





**AN EXPERIMENTAL STUDY ON IMPROVING  
READING COMPREHENSION SKILLS OF TEACHER TRAINEES  
AT GAZI UNIVERSITY ENGLISH LANGUAGE TEACHING  
DEPARTMENT THROUGH LITERATURE-BASED  
CRITICAL THINKING ACTIVITIES**

**ÜNAL ŞENOL**

**M.A. THESIS  
ENGLISH LANGUAGE TEACHING PROGRAM**

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## TELİF HAKKI ve TEZ FOTOKOPİ İZİN FORMU

Bu tezin tüm hakları saklıdır. Kaynak göstermek koşuluyla tezin teslim tarihinden itibaren 6 (altı) ay sonra tezden fotokopi çekilebilir.

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İngilizce Adı : An Experimental Study on Improving Reading Comprehension Skills of Teacher Trainees at Gazi University English Language Teaching Department through Literature-Based Critical Thinking Activities

## **ETİK İLKELERE UYGUNLUK BEYANI**

Tez yazma sürecinde bilimsel ve etik ilkelere uyduğumu, yararlandığım tüm kaynakları kaynak gösterme ilkelerine uygun olarak kaynakçada belirttiğimi ve bu bölümler dışındaki tüm ifadelerin şahsıma ait olduğunu beyan ederim.

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## JÜRİ ONAY SAYFASI

Ünal ŞENOL tarafından hazırlanan “An Experimental Study on Improving Reading Comprehension Skills of Teacher Trainees at Gazi University English Language Teaching Department through Literature-Based Critical Thinking Activities” adlı tez çalışması aşağıdaki jüri tarafından oy birliği/ oy çokluğu ile Gazi Üniversitesi Yabancı Diller Eğitimi Anabilim Dalı’nda Yüksek Lisans tezi olarak kabul edilmiştir.

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**Prof. Dr. Tahir ATICI**

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*To my family*

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Ünal ŞENOL



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**ÖZ**

Bu çalışma Gazi Üniversitesi İngilizce öğretmenliği bölümünde okuyan öğretmen adaylarının okuduğunu anlama becerilerinin edebiyat temelli eleştirel düşünme stratejileri yoluyla geliştirilmesinin incelenmesi amacıyla yapılmıştır. Çalışmada, 2013-2014 Eğitim Öğretim yılı Gazi Üniversitesi İngilizce öğretmenliği 3'üncü sınıf öğrencilerinden oluşan deney ve örneklem grubundan toplam 45 öğrenci yer almıştır. Veri toplama araçları için uzman görüşü alınmıştır. Nitel veriler Okuduğunu Anlama Becerisi ön ve son testi, Cornell Eleştirel Düşünme ön ve son testi ve öğrenci anketinden oluşmaktadır. Çalışmanın başında deney ve örneklem grubu öğrencilerinin okuduğunu anlama ve eleştirel düşünme düzeylerini belirlemek amacıyla Okuduğunu Anlama ve Cornell Eleştirel Düşünme ön testleri uygulanmıştır. Ardından, deney grubundaki öğrencilere “Edebiyat ve Dil Öğretimi I” dersi içerisinde 7 hafta süresince edebiyat temelli eleştirel düşünme stratejilerinin olduğu bir ders programı uygulanmıştır. Uygulama sonrasında her iki gruba Okuduğunu Anlama ve Cornell Eleştirel Düşünme Testi son test olarak uygulanmıştır. Ayrıca, deney grubu öğrencilerine öğrenci anketi uygulanarak uygulamada gerçekleştirilen etkinliklere ilişkin görüşleri alınmıştır. Verilerin analizi sonucunda öğretmen adaylarının okuduğunu anlama becerilerini geliştirmede edebiyat temelli eleştirel düşünme stratejilerinin kullanılmasının kayda değer bir katkı sağladığı sonucuna ulaşılmıştır. Bulgular sonucunda, ileride yapılabilecek çalışmalar için önerilerde bulunulmuştur.

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Danışman : Yrd. Doç. Dr. Semra SARAÇOĞLU

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**ABSTRACT**

This study was conducted in order to examine whether reading comprehension levels of teacher trainees at Gazi University English Language Teaching Department can be developed through literature-based critical thinking strategies. Totally 45 3<sup>rd</sup> grade teacher trainees studying at Gazi University, English Language Teaching Program participated in this study in the 2012-2013 Fall semester. The data collection instruments were presented to the experts. The qualitative data were gathered through Reading Comprehension Test, Cornell Critical Thinking Test, and student questionnaire. At the beginning of the study, the pre Reading Comprehension Test and pre Cornell Critical Thinking Test were carried out on both experimental and control group. Then, in “Literature and Language Teaching I” course the lessons were designed with literature-based critical thinking strategies. The treatment process lasted 7 weeks. After the treatment process, post Reading Comprehension and Cornell Critical Thinking Tests were applied to both groups. Besides, student questionnaire was conducted to students in experimental group to find out their opinions about the activities implemented into course. The data analyses revealed that conducting literature-based critical thinking strategies considerably contributed to improving teacher trainees’ reading comprehension levels. Suggestions are made for further studies based on the findings.

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## **LIST OF ABBREVIATIONS**

EFL	: English as a Foreign Language
ELT	: English Language Teaching
L1	: Mother Language
L2	: Second Language or target language

# **CHAPTER 1**

## **INTRODUCTION**

### **1.0 Introduction**

In this section, initially, the problem statement of the study will be presented. Subsequently, the aim of the study, the importance of the study, assumptions, limitations, and definitions will be clarified.

### **1.1 Statement of the problem**

We live in a century which has been described as an “Information Era”. This refers to the age in which information is rapidly changing and developing day by day. To be able to keep up with such increasing changes and developments, individuals should send and receive messages effectively and negotiate meaning. As an individual, human beings are constantly receiving a great deal of data from different sources of information all over the world, and this large bulk of information necessitates him/her to select the data through thinking critically. The same is true for language learners. They are constantly exposed to different types of texts, which require them to be able to use reading as well as thinking skills simultaneously. As far as language education is concerned, enabling students to become good language learners has always occupied the minds of authorities, and they have been attempting to find easy ways to facilitate it.

Elder and Paul (2004, p. 37) pointed out that “to learn well, one must read well”. Likewise, Cook (1991, p. 23) regarded reading primarily as a thinking process and highlighted the importance of engaging the students in talking about the text they read while using reading strategies. In order to understand the text and facilitate this complex interaction, readers need to be critical thinkers: that is to learn to value their own thinking, to compare their thinking and their interpretations with others, and to revise or reject parts of that process when it is appropriate (Collins, 1993, p. 2).

To some educators, talking about critical thinking skills may seem like just another fad that has had its day. However, if critical thinking is a fad, it is one that needs to be kept alive

and growing. As Beaumont states (2010, p. 428) in his article “A sequence of critical thinking tasks”, trend or not, critical thinking rightly remains at the forefront of education today.

In the educational fields, critical thinking has recently been noteworthy, and it can be easily seen that students need critical thinking in their academic lives. They need to solve word problems in Math classes, to conduct scientific inquiry in chemistry, to understand the workings of the human mind in psychology, and to write paragraphs, essays, and term papers across the curriculum. All of these assignments require them to think critically. According to Alagözlü and Süzer (2010, p. 61), the importance of teaching critical thinking skills in any classroom environment has been emphasized recently because it is pointed out that not only for students’ school life success but also for their lifelong success, critical thinking skills need to be teaching.

Much has been said, written and done on critical thinking and its relation to other subjects. In line with the studies confirming the positive relationship between critical thinking ability and language proficiency, this study intends to investigate the impact of implementing critical thinking activities through literature-based texts on reading comprehension ability of ELT department students at Gazi University.

## **1.2 Aim of the study**

Based on the idea that critical thinking is a sine qua non in education and the universities are the responsible educational institutions that will promote critical thinking in classrooms, the aim of this study is to investigate the impact of implementing critical thinking strategies through literature-based texts on reading comprehension ability of ELT department students at Gazi University. It is aimed to prove that students’ reading comprehension level improves via literature-based critical thinking strategies.

This study focuses on the following research questions:

1. What are the reading comprehension levels of the students in the experimental group and control group before the implementation of literature-based critical thinking strategies?
2. What are the critical thinking levels of the students in the experimental group and control group before the implementation of literature-based critical thinking strategies?
3. How can reading comprehension level of the students in ELT Department at Gazi University be improved through literature-based critical thinking strategies?

4. Does teaching literature-based critical thinking strategies cause any differences between the reading comprehension levels of the teacher trainees who were taught these strategies and those who were not?
5. Does teaching literature-based critical thinking strategies cause any differences between the critical thinking levels of the teacher trainees who were taught these strategies and those who are not?
6. How do the teacher trainees reflect on learning literature-based critical thinking strategies?

### **1.3 Importance of the study**

Although there are numerous studies conducted abroad examining critical thinking in various disciplines by those who are aware of the value of critical thinking, the number of the studies carried out on critical thinking is very limited in Turkey, and they are generally descriptive studies. Above all, the primary significance of the study comes from the fact that this study is considered as one of the first studies that tries to improve reading comprehension levels of the students through literature-based critical thinking strategies that will be implemented in literature courses in ELT Departments of the universities in Turkey. Additionally, to keep in step with the constantly changing world conditions, learners need to know how to think and how to use information. Underlying critical thinking skills, the study is considered to help learners improve their thinking skills in order to educate active and critical thinking individuals. Finally, emphasizing critical thinking, the study is expected to make a remarkable contribution to the department's education system, since the primary aim of the study is to improve reading comprehension level via literature-based critical thinking strategies.

### **1.4 Limitations**

The following limitations were taken into consideration while analyzing the data collected:

- The data is limited to 45 participants, who are the teacher trainees of 2013-2014 Fall term Gazi University, Education Faculty English Language Teaching Department.
- The study is limited to seven week's practice.
- Some students who will participate in this study may not follow all of the sessions throughout the semester due to personal reasons, and this may affect their posttest results.
- Quantitative instruments will be used in this study. The validity of these instruments depends on the students' states of mind while answering questionnaires.

