10	4	2	8	8
S14	11	92	8	3	0	6	9
S15	18	115	15	2	1	3	5
AVERAGE:	**13,93**	**126,66**	**9,2**	**3,2**	**1,53**	**6,53**	**8,26**

The data shown in table 4 shows that the average number of sentences that experimental group used is 13,93 and the number of words is 126,66. Regarding the type of their sentences, they mostly used simple structures rather than complex and compound structures. The average number of linking words that they used is 6,53. When their sentences were analysed, it was found out that students in the experimental group only have 8,26 correct sentences out of 13,93 which shows that they have 59,29 % success in their pre-writing tasks.

Table 5. Written Pre-Task Analysis of a Control Group

Student Number	Number of sentences	Number of words	Number of simple structures	Number of complex structures	Number of compound structures	Number of linking words	Correct number of sentences
S1	9	107	7	1	1	7	7
S2	9	129	16	2	1	5	9
S3	10	86	7	0	3	4	6
S4	13	97	11	1	1	3	8
S5	18	128	14	2	2	6	13
S6	10	89	7	3	0	3	7
S7	22	171	14	6	2	12	19
S8	12	94	8	3	1	6	12
S9	29	187	18	5	6	15	24
S10	15	124	9	3	3	9	10
S11	18	158	11	3	4	11	11
S12	6	95	4	2	0	5	3
S13	21	153	17	2	2	8	113
S14	15	119	11	3	1	6	11
S15	13	168	8	0	5	11	13
AVERAGE:	**14,66**	**127**	**10,8**	**2,4**	**2,13**	**7,4**	**17,73**

Table 5 provides information about control group students' performances in the pre-written task. Their average number of sentences is 14,66 and the number of words is 127. In terms of the structures, most of their structures are simple. They used 7,4 linking words on average. When their data were analysed, it was revealed that the average number of correct sentences that they have is 17,73 which means they have 82,68 % success in their pre-written tasks.

Regarding the results in students' pre-test written performances, control group students used more sentences and more words than the experimental group. While control group students used more simple structures and compound structures in their written tasks, experimental group students used more complex sentences. The average number of linking words that they used is also more in control group students' written output. Based on both group of students' pre-test results, correct number of sentences out of the number of sentences were compared below in the table.

Table 6. Experimental and Control Groups' Number of Correct Sentences

Student Number	**Experimental Group – Number of sentences**	**Experimental Group – Number of correct sentences**	**Student Number**	**Control Group – Number of sentences**	**Control Group – Number of correct sentences**
S1	9	7	**S1**	9	7
S2	20	12	**S2**	9	9
S3	12	7	**S3**	10	6
S4	8	5	**S4**	13	8
S5	13	8	**S5**	18	13
S6	13	11	**S6**	10	7
S7	12	5	**S7**	22	19
S8	22	11	**S8**	12	12
S9	15	12	**S9**	29	24
S10	10	2	**S10**	15	10
S11	12	5	**S11**	18	11
S12	18	17	**S12**	6	3
S13	16	8	**S13**	21	13
S14	11	9	**S14**	15	11
S15	18	5	**S15**	13	13
AVERAGE:	**13,9**	**8,2**		**14,6**	**11**

According to the results of this data, students in the control group used more sentences while expressing themselves and their sentences were more accurate than the experimental group of students before the implementation of Bloom's taxonomy and critical thinking skills in grammar teaching. Regarding the number of sentences students used in the written task as a pre-test, the differential rate is 5,03 % and the differential rate regarding the number of correct sentences is 34,14 %. This result clearly shows us that the control group students performed better in their written tasks at the beginning of this study. The following bar chart illustrates the number of correct sentences of each group.

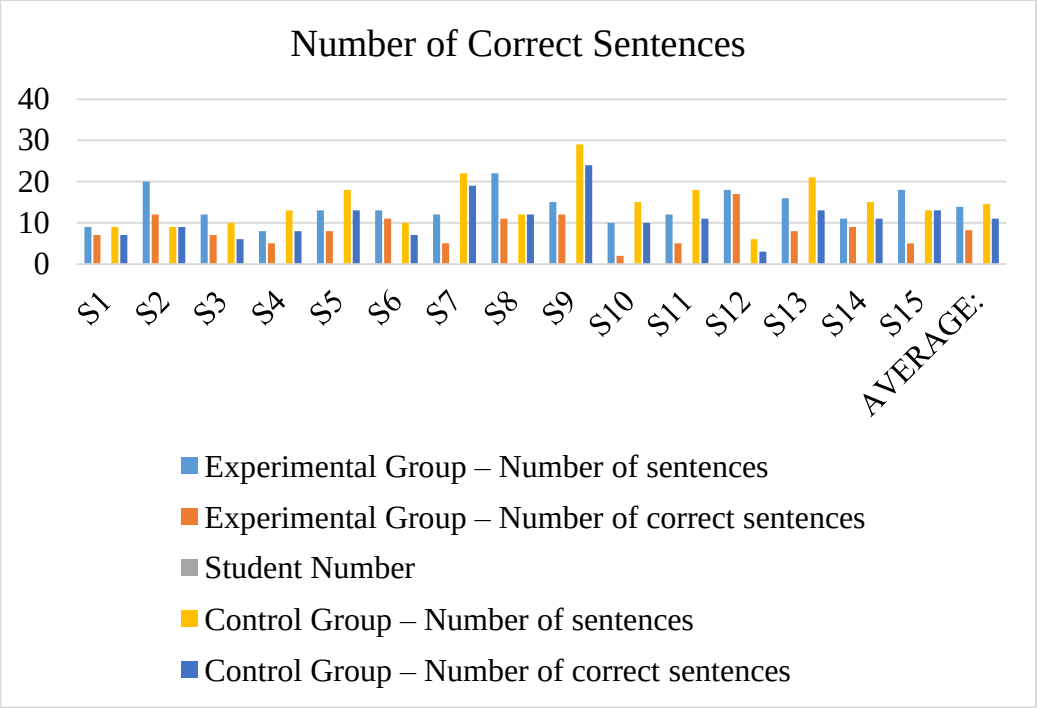


Figure 6. Experimental and Control Group Students' Number of Correct Sentences

4.3 Results of Data after the Implementation of Bloom's Taxonomy and Critical Thinking Skills in Grammar Teaching

After the implementation of Bloom's taxonomy and critical thinking activities during the teaching period, the same grammar test as a post-test (Appendix 2) was applied and students were asked to write another piece of writing (Appendix 4) about the topic given by the researcher in order to identify their competency in grammar. In the following

part, the results of students' post-test grades and the analysis of their final written task were documented in tables, illustrated with figures and then discussed.