### 1.5 Assumptions

While administrating the study, the following assumptions have been considered:

- The experimental and the control groups have similar characteristics at the beginning of the term.
- All of the teacher trainees will respond honestly to the items stated in critical thinking test and reading comprehension test.
- All of the teacher trainees who will answer the questions in questionnaires will reflect their proper points of view.
- It is assumed that the teacher trainees will fill the weekly activity papers voluntarily.

### 1.6 Definitions of Some Key Concepts

**Reading Comprehension:** Meaning constructed as a result of the complex and interactive process related to the reader's critical thinking, prior knowledge, and inference making (Elder and Paul, 2004, p. 37).

**Reading Comprehension Test:** A multiple-choice test including 30 questions, the reliability and validity of which have been made. This test is used to measure the students' reading comprehension skills such as finding the main idea, subordinate idea, judging the text, making inferences in reading comprehension.

**Critical Thinking:** In the study critical thinking is regarded as "a reasonable and reflective thinking focused on deciding what to believe or do" (Ennis, 2005, p. 4).

**Critical Thinking Test:** It provides an assessment of the fundamentals of critical thinking that can be used with content from any subject. The goal of the test is two-folded. The first goal is to provide a reasonable way to pre- and post-test students to determine the extent to which they have learned to think critically. The second goal is to provide a test instrument that stimulates the faculty to teach their discipline so as to foster critical thinking in the students (Çıkrıkçı, 1996, p. 4).

**Literature Courses:** These courses are taught in the second and third classes in ELT Department at Gazi University. The following table contains the names of the courses.

Table 1 Names of the Literature Courses

Literature Courses for the second grade ELT students at Gazi University:	1. English Literature I (First Semester) 2. English Literature II (Second Semester)
Literature Courses for the third grade ELT students at Gazi University:	1. Literature and Language Teaching I (First Semester) 2. Literature and Language Teaching II (Second Semester)





## **CHAPTER 2**

### **REVIEW OF LITERATURE**

#### **2.0 Introduction**

Literature review has been done by searching the previous studies about reading comprehension and critical thinking. In this part, firstly, the importance of reading comprehension in language learning will be presented. Next, the various definitions of critical thinking and its significance in education and language learning will be introduced. Then, the connection between reading comprehension and critical thinking will be discussed. Finally, the relation between literature, foreign language teaching and critical thinking will be presented.

#### **2.1 What is Reading?**

There have been many definitions of the process of reading and a great amount of research has been conducted on EFL reading over the years. The word reading is often used to describe what both beginners do when they are learning to read and what good readers do when they engage in fluent reading. However, these two kinds of readers do different things and thus have different needs as they struggle to become better readers.

What is referred to as reading is a series of activities that presuppose different levels of knowledge, and serves different needs, and purposes (Eskey, 1983, p. 132). Ridgway (1994) describes reading as a form of human cognition, which is the level of generality many researchers are aiming for. Glendinning and Holmström (2004, p. 55) define reading as the transaction of ideas in a text into one's own ideas. To Davidson (2006, p. 105), reading is the process of being able to decode symbols and to realize how these symbols go together. In his book, Adler (1967, p. 21) regards reading as the process of interpreting and understanding what presents itself to the senses in the form of words or other sensible marks.

Some researchers have defined reading in terms of its relation to reading and learning. According to İstifçi (2009, p. 99), reading is a process which leads to success in learning a

foreign language and good language learners are considered to be good readers. Irwin (1991, p. 33) describes reading as a transaction between the reader and the text. The reader creates meanings that are useful in this process. According to Duffy (2009, p. 20), reading is not a random process. It is a system and a set of conventions, which are used to interpret and make sense of the text. In addition, Perkins (1983, p. 121) states that reading is an active process in which the reader brings meaning to the text and the reading process. Much of this meaning comes from the reader's knowledge of the world and previous experience with language.

During the reading process, the reader can go through a lot of experiences. While the reader is looking at the print, decoding the marks on the page, deciding what they mean, and the relation between them, s/he is also thinking about what is being read, its meaning, and how it is related to the materials that were read before. In other words, the reader is dealing with more than one process. (Alderson, 2000, p. 49).

Some people think that reading means the recognition of words. However, true reading requires critical thinking and an understanding of the writer's message. Reading is a process, and a process always involves change. True reading means transforming the words on a paper into meaningful thoughts that is understood and evaluated by the reader. True reading also includes understanding (Hellyer et al., 2001, p. 11).

### **2.1.1 Reading and Constructivism**

Reading is an important skill which depends on constructing knowledge. From a constructivist viewpoint, as Tracey and Morrow (2006, p. 39) suggest, learning occurs when individuals integrate new knowledge with existing knowledge. In this theoretical perspective, the integration of new knowledge with existing knowledge can occur only when the learner is actively involved in the learning process. In other words, constructivism is a theory of learning that emphasizes the active construction of knowledge by individuals. Şen (2000, p. 15) supports this view, stating that, as claimed by constructivism, learning occurs when learners are actively involved in a process of meaning and knowledge construction.

According to Huitt (2009, p. 51), the basic premise of constructivism is that an individual learner must actively build knowledge and skills and that information exists within these built constructs rather than in the external environment. In other words, it is the individual's processing of stimuli from the environment and the resulting cognitive structures that produce adaptive behavior, rather than the stimuli themselves.

Huitt also provides the following principles of constructivist learning:

1. Instruction must be concerned with the experiences and contexts that make the student eager and able to learn (readiness).
2. Instruction must be structured so that it can be grasped by the student without difficulty (spiral organization).
3. Instruction should be designed in order to facilitate extrapolation and / or fill in the gaps (going beyond the information given).

Constructivism states that people can understand only what they have constructed by themselves. Tracey and Morrow (2006, p. 41) define it as a theory which does not intend to demolish but to reconstruct the past and present teaching and learning theories. Its main concern lies in its shedding light on learners as an important agent in the learning process. Therefore, it is the learner who interacts with his or her environment and gains an understanding of its features and characteristics. The learner constructs his own conceptualizations and figures out solutions to his problems besides mastering autonomy and independence. According to constructivism, learning is the result of individual mental construction.

In sum, constructivism and reading are closely linked to each other. According to constructivism, individuals rely on their existing knowledge in order to gain new knowledge. The learner is important and s/he must be actively involved in the learning process to gain new knowledge. The learner keeps in touch with the environment and finds solutions.

Constructivists argue that all human beings construct their own version of reality. Therefore, multiple contrasting ways of knowing and describing are equally legitimate. This perspective can be described as:

an emphasis on active processes of construction [of meaning] , attention to texts as a means of gaining insights into those processes, and an interest in the nature of knowledge and its variations, including the nature of knowledge associated with membership in a particular group (Brown 2001, p. 11).

In addition to presenting learning as a by-product of active mental agreement, constructivism views learning as a natural and ongoing state of mind. Learning can often take place without any external, noticeable indicators. Constructivism has been applied directly to the study of reading as an explanation of the way in which readers construct messages, or comprehend during the reading process (Tracey & Morrow, 2006, p. 42).

There exists a relationship between constructivism and reading comprehension. Block and Parris (2008, p. 202) mention that with the constructivist viewpoint dominating research on learning and instruction, it has been realized that comprehension is not a uniform quality that one either has or does not have after reading a text or solving a problem; rather, multiple processes are involved that affect comprehension in qualitatively different ways, with important results for learning. In other words, following passive, unengaged reading results in a shallow mental representation of the text content, whereas active, interpretive reading through which a reader creates a mental model of the situation in the text is fully connected to the reader's existing knowledge.

In brief, constructivism encourages learner independence. It is closely linked to reading comprehension, because it requires active and interpretive reading through the reader's existing knowledge. It is the reader who constructs knowledge. Thus, reading skills instruction must help students make connections with their past experiences and the texts. The instruction must also help students recognize the content of the text and utilize what they gain in new situations.

### **2.1.2 Reading and Schema Theory**

Schema theory is a constructivist theory. Landry (2002, p. 102) states that schema theory emerged from the studies of cognition and developed as computer scientists attempted to produce programs which mimic human processing. Schemata are the underlying connections which allow new experiences and information to be processed with previous knowledge.

Research on EFL reading process apparently shows that what we understand of something is a function of our past experiences, our background knowledge, or our schemata. Researchers have used different labels for the concept of background knowledge. In addition to schemata, other terms commonly used are frames, scripts, event chains and expectations (Carrell, 1983, p. 26).

In general, the theory explains how knowledge is created and used by learners. According to schema theory, as stated by Tracey and Morrow (2006, p. 43), people organize everything they know into schemas, or knowledge structures. An important characteristic of this theory is that every person's schemas are individualized. A person who cooks a lot has a much more elaborated schema for cooking than someone who rarely cooks. Schema theory states that the differences in existing schemas greatly influence learning. According to this theory, the more elaborated a person's schema for any topic, the more easily he or

she will be able to learn new information in that topic area. The theory also states that it is very difficult to learn new information on a topic without existing schemas.

It is apparent that schema theory is helpful for explaining how student learns. As noted by Lapp et al. (2004, p. 9), we should consider three conditions that affect learning: (1) background knowledge must be appropriate and accurate, (2) background knowledge must be sufficient, and (3) background knowledge must be activated. If these conditions are provided, the potential is greatly increased that student will integrate prior knowledge with new information and will create new schemata or elaborate new ones they already have.

The schema theory deals with the questions such as how learners construct meaning and infers a writer's message. According to Brown (2001, p. 77), this theory asserts that a text does not carry meaning by itself. The reader brings his / her own information, knowledge, emotion, experience, and culture; in other words, schemata; to the printed material. According to Erten and Razi (2009, p. 61), schema theory deals with pre-existing knowledge structures which are stored in the mind and how readers combine their previous knowledge with the text.

To sum up, the schema theory is related to constructivism, because they both emphasize the function of background knowledge and past experiences in understanding the texts. According to schema theory, the reader brings his / her own schemata and combines them with the text to gain new knowledge. In other words, the reader must activate the background knowledge to extract meaning from what is being read.

The schema theory leads us to other important aspects of reading: bottom-up and top-down processing. According to Brown (2001, p. 78), these two processes became a cornerstone of reading methodology. In bottom-up processing, firstly readers recognize the linguistic signals (letters, morphemes, syllables, words, phrases, grammatical cues, discourse markers) and use their linguistic data-processing mechanisms in order to impose some kind of order on these signals. These data-driven operations apparently require sophisticated knowledge of the language itself. In other words, as Nuttall (1996, p. 66) indicates, the reader builds up a meaning from the black marks on the page: recognizing letters and words, working out sentence structure. We can consciously use it when an initial reading leaves us confused. This approach seems to be like the scientist' examining the ecology of a transect with a magnifying glass.

The top-down processing is different from the bottom-up processing. In top-down or conceptually driven processing, as suggested by Nuttall (1996, p. 66), we draw on our own intelligence and experience in order to understand a text. This kind of processing is used

when we interpret assumptions and draw inferences. We consciously use it when we attempt to see the overall purpose of the text, or get a rough idea of the pattern of the writer's argument to make a reasoned guess at the next step. This approach can be compared to an eagle's eye view of the landscape. The main danger of the top-down approach is that the reader may try to read into the text what s/he thinks must be there, rather than what the writer intended. In order to overcome such a problem, students should learn to support their first impressions with detailed evidence from the text. That is to say, they should learn to treat interpretation as making a series of hypotheses, like scientists do. The relations between the schema theory and the reading process and its implications for reading instruction have also been investigated by the researchers. Tracey & Morrow (2006, p. 44) assert that, in addition to having schemas for content, (e.g. people, places and things), readers have schemas for reading process (e.g. decoding, skimming, inferring and summarizing) and for different types of text structures (e.g. narrative and expository texts). They argued that differences in readers' schemas are related to differences in comprehension. For example, a reader who has an elaborate schema for hiking will comprehend a text on a topic much differently than someone who has a very limited schema on hiking. Similarly, how well developed readers' schemas are in the areas of skills and text structures will also influence their reading comprehension. Moreover, without adequate existing schemas regarding the topic of the text, the skills needed to read the text, and the structure of the text, reading comprehension will not occur.

According to Irwin (1991, p. 35), the major teaching implication of prior knowledge and schema theory is that teachers must ensure that students have the necessary background knowledge before reading. If students have insufficient background knowledge, comprehension will be poor unless the teacher and the students find a way of filling in the gaps in their background. A useful way is lectures and activities that build background. Likewise, Erten and Razi (2009, p. 71) have reported that cultural familiarity has positive effects on reading comprehension and vocabulary learning. In cases of unfamiliar cultural norms, students tend to refer to their own cultural norms, and this results in poor interpretations of the texts.

In brief, the schema theory has influenced the reading process. This theory includes two processes: top-down and bottom-up. These processes are obviously important in methodology, since they offer ways of interpreting texts. They reveal how the reader's schemata affect the comprehension of texts. For this reason, teachers must make sure that

the students have accurate and adequate schemata before reading. Cultural familiarity is also essential for comprehension. Otherwise, comprehension will be poor or will not occur.

### **2.1.3 An Overview on Reading Skills**

There exist many factors which involve reading effectively. Like all the other skills it must be taught and developed and the ultimate goal of EFL teachers should be training their students to acquire skills in order to read and understand comfortably and hopefully make them efficient, independent and active readers.

How students learn skills has been investigated by researchers. To Paris (2005, p. 185), many theories of reading claim that multiple skills are learned during childhood, at home and school. The theories regard skills as components that must be acquired and assembled. Arguments have arisen about the developmental order and importance of decoding versus comprehension skills.

It has been observed by İstifçi (2009, p. 99) that students learn more and find reading more enjoyable if they use reading strategies in their classes. They use a wide variety of strategies when they have to deal with unknown vocabulary, but they are often not aware of which strategies to use when they read in English. İstifçi proposes the term “reading strategies” that students must use in order to comprehend reading passages, and she mentioned that an efficient reader reads to identify meaning, considers illustrations, evaluates guesses, uses various types of context clues, and follows through with proposed solutions during the process of reading.

In brief, applying reading skills or strategies has been associated with proficiency of readers. In other words, good readers benefit from them and are more likely to comprehend the written texts better. It is the teachers’ responsibility to emphasize that reading will not become a burden for students providing that they use the skills or strategies in reading classes.

Does an exact number of reading skills exist? Nuttall (1996, p. 67) states that a great amount of research effort has tried to identify a catalogue of reading skills and establish their relationships with one another, but the issues remain controversial. Similarly, Alderson (2000, p. 51) states that there is a considerable amount of controversy in the theory of reading over whether it is possible to identify and label separate reading skills. Alderson adds that reading researchers have attempted to identify reading skills by giving subjects a series of texts, and asking them questions intended to test different levels of



understanding of the texts. Duffy and Israel (2009, p. 7) agree with Alderson's (2000, p. 53) view, noting that it is difficult to fix the precise genesis of the 'reading skill'.

In brief, there exists a lot of reading skills and it is difficult to identify and label them. Researchers of EFL reading (Alderson, 2000; Duffy & Israel 2009; Pirozzi 1995; Langan 1992) have identified and listed them with their own methods. In brief, these skills are important to teach reading effectively.

Where do reading skills emerge from? Duffy and Israel (2009, p.6) reviewed the literature that describe reading comprehension as a construct and commonly used elementary and high school curricula of the times. They found literally hundreds of labels to name the skills, but reduced them to nine conceptual categories:

Table 2 Nine Potential Factors

1. Word meanings	6. Text based questions with paraphrase
2. Word meanings in context	7. Draw inferences about content
3. Follow passage organization	8. Literary devices
4. Main thought	9. Author's purpose
5. Answer specific text-based questions	

(Duffy & Israel 2009, p.7)

Many different lists have been developed by the researchers. Alderson (2000, p. 55) defined eight skills. These skills are:

1. Remembering word meanings
2. Drawing inferences about the meaning of a word in context
3. Finding answers to questions answered explicitly or in paraphrase
4. Putting ideas together in the content
5. Drawing inferences from the content
6. Recognizing a writer's purpose, attitude, tone and mood
7. Identifying a writer's technique
8. Following the structure of a passage.

In the light of these statements, Langan (1992, p.12) asserts seven key skills of reading. The first five skills include the ability to recognize and use important elements of written material, whereas the last two skills are the techniques that will help students take effective study notes:

- recognizing definitions and examples

- recognizing enumerations
- recognizing headings and subheadings
- recognizing signal words
- recognizing main ideas in paragraphs and short selections
- knowing how to outline
- knowing how to summarize

Researchers have conducted studies in order to label skills. They have come up with many skills which were later converted into lists. These studies increased especially in 1980s. These skills have become a part of school curricula.

Langan (1992, p.15) defines enumerations as lists of items that may actually be numbered in the text. We can signal a list of items by such words as “first of all, second, moreover, next, also, finally”, etc. Typical phrases that introduce enumerations are “There are three reasons why ...”, “The two causes of ...”, “Five characteristics of ...”, “There are several ways ...” and so on.

Another reading skill is recognizing headings and subheadings. Langan (1992, p. 20) notes that headings and subheadings are important visual aids. In addition, they give the reader a quick idea of the organization of information in a text.

Signal words help the reader follow the direction of a writer’s thought. They are like signposts on the road that guide the traveler. Common signal words show emphasis, addition, comparison or contrast, illustration, and cause and effect (Langan, 1992, p. 21). Likewise, Coman and Heavers (1998, p. 98) say that signal words are extremely helpful tools for picking out important details. They act like flags to indicate main points in sentences or paragraphs. There are two types of signal words: full signals and half signals. Full signals are flags that are easily seen; words such as the first, the second, and the third. On the other hand, half signals are less obvious; they are words such as the next, the last, in summary, and therefore.

In addition to signal words, readers must pay attention to other clues to deal with unknown vocabulary. As Alderson (2000, p. 56) notes, if the students struggle with reading because of unknown words, this will apparently affect comprehension and take the pleasure out of reading. Alderson adds that readers must know 95% of the words in text to comprehend it sufficiently and to be able to guess unknown words from context. This emphasizes the importance of lexical knowledge.

Pirozzi (1995, p. 29) shows four ways of finding the meanings of unknown words: using the context, using word parts, using a glossary and using the dictionary. He notes that

teaching reading is an essential ingredient of EFL reading and it cannot be taught without the help of contextual clues. She mentions that using contextual clues in order to guess the meanings of unknown words while reading is a universal strategy. Native speakers of all languages make use of these clues when they read or listen. Therefore, teachers should raise the students' awareness about language clues. Students should realize that dictionary definitions of new words are not always necessary.

There are various tactics that can be employed by the students when they encounter unknown words while reading. O'Hara (2005, p. 201) notes a tactic when the reader comes across with an unknown word: to guess its meaning depending on the sentence. Even if the reader does not know the word, s/he can figure out its meaning by checking how it is used in the sentence. Davidson (2006, p. 81) defines context clues stating that the clues needed for understanding both new words and the meaning of the reading can often be found in the reading itself. She adds that context clues are hints to the meaning. Listed below are the types of context clues:

Table 3 Context Clues

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<b>CONTEXT CLUES</b>
<i>Context Clues to Understanding New Vocabulary</i>
*Definition or Information Clues
*Synonym Clues
*Antonym Clues
*Example Clues
*Clues from Your Background Knowledge
<i>Other Context Clues</i>
*Grammar Clues
*Punctuation Clues

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(Davidson 2006, p. 82)

Paragraphs consist of sentences that serve as main ideas, major details, and minor details. According to Pirozzi (1995, p. 23), the main idea is very important, because it is the summary statement that discloses the theme of most of the remaining sentences in a paragraph. It provides the general overall message of a paragraph. On the other hand, details are much more specific; they give additional information or support for the main idea. Langan (1992, p. 27) emphasizes that almost every effective communication of ideas is made up of two basic parts: (1) a point is made, and (2) evidence is provided to support that point.