4.3.1 The results of the post-test

The same post-test was given to the both group of students in order to identify their grammatical competence at the end of this study. The test was given to the students in the 15th week of the study which was the last week of the term. Both experimental and control group students' post-test results were compared and shown below. The scores were calculated out of 70.

Table 7. Post-test Results of Experimental and Control Groups

Student Number	**Experimental Group**	**Student Number**	**Control Group**
	Post-test		**Post-test**
S1	58	**S1**	53
S2	57	**S2**	52
S3	60	**S3**	48
S4	28	**S4**	48
S5	52	**S5**	34
S6	51	**S6**	58
S7	52	**S7**	54
S8	54	**S8**	39
S9	55	**S9**	51
S10	53	**S10**	45
S11	49	**S11**	43
S12	49	**S12**	48
S13	36	**S13**	55
S14	49	**S14**	54
S15	43	**S15**	53
AVERAGE:	**49,73**		**49**

As it is shown in the table, post-test scores of the experimental group were slightly higher than the control group. The average score of the experimental group is 49,73 and it is 49 for the control group. When the scores of both groups compared, it can be concluded that integrating Bloom's taxonomy and critical thinking skills into the grammar teaching makes a difference into students' grammatical competence. Even the experimental group of students' grammatical competency was lower than the control group at the beginning of this study, they performed better than the control group at the end of this study and the final scores showed that there is a 1,46 % difference between these two groups. As it is clarified in the following bar chart, it can be clearly stated that experimental group students got better grades in their post-test compared to the control group.

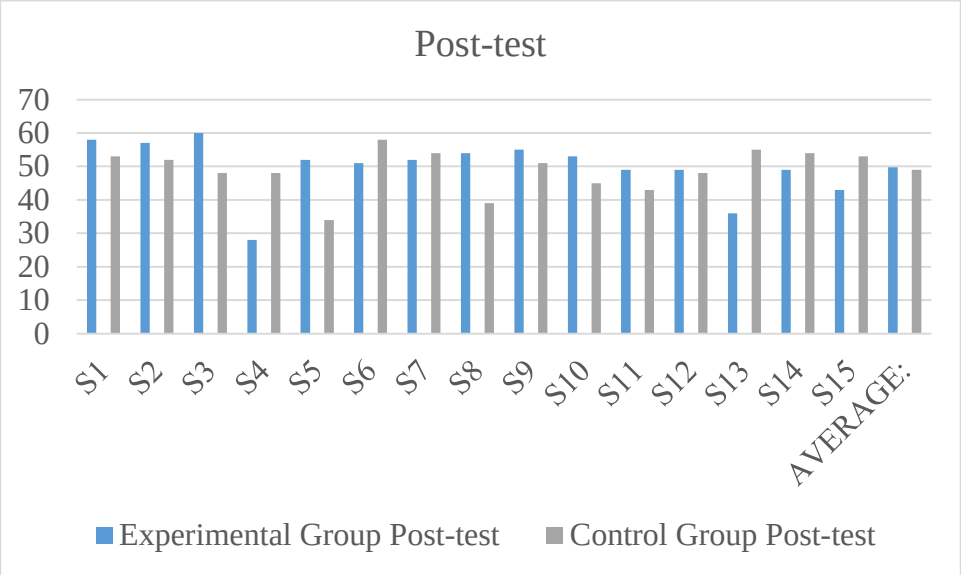


Figure 7. The Comparison of Post-test Results of Experimental and Control Groups

Regarding implementing Bloom's taxonomy in language teaching, Anderson (2001) also emphasized the importance of following Bloom's objectives by stating that the students understand and learn better when they correlate the knowledge that they have newly gained and the one that they have previously learnt. This helps them to integrate their previous cognitive frameworks with the incoming knowledge. In accordance with this, these scores show us that the knowledge that the experimental group has become more permanent in their minds and this helps them to remember and use them in their post-test.

As a final task after the implementation of grammar teaching integrated with Bloom's taxonomy and critical thinking, students were asked to write a piece of writing based on the rubric (see Appendix 4), then both experimental and control group students written outputs were analysed based on categories determined by the researcher. The analysis of experimental and control groups' written outputs was shown below:

Table 8. Written Post-Task Analysis of an Experimental Group

Student Number	**Number of sentences**	**Number of words**	**Number of simple structures**	**Number of complex structures**	**Number of compound structures**	**Number of linking words**	**Correct number of sentences**
S1	19	185	9	4	6	16	6
S2	34	457	9	6	19	29	30
S3	18	444	6	1	11	37	7
S4	19	349	4	8	7	26	13
S5	10	222	1	5	4	15	6
S6	18	308	7	6	5	24	13
S7	15	167	7	7	1	9	0
S8	22	477	7	8	7	27	12
S9	19	260	9	6	4	13	5
S10	15	287	4	2	9	26	4
S11	22	273	10	2	10	19	15
S12	18	216	8	2	8	14	14
S13	15	165	10	1	4	11	2
S14	19	379	6	1	12	18	12
S15	16	267	3	2	11	21	1
AVERAGE:	**18,6**	**297,06**	**6,66**	**4,06**	**7,86**	**20,33**	**9,33**

As it can be seen in Table 8 which displays the written post-task analysis of the experimental group, students used 18,6 sentences and 297,06 words on average. Regarding the type of structures, they used more compound structures compared to their simple and complex structures. The average number of linking words that they used is 20,33. When their data were analysed, it was revealed that the average number of correct sentences that they used is 9,33 out of 18,6 sentences.