In order to find the main idea, firstly the topic of the paragraph must be found. Pirozzi (1995, p. 23) states that the topic, which is not a sentence, can be stated in a word or a

phrase that can serve as a title. The topic is the subject matter of the sentences in a paragraph. The main idea can be found in the first sentence, last sentence, between the first and the last sentence, as two sentences, can cover more than one paragraph or unstated.

Outlining is a note-taking technique. Coman and Heavers (1998, p.99) note that outlining is the most widely used method of taking notes. Outlining provides the students with a well-organized set of notes to study from, because it forces the students to figure out the main idea and to recognize supporting details, eliminating unnecessary information. Once mastered, outlining can be a valuable tool in order to be a better reader.

There is a link between outlining and reading comprehension. According to Langan (1992, p. 22), outlining is an organizational skill that will improve the reading comprehension. It will also provide additional benefits. It develops students' ability to think in a clear and logical manner. The purpose of an outline is both to summarize material and to show the relationships between different parts of the material. Outlines have specific structures. In addition, every outline should have a title that summarizes the information in the outline.

Summarizing is another reading skill. Langan (1992, p. 22) defines a summary as a reduction of a large quantity of information to the most important points. It is helpful because it requires that the reader thoroughly understands the material being read. Summarizing a material will help the reader build comprehension power. The length of a summary depends on the purpose. Duffy (2009, p. 21) explains summarizing as the construction of a brief retelling of a text. It can include the main idea or a theme, but the focus is on telling briefly the major points of the text.

A skilled reader is also expected to recognize the type or genre of a text. According to Alderson (2000, p. 57), certain topics are associated with certain types of text. For instance, description of how a machine works is more likely to be found in expository texts than in narrative texts. The way a text is written; its style or the features make it different from the other. Thus, there are a number of different classifications of text type. Among these types are expository, narrative, descriptive texts.

To sum up, researchers have explained the reading skills and exemplified them. They have shown ways and strategies to make use of these skills. They have also shown ways of dealing with unknown vocabulary while reading texts. These hints can certainly be helpful in teaching vocabulary. The reading skills are of vital importance because they help the readers comprehend texts well.

There are also micro skills for reading. Alderson (2000, p. 59) has designed the taxonomy of micro skills:

- recognizing the script of a language
- deducing the meaning and use of unfamiliar lexical items
- understanding explicitly stated information
- understanding information when not explicitly stated
- understanding conceptual meaning
- understanding the communicative value of sentences
- understanding relations within the sentence
- understanding relations between parts of a text through lexical cohesion devices
- understanding cohesion between parts of a text through grammatical cohesion devices
- interpreting text by going outside it
- recognizing indicators in discourse
- identifying the main point or important information in discourse
- distinguishing the main idea from supporting details
- extracting salient details to summarize (the text, an idea)
- extracting relevant points from a text selectively
- using basic reference skills
- skimming
- scanning to locate specifically required information
- transcoding information to diagrammatic display

(p. 10-11)

This taxonomy above displays the micro skills which have influenced the syllabus and material design in EFL contexts. Alderson (2000, p. 60) notes that such lists or taxonomies are seductive because they offer a clearly theoretically justified means of devising test tasks or items, and of isolating reading skills to be tested. Thus, there emerges the possibility of diagnosing a reader's problems and identifying solutions.

In brief, there exists micro skills for reading as well as skills for reading. These micro skills are similar to skills; however, they offer more variety in detail. They also include discourse and types of reading such as skimming and scanning.

The following figure displays both the framework for reading skill / strategy instruction and the specific skills and strategies. This is certainly not an exhaustive list; it is intended to offer a range of suggestions for skill development, and the strategies for developing these skills. As can be seen in Table 4, the skills are identified within the stages of a reading class.

Table 4 Reading Skills Framework

Before Reading	During Reading	After Reading
<ul style="list-style-type: none"> <li>● Activate Schemata/Prior Knowledge</li> <li>● Connect to Experiences</li> <li>● Preview the Text <ul style="list-style-type: none"> <li>○ Title</li> <li>○ Cover Art</li> <li>○ Preview Format</li> <li>○ Style of Writing</li> <li>○ Chapter Titles</li> <li>○ Images</li> </ul> </li> <li>● Make Predictions</li> <li>● Set Reading Goals (Focus for Skill Development)</li> <li>● Establish a Purpose</li> <li>● Journal Writing</li> </ul>	<ul style="list-style-type: none"> <li>● Question the Text</li> <li>● Summarize Information</li> <li>● Check Predictions, Revise Predictions and Make New Predictions</li> <li>● Clarify Concepts and Vocabulary</li> <li>● Determine Importance</li> <li>● Visualize</li> <li>● Make Connections to <ul style="list-style-type: none"> <li>○ Other Texts</li> <li>○ Themes</li> <li>○ Self</li> </ul> </li> <li>● Reader Response <ul style="list-style-type: none"> <li>○ Efferent</li> <li>○ Aesthetic</li> </ul> </li> <li>● Check Understanding (Metacognition)</li> <li>● Vocabulary Acquisition</li> <li>● Outline / Take Notes</li> <li>● Annotate: <ul style="list-style-type: none"> <li>○ Characters</li> <li>○ Vocabulary</li> <li>○ Important Information</li> <li>○ Questions/Confusion</li> </ul> </li> <li>● Evaluate the Quality and Value of Texts</li> <li>● Attend to Character, Setting, and Plot in Narrative Texts</li> <li>● Read Selectively</li> </ul>	<ul style="list-style-type: none"> <li>● Writing to Learn <ul style="list-style-type: none"> <li>○ Summarize</li> <li>○ Analysis-Critical Response</li> <li>○ Thematic Connections</li> <li>○ Connections with Other Texts</li> <li>○ Personal Connections</li> <li>○ Emulate Narrative Style</li> </ul> </li> <li>● Re-Read</li> <li>● Question Generation</li> <li>● Use Graphic Organizers to Visually Represent Understanding</li> <li>● Discussion: <ul style="list-style-type: none"> <li>○ Express and Support Opinions</li> <li>○ Question the Author</li> </ul> </li> </ul>

Duke and Pearson (in Farstrup & Samuel, 2001, p. 206)

#### 2.1.4 Reading Comprehension

Reading is an activity carried out for certain purposes. The final outcome is reading comprehension. Reading is thinking and it usually requires a good deal of effort and concentration. You should have a specific purpose and positive attitude each time you read something. Reading for information, enjoyment, and knowledge is rather different from reading comprehension because reading in a test requires speed and quick scanning and

understanding. You have to be well prepared for the test and it also requires a different way of studying.

Various definitions of reading comprehension exist. Amer (1992, p. 712) explains reading comprehension as an interactive process between the reader and the text. During this process, the reader interacts with the text and relates ideas from the text to prior experiences in order to construct meaning. Thus, it is essential that the reader understands how the writer has organized his ideas (or the text structure). Duffy (2009, p. 25) defines comprehension as the essence of reading. He states that the goal of written language is communication of messages. Unless we understand the message, we are not actually reading. Block et al. (2002, p. 39) define reading comprehension as the process of extracting and constructing meaning through interaction and involvement with written language. Irwin (1991, p. 37) describes comprehension as the process of using one's own prior experiences and the writer's cues in order to construct a set of meanings that are beneficial to the reader.

### **2.1.5 The Factors Affecting Reading Comprehension**

Reading is a skill that cannot be dealt with in isolation. As Rivas (1999, p. 14) indicates, it has been shown by research that syntactic and vocabulary knowledge is essential for comprehension. Since lexis has been identified as a source of difficulty for EFL readers, the need to develop students' vocabulary recognition has arisen. According to Duffy (2009, p. 39), one cannot construct a meaning unless s/he has some experiences with the word meanings associated with a topic. Therefore, vocabulary instruction is crucial. Additionally, he also indicates that students develop in skills of verbal fluency, writing and comprehension with enhanced vocabulary. In other words, the larger the students' vocabulary, the more adept they are at understanding texts.

Pirozzi (1995, p. 35) emphasizes the importance of vocabulary stating that the more words you know, the easier you will comprehend the textbooks and lecture materials. Likewise, Dunmore (1989, p. 63) claims that vocabulary expansion can lead improvement in reading comprehension. Duffy and Israel (2009, p. 18) indicate that word knowledge plays a very important part in reading comprehension. Thus, separating the two processes is difficult, if not impossible.

There are other factors which affect reading comprehension. Duffy (2009, p. 48) states that reading comprehension depends on prior knowledge or knowledge about the world. Moreover, prior knowledge is expressed with words. While comprehending, readers say to

themselves, “In my experience with words associated with this topic or situation, the writer must mean something close to what I have experienced.” In other words, they use the words in the text to build a meaning which is consistent with their past experience with these words. There can be no comprehension without background knowledge. It has been estimated that as much as 50% - 60% of successful comprehension is linked to background knowledge. Knowing something about the topic before beginning to read is essential to being able to construct meaning from a text.

Additionally, Carrell and Eisterhold (1983, p. 27) indicate that efficient comprehension requires the ability to build a relationship between the textual material and one’s own knowledge. Comprehending words, sentences, and whole texts involves more than only depending on one’s linguistic knowledge. Likewise Irwin (1991, p. 40) underlines the same point: comprehension cannot occur if nothing is known before. Prior knowledge is so necessary for comprehension that it can often account for a large portion of the difference between successful and unsuccessful readers.

Another factor is reading speed. Nuttall (1996, p. 69) asserts that the relationship between reading speed and comprehension is complex, yet they are closely related. A slow reader is likely to read with poor understanding, if only because his / her memory is taxed. That is to say, the beginning of a paragraph may be forgotten by the time s/he has struggled to the end of it. However, the cause and the effect are not clear. Do people read quickly because they understand easily, or do they understand easily because of their reading speed? In fact, each influences the other. Similarly, there is a strong relationship between speed and interest and enjoyment, because motivation spurs us to get to the end of the story as quickly as we can. Yet, the causal relationship is not clear. However, these facts suggest that students will improve their speed on material that is readily comprehensible and interesting to them more easily.

Meaningful reading tasks are also important in comprehension. As Irwin (1991, p. 43) notes, if we want to involve students in comprehension, firstly we must create situations in which meaningful material is used. That is to say, the reason for reading and understanding the material must make sense to the students. Students must read in order to get the meanings that will be beneficial to them.

As Erten and Razi (2009, p. 73) indicate, cultural familiarity has positive effects on reading comprehension. If students are familiar with cultural norms, they make a better interpretation of the text than when they are not. In case of unfamiliar cultural norms, the result is poor interpretation of the text.



Another factor which affects readers' abilities to comprehend texts, as indicated by Shih (1992, p. 75), is their repertoires of cognitive strategies for processing text as well as metacognitive strategies (the self-regulation of cognition) to monitor this processing. It is also indicated that poor readers can be trained in such active processing strategies in order to improve their reading comprehension. Likewise, Jones (1985, p. 86) mentions that the reader's ability to control his or her own learning contributes significantly to the ability to comprehend. This ability is called metacognition and it involves the ability to plan, monitor comprehension and evaluate the learned material. Moreover, there is strong evidence that direct instruction in the use of metacognitive strategies can remarkably improve comprehension.

In conclusion, many factors affect the process of reading comprehension. These factors range from prior and vocabulary knowledge to reading speed. As noted earlier, prior knowledge is essential for comprehension. Comprehension is also related to the purpose of reading. Metacognitive strategies also influence comprehension, since the readers can evaluate and monitor their comprehension.

#### **2.1.6 The Role of Reading in EFL**

Reading is inevitably an important skill for English learners. In many parts of the world, the most emphasized skill in EFL situations has been reading. Singhal (1998, p. 10) regards the ability to read as the most stable and durable of the second language modalities. In other words, reading plays a vital role in teaching EFL. Paris (2005, p. 190) claims that learning to read is one of the great achievements in childhood, due to the fact that it is the basis for learning and academic success. Furthermore, Grabe (1991, p. 9) mentions that reading is probably the most important skill for EFL learners in academic contexts. However, according to Rivas (1999, p. 19), reading should not be dealt with in isolation. She adds that reading is a use of language; therefore, it needs to be integrated with the other language skills.

According to Richards and Renandya (2002, p. 33), reading receives special attention in many EFL teaching situations. There are certain reasons for this. Firstly, many EFL students often think of reading as one of their most important goals. It is a fact that the ability to read in a foreign language is all that students want to acquire. Secondly, written texts have various pedagogical purposes. If a text is well written, it may be a good model for writing and stimulate discussion and study the vocabulary and grammar of language. To conclude, reading is a skill highly valued by both students and teachers.

In the long history of EFL, reading has always played the most important role, but until recently, it meant reading aloud special texts, building a grammatical structure, explaining the unknown vocabulary, and answering comprehension questions. The developments in sociolinguistics, discourse analysis, and psycholinguistics have revitalized both the selection of the teaching materials and the teaching approach. An important factor which influenced the design of new teaching materials is that there have been changes in the understanding of the nature of the reading process. In the light of the findings of both research and theory, reading is no longer viewed as a passive skill or a process of decoding. On the contrary, it is viewed as an active or better as an interactive skill, since it is accepted that readers interact with the text while reading (Bindaka, 2007, p. 170).

Detailed studies of EFL reading has been going on for decades. Carrell (1989, p. 121) states that reading may be the most important of the four skills for ESL and EFL students. In a preliminary study conducted among secondary school students in the Seville province of Spain, reading preceded speaking, listening and writing in that order on a rank scale of 1-4 for preferences between the four skills. In the same study, researchers used a seven point bipolar scale for student's views about the skills, using symbols only (--- / -- / - / 0 / + / ++ / +++). The results showed a bunching for reading around the positive end of the scale (++), whereas speaking pointed out a double hump around the negative (--) and the positive (++) ends.

Additionally, there is a relationship between reading and writing. Zamel (1992, p. 465) argues that writing is the foundation of reading, and the most basic way of learning about reading. Writing makes reading an activity of finding and making connections. It is a way of constructing and composing reading. In brief, teachers of EFL should be aware of the fact that a means of perceiving the foreign language is through reading. We simply cannot expect our students to be successful readers unless we emphasize its importance in our classes. In addition, we must try to make our students appreciate the value of reading.

## **2.2 Critical Thinking**

In the earliest, traceable roots of critical thinking, Socrates' methods appear at the forefront. Socrates is known as a great teacher and a great thinker. However, he was killed because he asked too many questions. Socrates "established the importance of asking deep questions that probe profoundly into thinking before we accept ideas as worthy of belief" (The Critical Thinking Community, 1997, p. 1).

Socrates advocated thinking clearly and establishing the importance of seeking evidence, examining reasons and assumptions, and identifying implications of actions. Socrates' approach to questioning is still used today and known as the "Socratic Method". Paul and et al. notes that:

...Socrates set the agenda for the tradition of critical thinking, namely, to reflectively question common beliefs and explanations, carefully distinguishing those beliefs that are reasonable and logical from those which, however appealing they may be to our native egocentrism, however much they serve our vested interests, however comfortable or comforting they may be - lack adequate evidence or rational foundation to warrant our belief. He established the importance of seeking evidence, closely examining reasoning and assumptions, analyzing basic concepts, and tracing out implications not only of what is said but of what is done as well". (Richard Paul, Linda Elder, and Ted Bartell 1997, p. 132)

This concern about the quality of thought was shared by many other thinkers throughout history. Francis Bacon, for example, pointed out that people, if left unguided, could develop bad habits of thought that would lead them to ignorance, prejudice, and self-deception. Descartes, famous for his words "*Cogito, ergo sum*" ("I think, therefore I am"), emphasized the importance of questioning the clarity and accuracy of thoughts. At the beginning of the twentieth century, Sumner stated that critical thinking, without which people would have delusions, superstitions, and misapprehensions, must be an indispensable goal of education. Likewise, Dewey strongly advocated critical thinking for the sake of a good society (Paul & Elder, 2001, p. 376).

### **2.2.1 Definitions of Critical Thinking**

Although there is a long history behind critical thinking, it had not been defined until the beginning of the twentieth century. In addition, being an abstract and broad term, many different definitions concerning its various aspects have been suggested. All this definitions have some similarities in common as well as confusing differences.

One of the first definitions belongs to John Dewey. Dewey (cited in Hurte, 2004, p. 22) defines critical thinking as a sensation of imbalance that leads people to search for the facts and knowledge that will originate the opposing feelings of balance. In 1906, William Graham Sumner offers a working definition of critical thinking; according to him, critical thinking is "the examination and test of propositions of any kind of which are offered for acceptance, in order to find out whether they correspond to reality or not" (p.15).

Paul (1998) accentuates that:

...Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. It is based on universal intellectual values that transcend subject

matter divisions: Clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness. It entails the examination of those structures or elements of thought implicit in all reasoning: purpose, problem, or question-at-issue; assumptions; concepts; empirical grounding; reasoning leading to conclusions; implications and consequences; objections from alternative viewpoints; and frame of reference. Critical thinking, in being responsive to variable subject matter, issues, and purposes, is incorporated in a family of interwoven modes of thinking, among them: Scientific thinking, mathematical thinking, historical thinking, anthropological thinking, economic thinking, moral thinking, and philosophical thinking. (Paul, 1998, p. 32)

Critical thinking was defined by the distinguished critical thinking expert Robert H. Ennis, who is also the developer of the Cornell Critical Thinking Tests which are widely used in critical thinking studies all over the world. Ennis (1989, p. 9) defines critical thinking as “reasonable reflective thinking that is focused on deciding what to believe or do” (p. 4). Mcpeck (1981, p. 8) declares that Ennis’s most original contribution to critical thinking is his dimensional simplification of the concept. Mcpeck (1981, p. 8) highlights Ennis’s argument that only knowing critical thinking skills is not enough but one must know when and how much to use them in right circumstances. In the dimensional analysis, Ennis lists three dimensions and highlights that critical thinkers must employ the critical thinking skills together with the dimensional considerations. Mcpeck (1981, p. 9) summarizes Ennis’s dimensional analysis as:

*Logical dimension:* judging the alleged relations between terms, statements and sets of statements. This includes knowing the meanings of the terms and statements and their implications. *Criterial dimension:* covers knowledge of standards and subject-related criteria for judging statements, for example, statistical judgments in the social sciences. *Pragmatic dimension:* judging, in context, when one has enough evidence in the light of the statements’s purpose and practical consequences. (1989, p. 9)

According to Schaefersman (1991) critical thinking is “correct thinking in the pursuit of relevant and reliable knowledge about the world” (p. 3). Halpern (1997) defines critical thinking with the following words: “It is the use of those cognitive skills or strategies that increase the probability of a desirable outcome. This term is used to describe thinking that is purposeful, reasoned and goal directed” (p. 4).