Table 9. Written Post-Task Analysis of a Control Group

Student Number	Number of sentences	Number of words	Number of simple structures	Number of complex structures	Number of compound structures	Number of linking words	Correct number of sentences
S1	5	287	0	1	4	23	0
S2	12	168	5	3	4	14	2
S3	21	362	5	8	8	26	9
S4	23	320	5	4	14	19	14
S5	3	42	3	0	0	2	1
S6	28	384	10	3	15	27	23
S7	20	312	7	7	6	21	8
S8	12	202	3	2	7	19	4
S9	23	391	2	8	13	27	12
S10	21	304	7	5	9	18	5
S11	27	385	6	9	12	35	11
S12	11	289	2	6	3	16	3
S13	21	260	6	4	11	19	12
S14	21	253	7	6	8	15	15
S15	20	487	1	3	16	45	12
AVERAGE:	**17,86**	**296,4**	**4,6**	**4,6**	**8,66**	**21,73**	**8,73**

Table 9 demonstrates the data gathered from control group students' written post-task analysis. The average number of sentences they used is 17,86 and the number of words is 296,4. Their number of compound structures is twice as much. They used 21,72 linking words on average. In terms of the correct sentences, they have only 8,73 number of correct sentences out of 17,86.

Regarding the scores in students' final written tasks, experimental group students used more sentences and more words in their outputs. Even though students in the experimental group used more simple structures, students in the control group used more complex and compound structures. They also used more linking words compared to the experimental group.

Based on both group of students' post-test results, correct number of sentences out of the number of sentences students used in their final written tasks were compared below in the table.

Table 10. Experimental and Control Groups' Number of Correct Sentences

Student Number	**Experimental Group**	**Experimental Group**	**Student Number**	**Control Group**	**Control Group**
	Post Written Task (Number of sentences)	**Post Written Task (Correct number of sentences)**		**Post Written Task (Number of sentences)**	**Post Written-Task (Correct number of sentences)**
S1	19	6	S1	5	0
S2	34	30	S2	12	2
S3	18	7	S3	21	9
S4	19	13	S4	23	14
S5	10	6	S5	3	1
S6	18	13	S6	28	23
S7	15	0	S7	20	8
S8	22	12	S8	12	4
S9	19	5	S9	23	12
S10	15	4	S10	21	5
S11	22	15	S11	27	11
S12	18	14	S12	11	3
S13	15	2	S13	21	12
S14	19	12	S14	21	15
S15	16	1	S15	20	12
AVERAGE:	**18,6**	**9,3**		**17,8**	**8,7**

The table above shows that students in the experimental group used more sentences compared to the control group students. Regarding the correct sentences out of total

number of sentences, experimental group students used more accurate sentences. Experimental group students used 18,6 sentences in average and 9,3 of them were accurate. Compared to the experimental group, the average number of sentences in the control group was 17,8 and only 8,7 of them were accurate. The differential rate between two groups is 6,45 %. The following bar chart represents the number of correct sentences of each group.

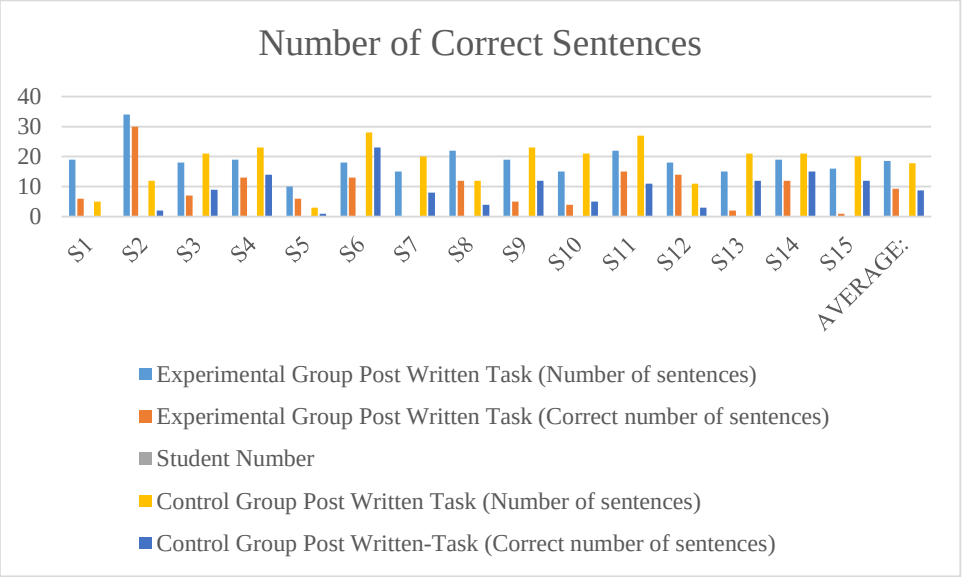


Figure 8. Experimental and Control Group Students' Number of Correct Sentences

The analysis of this data shows us that students in the experimental group showed better performance in their written tasks in terms of the use of correct sentences. Armstrong (2016) also mentioned the significance of having an organized set of objectives that results in planned and appropriate instruction in his study. In parallel with his finding, the result of this data supports that when students are treated with more organized instruction, they show better performance in using the foreign language.

4.4 Comparison of the Results of the Experimental and Control Groups

The following table reveals the impact of integrating Bloom's taxonomy and critical thinking skills on grammar teaching. The table below summarizes the students' final performances after getting grammar instruction together with Bloom's taxonomy and critical thinking skills.