In 1990, experts on critical thinking from the disciplines of philosophy, psychology, and education came together in a panel under the sponsorship of the American Philosophical Association, and they agreed on a definition of critical thinking and critical thinking skills through consensus. The panel was called the Delphi Project, and the general agreement on the definition was for purposes of educational instruction and assessment (Giancarlo & Facione, 2001, p. 33). According to these experts, critical thinking is “purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criterion-logical, or

contextual considerations upon which that judgment is based” (p. 30). They further explained the term by defining an ideal critical thinker:

The ideal critical thinker is habitually inquisitive, well informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (Facione, 1990, p. 3)

In sum, over the years critical thinking was defined in different ways by different people. However, regarding all the definitions above, we can list the common features of the definitions to come up with a sound idea of the concept of critical thinking:

Critical thinking,

- 1- requires a systematic search for reaching a sound knowledge.
- 2- emphasizes a logical, deep and purposeful thinking.
- 3- aims to recognize and solve a problem.
- 4- examines different point of views to find the accurate and reliable one.
- 5- is related to cognitive skills.
- 6- rejects the arguments that lack sound evidence.
- 7- is a careful and deliberate thinking whether to accept or reject an idea.
- 8- is a self-regulatory judgement that was reached by a deep thinking about the idea on which this judgement is made.
- 9- has argument and the separation of ‘fact and opinion’ at its very core.
- 10- requires to be open to new ideas.

### **2.2.2 Critical Thinking and Bloom’s Taxonomy**

In 1956, Benjamin Bloom and a group of educational psychologists developed taxonomy of learning objectives that educators especially in the U.S.A still widely employ to achieve educational goals. They found that over 95 % of the test questions that students are expected to answer requires them to think only at the lowest level - the recall of information, and in the taxonomy, he listed six levels of thinking from the lower-order thinking to higher-order thinking. What is higher-order thinking? Queensland Department of Education defines higher-order thinking as the transformation of information and ideas, and this transformation takes place when students combine facts and ideas, synthesize, generalize, explain and hypothesize to reach a conclusion. Bloom’s taxonomy involves three domains: cognitive domain, effective domain and psychomotor domain. Cognitive

domain includes knowledge and the development of intellectual attitudes and skills, affective domain is related to growth in feelings or emotional areas and psychomotor domain includes manual or physical skills. Since we deal with critical thinking, our concern is the taxonomy's first domain- cognitive domain. Cognitive domain involves six levels that refer to critical thinking skills from the lower to higher ones; the skills are knowledge, comprehension, application, analysis, synthesis and evaluation.

Knowledge is the first level of the cognitive domain of Bloom's taxonomy, and it refers to retaining of previously learned material. It is the lowest level of the taxonomy. Examples include knowing common terms, specific facts, methods and procedures, basic concepts and principles.

Comprehension is the second level of the cognitive domain of Bloom's taxonomy. It refers to the ability to understand the meaning of material, and is beyond the remembering of material. Examples involve understanding the facts and principles, interpreting verbal material, charts and graphs, translating verbal material to mathematical formulae, estimating the future consequences implied in data and justifying methods and procedures.

Application is the third level of the cognitive domain of Bloom's taxonomy. It is defined as the ability to use learned material in new and concrete situations. Examples are applying concepts and principles to new situations, applying laws and theories to practical situations, solving mathematical problems, constructing graphs and charts and showing the correct usage of a method or procedure.

Analysis is the fourth level of the cognitive domain of Bloom's taxonomy. It refers to the ability to separate material into its component parts to understand its organizational structure. It is the first high level of the cognitive domain of Bloom's taxonomy. Examples include recognizing unstated assumptions, logical fallacies in reasoning, distinguishing facts and inferences, evaluating the relevancy of data, and analyzing the organizational structure of a work.

Synthesis is the fifth and the second high level of the cognitive domain of Bloom's taxonomy. It refers to the ability to put parts together to form a new whole. This skill focuses on creative behaviors and formulation of new patterns or structures. Among the examples are writing a well-organized theme, giving a well-organized speech, writing a creative short story and formulating a new scheme for classifying objects.

Evaluation is the sixth and highest level of the cognitive domain of Bloom's taxonomy since it includes the components of all other five levels. Fischer (1995, cited in Mirioglu,

2002, p. 38) believes that Bloom used the word evaluation as a synonym of critical thinking and puts evaluation at the top of the cognitive domain of his taxonomy.

Here is the table that summarizes Bloom's Taxonomy with question cues:

Table 5. Bloom's Taxonomy with Question Cues

Competence	Skills Demonstrated
<b>Knowledge</b>	Observation and recall of information, knowledge of dates, events, places, knowledge of major ideas, mastery of subject matter. <i>Question Cues:</i> list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
<b>Comprehension</b>	Understanding information, grasp meaning translate knowledge into new context interpret facts, compare, contrast, order, group, infer causes, predict consequences. <i>Question Cues:</i> summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
<b>Application</b>	Use information, use methods, concepts, and theories in new situations, solve problems using required skills or knowledge. <i>Questions Cues:</i> apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
<b>Analysis</b>	Seeing patterns, organization of parts, recognition of hidden meanings, and identification of components. <i>Question Cues:</i> analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
<b>Synthesis</b>	Use old ideas to create new ones, generalize from given facts, relate knowledge from several areas, predict, draw conclusions <i>Question Cues:</i> combine, integrate, modify, rearrange, substitute, plan, create, design, invent, compose, formulate, prepare, generalize, rewrite
<b>Evaluation</b>	Compare and discriminate between ideas, assess value of theories, presentations, make choices based on reasoned argument, verify value of evidence, recognize subjectivity <i>Question Cues:</i> assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

Source: Learning Skills Program (2005, p. 2)

The first taxonomy has been used extensively by educators to assess students learning and to create learning objectives. Teachers have been using Bloom's Taxonomy to teach their students how to "classify student objectives, activities, and assessments" (Krathwohl, 2002, p. 214). Krathwohl presents a revised version that includes a second dimension, Cognitive Processes. The revised version includes two tables: one that updates "The Knowledge Dimension" previously included in the original taxonomy and a new dimension "The Cognitive Process Dimension" in Figure 1.

**Structure of the Cognitive Process  
Dimension of the Revised Taxonomy**

- 1.0 Remember – Retrieving relevant knowledge from long-term memory.
  - 1.1 Recognizing
  - 1.2 Recalling
- 2.0 Understand – Determining the meaning of instructional messages, including oral, written, and graphic communication.
  - 2.1 Interpreting
  - 2.2 Exemplifying
  - 2.3 Classifying
  - 2.4 Summarizing
  - 2.5 Inferring
  - 2.6 Comparing
  - 2.7 Explaining
- 3.0 Apply – Carrying out or using a procedure in a given situation
  - 3.1 Executing
  - 3.2 Implementing
- 4.0 Analyze – Breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose.
  - 4.1 Differentiating
  - 4.2 Organizing
  - 4.3 Attributing
- 5.0 Evaluate – making judgments based on criteria and standards.
  - 5.1 Checking
  - 5.2 Critiquing
- 6.0 Create – Putting elements together to form a novel, coherent whole or make an original product.
  - 6.1 Generating
  - 6.2 Planning
  - 6.3 Producing

Figure 1. Upgraded Bloom's Taxonomy

Source: Krathwohl (2002, p. 214)

### **2.2.3 Framework of Critical Thinking**

There are several frameworks of critical thinking which involves a comprehensive list of critical thinking skills, abilities and proficiencies and dispositions. Ennis (1987, p. 53) offered one of the pioneering taxonomies in the educational use of the concept of critical thinking (Table 6). In his taxonomy, he distinguishes between critical thinking skills and the dispositions that are central to the effective use of critical thinking skills. These skills and dispositions are as follows:



Table 6. Critical Thinking Dispositions and Abilities

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*Critical thinking skills*

1. Focusing on a question
2. Analyzing arguments
3. Asking and answering questions of clarification and/or challenge
4. Judging the credibility of a source
5. Observing and judging observation reports
6. Deducing and judging deductions
7. Inducing and judging inductions
8. Making value judgements
9. Defining terms, and judging definitions
10. Identifying assumptions
11. Deciding on an action
12. Interacting with others

*Dispositions*

1. Seeking clarity
2. Seeking reasons
3. Seeking to be well-informed
4. Using credible sources
5. Considering total situation
6. Remaining relevant to main point
7. Keeping in mind original concern
8. Looking for alternatives
9. Being open-minded
10. Making judgment based on evidence
11. Seeking precision
12. Being orderly
13. Use one's critical thinking abilities
14. Being sensitive to others

---

Source: Ennis (1987, p. 54)

With his taxonomy, Ennis was also engaged in exploring the ways to assess critical thinking. As McDaniel and Lawrence (1990, p. 112) indicate, Ennis, together with his colleagues Millman and Tomko developed the Cornell Critical Thinking Test. On this test, respondents read arguments and were then asked to determine if conclusions follow necessarily from the statements, conclusions contradict the statements, or neither. Yet, the responses to the test were limited to an evaluation of thought processes in test items. As McDaniel and Lawrence (1990, p. 113) state Ennis later worked with Weir to develop the Ennis-Weir Critical Thinking Test in an attempt to give respondents more freedom in evaluating arguments and assessing statements. In this test, respondents constructed an essay to respond to arguments presented in “a letter to the editor” about a parking situation

in a fictitious city. Responses were graded according to the guidelines provided, primarily measuring processes based on rules of logical reasoning: getting the point, seeing the reasons and assumptions, stating one's point, offering good reasons, seeing other possibilities and responding appropriately to logical arguments.