Table 11. Post-test Results of both Experimental and Control Groups

Student Number	Experimental Group Post-test	Experimental Group Post Written Task (Correct number of sentences)	Student Number	Control Group Post-test	Control Group Post Written-Task (Correct number of sentences)
S1	58	6	S1	53	0
S2	57	30	S2	52	2
S3	60	7	S3	48	9
S4	28	13	S4	48	14
S5	52	6	S5	34	1
S6	51	13	S6	58	23
S7	52	0	S7	54	8
S8	54	12	S8	39	4
S9	55	5	S9	51	12
S10	53	4	S10	45	5
S11	49	15	S11	43	11
S12	49	14	S12	48	3
S13	36	2	S13	55	12
S14	49	12	S14	54	15
S15	43	1	S15	53	12
AVERAGE:	**49,73**	**9,3**		**49**	**8,73**

The data shows that students in the experimental group got better grades in both grammar test and written task than the control group. The differential rate between two groups is 1,46 % regarding the post-test results and 6,12 % regarding the correct sentences that they used in their final written tasks. The study conducted by Aşlıoğlu (2008) highlights the importance of teaching critical thinking skills and suggested that critical thinking must be started teaching in primary school and should be considered as

a life-long process. This study also revealed that when critical thinking skills were integrated into grammar teaching in foreign language classrooms, students' success rates showed difference in a positive way compared to the one who were treated with explicit grammar teaching.

Additionally, when both group of students' written outputs were analysed, it can be suggested that integrating Bloom's taxonomy and critical thinking skills into grammar teaching has a positive impact on students' language learning proficiency which supports this study's first hypothesis. The second research question is whether there is a significant difference between using Bloom's taxonomy and critical thinking and explicit grammar teaching. The results of the data of the study revealed that even though experimental group performed better in both tests, there is no significant difference between the experimental and the control group.

4.5 Results of the Experimental group

The experimental group's pre-test and post-test results were also analysed for each student and the following table shows the success rates of each student in the experimental group.

Table 12. Success Rates of Experimental Group Students in Pre- and Post-tests

Student Number	**Experimental Group**		
	Pre-test	**Post-test**	**Success Rate (%)**
S1	40	58	45 %
S2	52	57	9,61 %
S3	62	60	-3,22 %
S4	26	28	7,69 %
S5	48	52	8,33 %
S6	44	51	15,90 %
S7	26	52	99,99 %
S8	35	54	54,28 %
S9	40	55	37,5 %
S10	39	53	35,89 %
S11	39	49	25,64 %
S12	36	49	36,11 %
S13	31	36	16,12 %
S14	34	49	44,11 %
S15	32	43	34,37 %
AVERAGE:	**38,93**	**49,73**	**31,12 %**

The table above demonstrates the rates of success for each student. As it can be clearly seen, all students except one improved their grammar competence and the average success rate between their pre-test and post-test's is 31,12 % which clearly provides evidence for the first research question which asks whether using Bloom's taxonomy and critical thinking skills has an impact on students' language learning proficiency. Norris (1985) also supported the idea that teachers should teach students how to teach critically in order to make them question, challenge, and demand reasons and justifications for the things that they learn. That is to say, when students question and

use critical thinking in learning a language, they can be more competent in learning a language and improve their performance while using the target language.

The following table shows the success rates of experimental group students based on their written tasks.

Table 13. Success Rates of Experimental Group Students in Written Tasks

Student Number	**Experimental Group / Number of correct sentences**		
	Pre-task	**Post-task**	**Success Rate (%)**
S1	7	6	-14,28 %
S2	12	30	149,99 %
S3	7	7	0 %
S4	5	13	160 %
S5	8	6	-25 %
S6	11	13	18,18 %
S7	5	0	-100 %
S8	11	12	9,09 %
S9	12	5	-58,33 %
S10	2	4	100 %
S11	5	15	200 %
S12	17	14	-17,64 %
S13	8	2	-75 %
S14	9	12	33,33 %
S15	5	1	-80 %
AVERAGE:	**8,2**	**9,3**	**20,02 %**

Regarding the results, the average success rate of this group is 20,02 % on the written task which also provides an evidence for the first hypothesis of this research. Pishghadam and Ebrahimi (2019) also conducted a study on teaching grammar through applicative teaching which combines application and reflection in teaching students how

to think critically and they suggested that applying critical thinking skills to teach grammar in an applicative way supports students' creative thinking skills and leads to their learning the grammatical rules better. Their study also supported the findings of this study in terms of integrating critical thinking skills into grammar teaching and students' language learning competence.

4.6 Results of the Control Group

The pre-test and post-test results of each student in the control group were analysed and the following table shows the success rates of each student in the experimental group.

Table 14. Success Rates of Control Group Students in Pre- and Post-tests

Student Number	**Control Group**		
	Pre-test	**Post-test**	**Success Rate (%)**
S1	55	53	-3,63 %
S2	32	52	62,5 %
S3	40	48	20 %
S4	47	48	2,12 %
S5	28	34	21,42 %
S6	40	58	45 %
S7	48	54	12,49 %
S8	39	39	0 %
S9	43	51	18,60 %
S10	27	45	66,66 %
S11	37	43	16,21 %
S12	34	48	41,17 %
S13	47	55	17,02 %
S14	38	54	42,10 %
S15	49	53	8,16 %
AVERAGE:	**40,26**	**49**	**24,65 %**

The table displays the success rate of students in the control group. As it can be seen clearly, there is no significant improvement in students' success based on a grammar-

based post-test. The differential rate between the pre-test and post-test results is 24,65 %. The table reveals that there is no significant increase in students' grammar competence compared to the experimental group.

Table 14 demonstrates the success rates of control group students in written tasks.