In 1988, American Philosophical Association commissioned a national Delphi study to develop a consensus on the definition of critical thinking (Facione, 1990, p. 12). The aims were to identify the skills and dispositions which characterize the concept of critical thinking, explore effective ways to teach and assess critical thinking, design college level academic programs in critical thinking and assist with efforts to introduce critical thinking into the K-12 curriculum. Facione was the principal investigator for the study, which involved 46 experts with recognized expertise in critical thinking, instruction, theory and or assessment. Half of the panel members were from the field of philosophy, and the other half from the field of education, social sciences and physical sciences. Using the Delphi technique, the panel provided their conceptualizations of critical thinking, which were compiled by Facione and presented to the panel members for their feedback. The process was repeated over a two-year period until consensus was reached on the major components of critical thinking. Finally, the experts found good critical thinking to include both a skill dimension and a dispositional dimension. Consensus list of critical thinking cognitive skills and sub-skills included interpretation (categorization, decoding significance and clarifying meaning), analysis (examining ideas, identifying arguments, analyzing arguments), evaluation (assessing claims, assessing arguments), inference (querying evidence, conjecturing alternatives, drawing conclusions), explanation (stating results, justifying procedures, presenting arguments) and self-regulation (self-examination, self-correction). Regarding the list of affective dispositions, however, the experts distinguish between the affective dispositions which are categorized as the approaches to life and living in general, and those that are characterized as approaches to specific issues, questions or problems as follows:

Table 7. Affective Dispositions of Critical Thinking

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*Affective dispositions of critical thinking*

I. Approaches to life and living in general

- \_ Inquisitiveness with regard to a wide range of issues
- \_ Concern to become and remain generally well-informed
- \_ Alertness to opportunities to use critical thinking
- \_ Trust in the processes of reasoned inquiry
- \_ Self-confidence in one's own ability to reason
- \_ Open-mindedness regarding divergent world views
- \_ Flexibility in considering alternatives and opinions
- \_ Understanding of the opinions of other people
- \_ Fair-mindedness in appraising reasoning
- \_ Honesty in facing one's own biases, prejudices, stereo-types, egocentric or socio-centric tendencies
- \_ Prudence in suspending, making or altering judgments
- \_ Willingness to reconsider and revise views where honest reflection suggests that change is warranted

II. Approaches to specific issues, questions or problems

- \_ Clarity in stating the question or concern
  - \_ Orderliness in working with complexity
  - \_ Diligence in seeking relevant information
  - \_ Reasonableness in selecting and applying criteria
  - \_ Care in focusing attention on the concern at hand
  - \_ Persistence though difficulties are encountered
  - \_ Precision to the degree permitted by the subject and the circumstance
- 

Source: Facione (1990, p. 13)

It is worth noting that according to the Delphi report, these two types of affective dimensions are considered as the permanent traits of critical thinkers at times when they are using one of the cognitive skills as well as at times when they are not employing a cognitive critical thinking skill. Moreover, it is also suggested that in order to count a person as a critical thinker, it is not necessary that s/he should be proficient at every skill.

Jones et al. (1995, p. 18) also conducted a study to conceptualize critical thinking with the aim of providing a framework for its assessment among college students. The list of cognitive skills and sub-skills included:

- \_ interpretation (categorization of data, detecting indirect persuasion and classifying meaning),
- \_ analysis (examining ideas and purpose, and detecting and analyzing arguments),
- \_ evaluation (assessing the importance of an argument, its reasonability and practicality as well as evaluating the sources of information, assumptions, statistical information used as

evidence to support an argument, evaluating conclusions of an argument in face of new data, evaluating analogies, detecting bias, narrow mindedness and contradictions),

\_ inference (collecting and questioning evidence, developing alternative hypotheses and drawing conclusions),

\_ presenting arguments (presenting supporting reasons and evidence for their conclusions which address the concerns of audience, negotiating fairly and persuasively, presenting an argument with its crucial points, considering alternative positions and opposing points of view, and illustrating arguments with significant examples and showing how these examples apply in real situations),

\_ reflection (applying the skills of analysis and evaluation to one's own arguments to confirm and/or correct reasoning and results, critically examining and evaluating vested interests, beliefs and assumptions and making revisions in arguments and findings when self-examination reveals inadequacies) (p. 21)

Finally, Jones et al. (1995, p. 19) assert that a critical thinker needs to have the following dispositions: Thinking independently, exercising fair-mindedness, developing insight into ego-centricity and socio-centricity, developing intellectual humility and suspending judgment, developing intellectual courage, developing intellectual good faith or integrity, developing intellectual perseverance, developing confidence in reason, exploring thoughts underlying feelings and feelings underlying thoughts, being curious, being organized, orderly and focused in inquiry or in thinking, being flexible and creative in seeking solutions, monitoring own understanding of a situation and progress toward goals, and finding ways to collaborate with others to reach consensus on a problem or issues.(p. 29)

According to Paul (1995, p. 23), comprehensive critical thinking has the following characteristics: First, it is the kind of thinking which is responsive to and guided by intellectual standards, namely, relevance, accuracy, precision, clarity, depth, and breadth. Second, it is the thinking that supports the development of intellectual traits in the thinker. These traits include intellectual humility, intellectual integrity, intellectual perseverance, intellectual empathy, and intellectual self-discipline, among others. Third, it is the sort of thinking in which the thinker is able to identify the elements of thought that are present in all thinking about any problem. For instance, the thinker asks himself or herself questions about the subject of the thinking task at hand: What is the purpose of my thinking? What question do I exactly answer? Within what point of view am I thinking? What information am I using? How am I interpreting that information? What concepts or ideas are central to my thinking? What conclusions am I reaching at? What are the things that I am taking for

granted, and what assumptions am I making? If I accept the conclusions, what are the implications? What would be the consequences of putting my thought into action? Fourth, this type of thinking is characterized as “routinely self-assessing, self-examining and self-improving. Therefore, the critical thinker needs to assess the various dimensions of her / his thinking using appropriate intellectual standards (accurate, relevant, specific, clear, precise, plausible, consistent, logical, deep, broad, complete, significant, adequate and fair). Fifth, in this thinking, there is integrity to the whole system. That is, a critical thinker not only examines her thought as a whole, but also to take it apart, considers its various parts as well. Sixth, it is the type of thinking that produces a predictable, well-reasoned answer because of the comprehensive and demanding process that the thinker goes through. Finally, in this type of thinking, the thinker not only argues from alternate and opposing points of view, but also seeks and identifies weaknesses and limitations in one’s own position. (p.30)

Paul’s frame of critical thinking consists of three major categories: affective strategies, cognitive strategies (macro abilities), and cognitive strategies (micro abilities) (Table 8) Consisting of 35 dimensions of critical thought, the list of strategies also serves as an important goal of classroom instruction especially at the K-12 levels:

Table 8. Dimensions of Critical Thought

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Affective Strategies

1. Thinking independently
2. Exercising fair-mindedness
3. Developing insight into egocentricity and socio-centricity
4. Developing intellectual humility and suspending judgment
5. Developing intellectual courage
6. Developing intellectual good faith or integrity
7. Developing intellectual perseverance
8. Developing confidence in reason
9. Exploring thoughts underlying feelings and feelings underlying thoughts

Cognitive Strategies – Macro Abilities

10. Refining generalizations and avoiding oversimplifications
11. Comparing analogous situations: transferring insights to new contexts
12. Developing one's perspective: creating or exploring beliefs, arguments, or theories
13. Clarifying issues, conclusions or beliefs
14. Clarifying and analyzing the meanings of words and phrases
15. Developing criteria for evaluation: clarifying values and standards
16. Evaluating the credibility of sources of information
17. Questioning deeply: raising and pursuing root or significant questions
18. Analyzing or evaluating arguments, interpretations, beliefs, or theories
19. Generating or assessing solutions
20. Analyzing or evaluating actions or policies
21. Reading critically: clarifying or critiquing texts
22. Listening critically: the art of silent dialogue
23. Making interdisciplinary connections
24. Practicing Socratic questioning
25. Reasoning dialogically: comparing perspectives, interpretations, or theories
26. Reasoning dialectically: Evaluating perspectives, interpretations or theories

Cognitive Strategies – Micro Abilities

27. Comparing and contrasting ideals with actual practice
  28. Thinking precisely about thinking: using critical vocabulary
  29. Noting significant similarities and differences
  30. Examining or evaluating assumptions
  31. Distinguishing relevant from irrelevant facts
  32. Making plausible inferences, predictions, or interpretations
  33. Giving reasons and evaluating evidence and alleged facts
  34. Recognizing contradictions exploring implications and consequences
- 

Source: Paul (1995, p. 56)

It is noteworthy that both the cognitive and affective are included in this framework as they are considered to be complementary to each other with the belief that unmotivated persons or those who are not predisposed to think critically can neither learn thinking critically nor think critically. At this point, Paul (1995, p. 58) suggests that critical thinking can be

developed in an atmosphere which encourages the intellectual virtues: intellectual autonomy, intellectual civility, intellectual confidence or faith in reason, intellectual courage, intellectual curiosity, intellectual discipline, intellectual empathy, intellectual humility, intellectual integrity, intellectual perseverance, intellectual responsibility, and intellectual sense of justice. He views these intellectual virtues as the traits of mind and character necessary for the right action and thinking and the traits of mind and character essential for the fair-minded rationality.

Bailin et al. (1999, p. 271), on the other hand, criticize all conceptions of critical thinking as skill, mental processes or procedures. They believe that such conceptions of critical thinking ignore the importance of contextual factors or background information since skills can be exercised whenever they are needed regardless of context and background information. They set out a new conception of critical thinking – which critical thinking is a normative enterprise in which people apply appropriate criteria and standards to what they or others say, do or write. Thus, they believe that those who become critical thinkers acquire such intellectual resources as background knowledge, operational knowledge of appropriate standards, knowledge of key concepts, possession of effective heuristics and of certain vital habits of mind. (p. 271)

First of all, they argue that critical thinking always takes places within the context of already existing concepts, beliefs, values and courses of action. This context, as they point out, plays a very important role in determining what will be considered as sensible or reasonable application of standards and principles of good thinking. Therefore they assert that the depth of knowledge, understanding and experience people have in a particular area of study or practice is an important determinant of the extent to which they are capable of thinking critically in that area.