Table 15.Success Rates of Control Group Students in Written Tasks

Student Number	**Control Group / Number of correct sentences**		
	Pre-task	**Post-task**	**Success Rate (%)**
S1	7	0	-100 %
S2	9	2	-77,77 %
S3	6	9	49,99 %
S4	8	14	75 %
S5	13	1	-92,30 %
S6	7	23	228,57 %
S7	19	8	-57,89 %
S8	12	4	-66,66 %
S9	24	12	-49,99 %
S10	10	5	-50 %
S11	11	11	0 %
S12	3	3	0 %
S13	13	12	-7,69 %
S14	11	15	36,36 %
S15	13	12	-7,69 %
AVERAGE:	**11**	**8,73**	**-8 %**

The results presented in the table above reveals that students in the control group had no improvement in using the language. On the contrary, there is a decrease in their average success rate. Only four students out of 15 used more accurate sentences compared to their previous task. Two students showed no improvement and nine students used more inaccurate sentences. The average success rate of the control group is -8 % regarding

the written tasks. Cai (2020) conducted a similar study which aims to create teaching materials to improve students' motivation and ability to learn English by using a handbook based on Bloom's taxonomy. The similar results have been found that using this handbook improved students' motivation and achievement in learning English.

The figure 5 below summarizes the final outcome of this study. As the figure clearly demonstrates, students who were treated with Bloom's taxonomy integrated with critical thinking skills in their grammar lessons showed more increase in their success both in post-tests and written tasks. On the contrary, students who were treated with explicit grammar teaching showed no significant improvement in their grammatical competence.

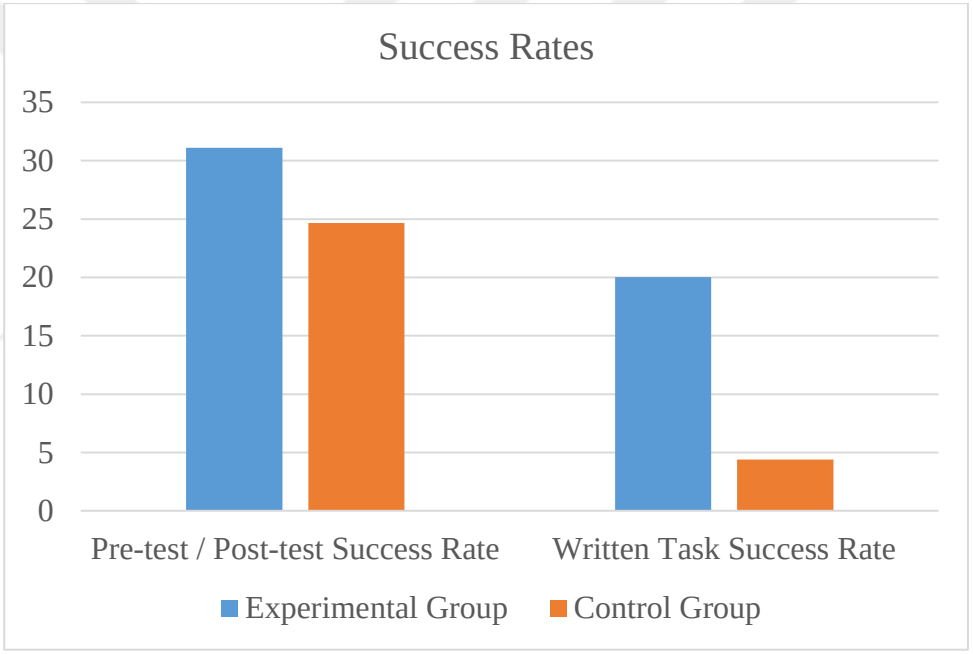


Figure 9. Success Rates of Experimental and Control Group Students

In accordance with the overall results of this study, the first research question was asked to find out whether Bloom's taxonomy and critical thinking skills have an impact on students' language learning proficiency or not. The results revealed that integrating Bloom's taxonomy and critical thinking skills into grammar lessons has a meaningful effect on grammar teaching and students' language learning proficiency. The second research question had the aim of exploring if there is a significant difference between using Bloom's taxonomy and critical thinking and explicit grammar teaching. In the

light of the analysed data, it was found that there is no significant difference between implementing these different ways of teaching; however, it is an undeniable result that students showed better performance in their post-tests compared to the control group. This leads to the result that when the levels and objectives of the Bloom's taxonomy were implemented in grammar teaching, this makes the knowledge more permanent in students' minds and help them use this information in their products. However, when students are not pushed to think critically and use the information especially grammatical knowledge, this makes the knowledge that they learn disappear through time.

5. CONCLUSION

This chapter presents a conclusion of the study with the summary of its aims and findings and provides pedagogical implications for teachers along with the suggestions for further research in the light of the findings.

5.1 Summary of the Study

This study has been conducted with the aim of determining whether using Bloom's taxonomy along with critical thinking skills in grammar teaching has a positive impact on students' language learning proficiency or not and if there is a significant difference between grammar teaching based on Bloom's taxonomy with critical thinking skills and explicit grammar teaching.

This research was designed to be conducted as an experimental study with a pre-test and a post-test which emphasized the analysis of quantitative data gathered from an experimental and a control group who were the students at the Preparatory School of Foreign Languages Department located in Istanbul. The experimental group (N=15) was treated with Bloom's taxonomy together with critical thinking based grammar teaching and the control group (N=15) was instructed with the explicit grammar teaching. The same pre-test was applied to both groups at the beginning of the study to measure their grammatical competence and a written task was also given to the students to see their grammar use in a context. After 15-week treatment, the same post-test and another piece of written task were given to both groups of students to find out the outcome whether applying Bloom's taxonomy together with critical thinking skills has an impact on students' grammatical competence or not.

As for the findings of this study, the average scores of the experimental group students in the pre-test were lower than the control group at the beginning of this study. It can be stated that the proficiency rate of the control group was higher than the experimental group. When their written tasks were analysed, it can be inferred that control group students used more sentences and more words than the experimental group. Additionally, their sentences were more accurate than the experimental group before the implementation of Bloom's taxonomy and critical thinking skills in grammar teaching.

This result clearly shows us that the control group students performed better in their written tasks at the beginning of this study.

When the treatment process finished, students were given a post-test and another written task. Regarding the results of this data, post-test scores of the experimental group were slightly higher than the control group even though their grammatical competency was lower at the beginning of the study. Regarding their written outputs, they also had more accurate sentences compared to the control group.

Additionally, students' scores in each group were analysed on individual basis. The results show that all students in the experimental group except one improved their grammar competence in post-test. However, there is no significant improvement in students' success in the control group compared to the experimental group.

It can be concluded that this study found evidence for the first research question and it can be suggested that using Bloom's taxonomy together with critical thinking skills has a positive impact on students' grammatical competence; however, the second research question aimed to find out whether there is a significant difference between using Bloom's taxonomy and critical thinking and explicit grammar teaching and it can be asserted that there is no significant difference between implementing these different ways of teaching.

5.2 Pedagogical Implications

In accordance with the findings of the study, this study suggests some pedagogical implications. Firstly, following Bloom's taxonomy and critical thinking skills in foreign language teaching guides teachers to develop higher levels of thinking process which are evaluating, analysing, and creating. In addition, it gives both teachers and students an opportunity to learn and practice a range of thinking which are critical thinking and creative thinking in order to develop students' intellectual ability or thinking capacity**.**

Another pedagogical implication of this research is that using Bloom's taxonomy in language teaching creates organization in lessons and in teaching. As it establishes and clarifies learning goals for the students and the teachers to achieve for planning and

delivering instruction, it helps teachers to design appropriate activities and assessments which are aligned with the learning objectives.

In addition, using the taxonomy in teaching helps teachers or syllabus designers to arrange a curriculum and classroom activities to improve the learning process from recalling information to higher level of thinking by making the students create their own output.

Lastly, Bloom's taxonomy guides teachers to think and analyse their own teaching and students' learning. As they understand the objectives of their lessons, they can plan their lessons accordingly. The difficulty of tasks, assessments, or activities can be evaluated and the complexity of the questions or tasks can be changed.

5.3 Recommendations for Further Research

This study has some recommendations to be taken for consideration for further research. First, the number of participants (N=30) who took part in this study was limited. The size of the sample can be increased in future studies to make generalizations about the whole students learning English as a foreign language in non-English environment settings. Studies with higher number of participants can make more contributions to the field of English language teaching. In addition, this study was conducted within a limited time which is 14 weeks due to the curriculum of the school. Extended study periods may disclose different results on this subject. A qualitative perspective may also be included to the study to provide profound insight in further studies. Incorporating data on teachers' observations and feedback would be helpful for a deeper understanding of the impact and the implementation of Bloom's taxonomy and critical thinking skills in grammar teaching.

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APPENDICES

Appendix - 1 Etik Kurulu Kararı

Bu belge, Yükseköğretim Kurulu tarafından 19.01.2021 tarihli “Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge” ile bildirilen 6689 Sayılı Kişisel Verilerin Korunması Kanunu kapsamında gizlenmiştir.

Appendix - 2 Bloom's Revised Taxonomy Verb Chart

REVISED Bloom's Taxonomy Action Verbs

Definitions	I. Remembering	II. Understanding	III. Applying	IV. Analyzing	V. Evaluating	VI. Creating
Bloom's Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	• Choose • Define • Find • How • Label • List • Match • Name • Omit • Recall • Relate • Select • Show • Spell • Tell • What • When • Where • Which • Who • Why	• Classify • Compare • Contrast • Demonstrate • Explain • Extend • Illustrate • Infer • Interpret • Outline • Relate • Rephrase • Show • Summarize • Translate	• Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organize • Plan • Select • Solve • Utilize	• Analyze • Assume • Categorize • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List • Motive • Relationships • Simplify • Survey • Take part in • Test for • Theme	• Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criteria • Criticize • Decide • Deduct • Defend • Determine • Disprove • Estimate • Evaluate • Explain • Importance • Influence • Interpret • Judge • Justify • Mark • Measure • Opinion • Perceive • Prioritize • Prove • Rate • Recommend • Rule on • Select • Support • Value	• Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Happen • Imagine • Improve • Invent • Make up • Maximize • Minimize • Modify • Original • Originate • Plan • Predict • Propose • Solution • Solve • Suppose • Test • Theory

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Appendix - 3 Pre- and Post- Tests

Complete the dialogues below by choosing the correct option (A–D). An example (0) has been done for you.

0 **Emily:** What do you do at the weekends, Yara?
Yara: My sister and I _A_ going to the cinema.
A like
B like to
C want
D want to

1 **Manager:** Where's Mr Davidson?
Assistant: Oh, he's ___ London today.
A in
B on
C to
D at

2 **Amirah:** Do you like cats?
Chris: No, but there ___ lots of other animals I like.
A is
B be
C are
D was

3 **Andrew:** Where ___ Alicia come from?
Martin: I think she's from the United States.
A is
B do
C are
D does

4 **Teacher:** Tell me something about your parents, Lucas.
Student: My mother and father ___ both very tall.
A is
B isn't
C are
D aren't

5 **Ayla:** That's a nice table, Sophie! Is it new?
Sophie: Oh no, it's my ___ old dining table.
A mother
B mothers
C mother's
D mothers'

6 **Emma:** What do you do after school?
Chloe: I see my friends. Do you visit people, too?
Emma: No, I ___ go out.
A often
B never
C always
D sometimes

7 **Katie:** Is Charlotte at school today?
Laura: No, she ___. She's not well today.
A isn't
B aren't
C doesn't
D hasn't

8 **Alex:** I'd like to make a cake. ___ eggs have we got?
Andrea: Three, I think. Let me check.
A How big
B How much
C How many
D How long

9 **Ifrah:** Which bus goes to the hospital?
Antonia: ___ the 236. It stops outside
A Get
B Got
C Gets
D Getting

10 **Father:** Are we ready to go?
Daughter: No, Mum can't find ___ hat.
A its
B his
C her
D their

11 **Shop Assistant:** Can I help you?
Customer: Yes, I'd like to buy ___ trousers.
A a
B an
C this
D these

12 **Mother:** Where's that fish I bought? It was on the table.
Daughter: Oh no! The cat ___ it.
A eat
B eats
C is eating
D are eating

13 **Amanda:** I like your new sofa
Fahima: Thanks. It's ___ comfortable than the other one we had
A too
B very
C much
D more

14 **Alicia:** I'm going to the supermarket. Do you want anything?
Peter: Could you get ___ milk, please?
A a
B any
C some
D every

15 **Karina:** When do you want to play football?
Aniqa: I ___ to play tomorrow, because I don't need to go to work.
A like
B likes
C liked
D 'd like

16 **Manisha:** What did you do at the weekend?
Nicola: I ___ tennis with my friend on Saturday.

A play
B played
C plays
D playing

17 **Wife:** Have we got any cheese in the fridge?
Husband: No, we haven't. I'm ___ buy some this afternoon.

A go
B go to
C going
D going to

18 **Laura:** Where ___ you last Tuesday? I tried to phone you.
Beatriz: Oh, I was visiting my grandmother. I didn't have my phone with me.

A were
B was
C are
D is

19 **Miriam:** Are you coming to my party on Tuesday?
Brian: I'm really sorry, but I ___ to take my daughter to the airport.

A has
B had
C have
D having

20 **Saif:** Why do you like running?
Isabella: Because it's ___ way to keep fit.

A best
B better
C the best
D the better

21 **Anna:** Have you lived here a long time?
Stefan: Yes, over 40 years. I know ___ of people in this town.

A any
B lots
C more
D most

22 **Josef:** Why didn't you come to the cinema last week?
Chloe: I wanted to but I couldn't. I ___ studying for that test we had on Monday.

A was
B were
C am
D been

23 **Anna:** That bird's on the garden table again. I think it's hungry.
Juliana: Yes, look! It ___ eat the bread we put there.

A is
B will
C goes to
D is going to

24 **Sophie:** How long ___ married?
Ying Yue: Two years. I met my husband when I was working in New York.

A had you got
B did you get
C have you been
D are you being

25 **David:** Have you ___ that new film yet?
Susanna: No, I haven't. We could go on Thursday if you like?

A see
B saw
C seen
D seeing

26 **Shop Assistant:** Excuse me, please. Could I get past?
Customer: Oh, I'm sorry. I'm getting in the way, ___ I?

A don't
B aren't
C can't
D haven't

27 **Wife:** Advertising is a big business for musicians.
Husband: Yes, musicians ___ a lot of money for writing short pieces of music.

A pay
B paid
C are paid
D are paying

28 **Son:** Mum, I'd really like a guitar. Can I have one?
Mother: OK, but if we buy one you ___ have to practise playing it.

A will
B can
C could
D must

29 **Juliana:** Do you like Brazilian coffee?
Miriodere: No I don't, because it's ___ strong.

A too
B such
C much
D enough

30 **Matthew:** Would you like anything from the shop?
Alicia: Yes, I'd like one of ___ celebrity magazines, please.

A most recent
B more recent
C the most recent
D the more recent

31 **Daughter:** Mum, my computer is broken again. I really need a new one.
Mother: I ___ buy one if we had the money, but it's not possible right now.

A will
B may
C should
D would

32 **Mother:** ___ you packed your suitcase yet? We're leaving early tomorrow morning.
Son: I'll do it later. It won't take long.

A Did
B Have
C Will
D Are

33 **Lucas:** Do you play the piano, Natasha?
Natasha: Well, I ___ play when I was younger, but I'm not sure I remember now.

A can
B can't
C could
D couldn't

34 **Martina:** What did the doctor say about your stomach pains?
Padma: He asked me what I ___ for the last two days.

A eat
B had eaten
C was eating
D would eat

35 **Daughter:** Everyone has arrived apart from Pamela.
Mother: Don't worry, she phoned me this morning and said she ___ be a bit late.

A can
B must
C should
D would

36 **Vincent:** Did you see the weather forecast? It's going to be extremely hot this weekend.
Pauline: I know, I can't believe it! It ___ since Monday.

A rains
B has been raining
C is raining
D was raining

37 **Ameena:** What colour are you going to paint the living room?
Charlotte: I ___ probably choose something bright, like yellow.

A will
B may
C can
D might

38 **Victor:** I'd love to go back in history to see how people lived hundreds of years ago.
Simon: Me too! If I ___ choose, I'd probably travel to ancient Rome.

A can
B will
C could
D would

39 **Stephen:** The concert was fantastic yesterday. You ___ have come.
Yuuto: I know. I wanted to, but I had to work late.

A must
B could
C ought
D should

40 **Katie:** Would you like to go sightseeing or to the beach this afternoon?
Matthew: I don't mind, I'll let you decide.
Katie: OK, let's go sightseeing, ___ we?

A should
B shall
C might
D would

41 **Amanda:** It said on the news that the president also owns all the national newspapers.
Andrew: That ___ be right! I don't think that's true.

A must
B can't
C won't
D would

42 **Assistant:** That meeting was really difficult. What would you have done if you ___ in my position?
Manager: Oh, I think you managed it very well.

A are
B were
C had been
D would be

43 **Natalia:** My new smartphone doesn't seem to work.
Katie: Oh dear! Perhaps you should take it ___ and ask for a refund.

A up
B out
C away
D back

44 **Chris:** I wish I could be with our cousins …
Alison: Me too! By this time tomorrow they ___ on a Greek beach while we're revising for our history test.

A sunbathe
B will sunbathe
C will be sunbathing
D will have sunbathed

45 **Son:** Are you OK, Mum? You don't seem very relaxed.
Mother: I just wish I ___ an aisle seat so that I could get up and walk around more easily.

A had chosen
B have chosen
C would choose
D should choose

46 **Nicola:** I love this picture, but won't it cost a fortune?
Victor: No, it's just a copy. The original, ___ is a portrait of the artist's friend, sold for €4 million!

A whose
B which
C whom
D that

47 **Laura:** I can't believe how talented this artist was.
Emily: I know, it's amazing. ___ he was almost 90 when he did them, his paintings are beautiful.

A Since
B Besides
C Although
D Therefore

48 **Andrea:** I want to buy some new shoes for the winter.
Shan: Well, I ___ looking for a new pair of boots for weeks, but I can't find anything I like.

A am
B was
C had been
D have been

49 **Client:** I don't have much money – just enough to ___ .
Accountant: Well, let me suggest a way of helping you save more.

A get by
B pay off
C do with
D make up

50 **Pablo:** In April next year I ___ here for ten years exactly.
Alison: Wow! It really doesn't seem that long.

A will live
B will be living
C am going to live
D will have been living

51 **Student:** Is it true that it took Bell and Watson ages to invent the telephone?
Teacher: Yes. When they finally succeeded, they ___ on it for about 30 years.

A must work
B had been working
C have worked
D would be working

52 **Rachel:** This would be a lovely place to sit on a dry day.
Natasha: Yes, I know. I just wish the rain ___ .

A would stop
B has stopped
C will have stopped
D would be stopping

53 **Student:** What's today's lesson going to be about?
Teacher: Today we're going to learn about a tribe ___ descendants live in Lima, the capital of Peru.

A who
B which
C whose
D whom

54 **Andrea:** Did your town have a good market?
Katie: Yes. When I was young we ___ there every Saturday looking for bargains.

A had gone
B would go
C were going
D had been going

55 **Daughter:** Joanna has been really supportive. I'm so lucky to have her as a friend.
Mother: Yes. Just think – if you hadn't sat next to her in class at school, you ___ so close now.

A won't be
B wouldn't be
C wouldn't have been
D aren't

56 **David:** Did you see the headline this evening?
Nicola: Yes – the Prime Minister was ___ to resign today.

A charged
B argued
C struggled
D forced

57 **Student:** I'm concerned about the chemical test results I've just had from the river.
Professor: It ___ be a good idea to check the acid levels as well then.

A must
B should
C might
D ought

58 **Aamir:** They've just announced that our train has been delayed.
Laura: That's annoying. We ___ have rushed to get here after all.

A needn't
B could
C should
D mustn't

59 **Liam:** So, your Dad's got a laptop!
Cian: Yes, I bought it for him last year – until then he ___ a typewriter!

A used
B has used
C has been using
D had been using

60 **Isabella:** The flight is fully booked, so I won't be able to go to Barbados next week.
Safia: If you ___ the ticket sooner, you'd have found a seat.

A had booked
B were booking
C booked
D would have booked

61 **Receptionist:** You ___ taken a taxi to the hotel since you arrived so late.
Customer: It was OK, actually. There was a direct bus service from the airport.

A will have
B should have
C might have
D would have

62 **Sophie:** Have they finished interviewing for the manager's position yet?
Rafi: No, but they ___ all the candidates by next Friday.

A won't see
B would see
C haven't seen
D will have seen

63 **Athlete:** ___ hard I try, I can't run any faster.
Coach: You've improved a lot. I wouldn't worry about it.

A Though
B Whereas
C However
D Considering

64 **Laura:** That's a really beautiful painting. The colours are so vivid.
Jeremy: Yes, it's amazing to think it was lost for years and ___ .

A must be restored
B had to be restored
C has been restoring
D would be restoring

65 **Charlotte:** I saw the photos from the film festival. Was that you with the actor from *The Hobbit*?
Niall: Yes, it was! ___ did I imagine I would ever actually meet him.

A Not
B Much
C Hardly
D Little

66 **Pauline:** I hear you got soaked on the golf course this morning.
Chris: Yes. I wish I ___ listened to the weather forecast.

A had
B have
C would have
D should have

67 **Laura:** How was the meeting?
Ricardo: It finished late because Victor didn't arrive until 5 pm. He told me he ___ been given the wrong directions.

A has
B had
C should have
D would have

68 **Andrew:** I picked up some of that cat food you wanted.
Pedro: Oh good. Once ___ to these new cat biscuits, they won't want to go back to the other stuff.

A we've switched
B we'll be switching
C we'll have switched
D we've been switched

69 **Antonia:** Has your son done well in his exams?
Phillip: Yes. Only once ___ he wasn't sufficiently prepared, but he can take that one again.

A he found
B he has found
C did he find
D could he find

70 **Son:** I had a bit of a stomach ache this morning.
Mother: Oh dear! Well, I did say you ___ eaten that chicken last night.

A wouldn't have
B couldn't have
C mustn't have
D shouldn't have

Appendix - 4 Pre- Written Test

Name-Surname:

Please write a paragraph including the following information about yourself.

- Your name, age, department, hometown, family
- Your interests / your hobbies / your free time activities
- 3 things to describe yourself
- Describe how you spent your summer holiday
- Your future plans

Appendix - 5 Post- Written Test

Name-Surname:

Please write an essay based on the following topic below using 300-350 words.

- Talented children should be pushed hard by their parents in order to succeed. Do you agree or disagree?

Appendix - 6 Students' Written Output Analysis Chart

Student Number	Number of sentences	Number of words	Number of simple structures	Number of complex structures	Number of compound structures	Number of linking words	Correct number of sentences
S1							
S2							
S3							
S4							
S5							
S6							
S7							
S8							
S9							
S10							
S11							
S12							
S13							
S14							
S15							
AVERAGE:							

CIRRICULUM VITAE

Müge SAĞKOL

EDUCATION

Degree	*Year*	*Institution*
M.A.	2014	Yeditepe University, Graduate School of Educational Sciences, English Language and Education
B.A.	2011	Middle East Technical University, Faculty of Education, Teaching English as a Foreign Language

WORK EXPERIENCE

Year	*Place*	**Enrolment**
2015 -	Maltepe University	English Language Instructor
2011-2015	Yeditepe University	English Language Instructor

MEMBERSHIPS

Year	*Institution*
2011	METU Alumni Association

PUBLICATIONS

The research and presentation on ‘Students’ Perspectives on the Future of English as an International Language’ (‘Celebrating Diversity’ conference – Middle East Technical University)