Second, similar to the previous authors, they indicate that fulfilling relevant standards of critical assessment in carrying out thinking tasks is at the heart of critical thinking. Thus, they emphasize that knowledge of the standards at the operational level is necessary for anyone to think critically. These standards include the adequacy of claims about meaning, credibility of statements made by authorities, reliability of reports made by observers, validity of deductive arguments, strength of inductive arguments, adequacy of moral, legal and aesthetic reasons. In addition, they also offered a set of principles which may be needed in solving different kinds of problems that require deliberation. These include considering many alternative courses of action, discovering and taking into account as much relevant information about the nature and results of each alternative and trying to

acquire an awareness of the point of view and assumptions underlying one's thinking and the possible biases, according to the context of the decision, its significance, and one's prior reasoning about similar decisions.

Third, they suggest that a critical thinker needs to have a wide range of critical concepts on account that they enable the critical thinker to analyze and evaluate arguments more effectively. Forth, critical thinkers are advised to have a rich repertoire of heuristic devices (strategies, procedures, etc) in order to deal effectively with a wide range of thinking tasks. For instance, to decide which side of an issue to support, it is sometimes useful to make a list of the reasons for or against each side. To clarify what someone means by a term, it is useful to ask for examples of things to which s/he would apply the term, or to suggest what s/he thinks might be good examples and ask for confirmation of them.

Finally, they claim that one must also have certain commitments, attitudes or habits of mind that dispose him or her to use these resources to fulfill relevant standards and principles of good thinking. These attitudes and habits of mind include the following: respect for reasons and truth, respect for high quality products and performances, an inquiring attitude, open-mindedness, fair-mindedness, independent-mindedness, respect for others in group inquiry and deliberation, respect for legitimate intellectual authority, and an intellectual work ethic.

#### **2.2.4 Basic Critical Thinking Skills and Strategies**

Basic critical thinking skills can be examined under six main titles as interpretation, analysis, evaluation, inference, explanation and self-regulation. There are also some basic critical thinking strategies that are important to be a good critical thinker.

##### **2.2.4.1 Basic Critical Thinking Skills**

Upon the great interest in critical thinking, American Philosophical Association asked Peter Facione -an internationally known expert on the practice of critical thinking-to make a systematic inquiry about the present state of critical thinking. Facione (1990, p. 7) presided at the meeting where 46 critical thinking experts from various disciplines came together to discuss critical thinking. The result of the meeting is Delphi report. In the Delphi Report, Facione (1990, p. 7) stated that in eighties there was a great change toward thinking rather than traditional way of teaching. This movement highlighted inquiry and thinking rather than emphasizing disjointed skills all together. By this movement, critical thinking gained great attention and some questions related to critical thinking appeared to



be answered such as what are critical thinking skills? Analyzing Delphi Report, one can easily recognize that it is a remarkable one that clarifies many unsettled issues of critical thinking including the answer of the question mentioned above. 46 experts in the meeting came to an agreement that cognitive skills are the core critical thinking skills, and these cognitive skills are analysis, evaluation, inference, interpretation, explanation and self-regulation. Besides cognitive skills, the committee had a consensus on the sub-skills. Here is the table showing the cognitive skills and sub-skills that the committee came up with at the end of the meeting.

Table 9. Consensus List of Critical Thinking Cognitive Skills and Sub-Skills

<b>SKILL</b>	<b>SUB-SKILLS</b>
Interpretation	<i>Categorization</i> <i>Decoding Significance</i> <i>Clarifying Meaning</i>
Analysis	Examining Ideas Identifying Arguments Analyzing Arguments
Evaluation	Assessing Claims Assessing Arguments
Inference	Querying Evidence Conjecturing Alternatives Drawing Conclusions
Explanation	Stating Results Justifying Procedures Presenting Arguments
Self-Regulation	Self-examination Self-correction

Source: Facione (1990, p. 15) The Delphi Report p. 6-7

The committee also provided the descriptions of critical thinking cognitive skills and sub-skills in the following tables.

Table 10. Interpretation and Its Sub-Skills

SKILL	SUB-SKILLS
<b>Interpretation:</b> To comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures or criteria.	<b>Categorization:</b> To apprehend or appropriately formulate categories, distinctions, or frameworks for understanding, describing or characterizing information. To describe experiences, situations, beliefs, events, etc. So that they take on comprehensible meanings in terms of appropriate categorizations, distinctions, or frameworks.
	<b>Decoding Significance:</b> To detect, attend to, and describe the informational content, affective purport, directive functions, intentions, motives, purposes, social significance, values, views, rules, procedures, criteria, or inferential relationships expressed in convention-based communication systems, such as in language, social behaviors, drawings, numbers, graphs, tables, charts, signs and symbols.
	<b>Clarifying Meaning:</b> To paraphrase or make explicit through description, analogy or figurative expression, the contextual, conventional or intended meanings of words, ideas, concepts, statements, behaviors, drawings, numbers, signs, charts, graphs, symbols, rules, events or ceremonies.

Source: Facione (1990, p. 16) The Delphi Report p. 7

Table 11. Analysis and Its Sub-Skills

SKILL	SUB-SKILLS
<b>Analysis:</b> To identify the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of representation intended to express beliefs, judgments, experiences, reasons, information, or opinions.	<b>Examining Ideas:</b> To determine the role various expressions play or are intended to play in the context of argument, reasoning or persuasion, to define terms, to compare or contrast ideas, concepts or statements; to identify issues or problems and determine their component parts, and also to identify the conceptual relationships of those parts to each other and to the whole.
	<b>Detecting Arguments:</b> given a set of statements, descriptions, questions or graphic representations, to determine whether or not the set expresses, or is intended to express, a reason or reasons in support of or contesting some claim, opinion or point of view.
	<b>Analyzing Arguments:</b> given the expression of a reason or reasons intended to support or contest some claim, opinion or point of view, to identify and differentiate. (a) the intended main conclusion, (b) the premises and reasons advanced in support of the main conclusion, (c) further promises and reasons advanced as backup or support for those premises and reasons intended as supporting the main conclusion (d) additional unexpressed elements of that reasoning, such as intermediary conclusions, unstated assumptions or presuppositions, the overall structure of the argument or intended chain of reasoning, and (f) any items contained in the body of expressions being examined which are not intended to be taken as part of the reasoning being expressed or its intended background.

Source: Facione (1990, p. 17) The Delphi Report p. 7-8

Table 12. Evaluation and Its Sub-Skills

SKILL	SUB-SKILLS
<b>Evaluation:</b> To assess the credibility of statements or other representations which are accounts or descriptions of a person's perception, experience situation, judgment, belief, or opinion; and to assess the logical strength of the actual or intend inferential relationships among statements, descriptions, questions or other forms of representation.	<p><b>Assessing Claims:</b> To recognize factors relevant to assessing the degree of credibility to ascribe to a source of information or opinion; to assess the contextual relevance of questions, information, principles, rules or procedural directions and to assess the acceptability, the level of confidence to place in the probability or truth of any given representation of an experience, situation, judgment, belief or opinion.</p> <p><b>Assessing Arguments:</b> To judge whether the assumed acceptability of the premises of a given argument justify one's accepting as true (deductively certain), or very probably true (inductively justified) the expressed conclusion of that argument, to anticipate or to raise questions or objections, and to assess whether these point to significant weakness in the argument being evaluated, to determine whether an argument relies on false or doubtful assumptions or presuppositions and then to determine how crucial these affect its strength, to judge between reasonable and fallacious inference, to judge the probative strength of an argument's premises and assumptions with a view toward determining the acceptability of the argument, to determine and judge the probative strength of an argument's intended or unintended consequences with a view toward judging the acceptability of the argument and to determine the extent to which possible additional information might strengthen or weaken an argument.</p>

Source: Facione (1990, p. 18) The Delphi Report p. 8-9

Table 13. Inference and Its Sub-Skills

SKILL	SUB-SKILLS
	<p><b>Querying Evidence:</b> In particular, to recognize promises which require support and to formulate a strategy for seeking and gathering information which might supply that support. In general, to judge that information relevant to deciding the acceptability, plausibility or relative merits of given alternative, question, issue, theory, hypothesis or statement is required, and to determine plausible investigatory strategies for acquiring that information.</p>
<p><b>Inference:</b> To identify and secure elements need to draw reasonable conclusions; to form conjectures; and hypotheses, to consider relevant information and to deduce the consequences flowing from data, statements, principles, evidence, judgements, beliefs, opinions, concepts, descriptions, questions, or other forms of representation.</p>	<p><b>Conjecturing Alternatives:</b> To formulate multiple alternatives for resolving a problem, to postulate a series of suppositions regarding a question, to project alternative hypotheses regarding an event, to develop a variety of different plans to achieve some goal and to draw presuppositions and project the range of possible consequences of decisions, positions, policies, theories or beliefs.</p> <p><b>Drawing Conclusions:</b> To apply appropriate modes of inference in determining what position, opinion or point of view one should take on a given matter or issue, given a set of statements, descriptions, questions or other forms of representation, to deduce, with the proper level of logical strength, their inferential relationships and the consequences or the presuppositions which they support, warrant, imply or entail, to employ successfully various sub-species of reasoning, as for example to reason analogically, arithmetically, dialectically, scientifically, etc. And to determine which of several possible conclusions is most strongly warranted or supported by the evidence at hand, or which should be rejected or regarded as less plausible by the information given.</p>

Source: Facione (1990, p. 19) The Delphi Report p. 9

Table 14. Explanation and Its Sub-Skills

SKILL	SUB-SKILLS
<b>Explanation:</b> To state the results of one's reasoning; to justify that reasoning in terms of the evidential, conceptual, methodological, criteria-logical and contextual considerations upon which one's results were based; and to present one's reasoning in the form of cogent arguments.	<b>Stating Results:</b> To produce accurate statements, descriptions or representations of the results of one's reasoning activities so as to analyze, evaluate, infer from, or monitor those results.
	<b>Justifying Procedures:</b> To present the evidential, conceptual, methodological, criteria-logical and contextual considerations which one used in forming one's interpretations, analyses, evaluation or inferences, so that one might accurately record, evaluate, describe or justify those processes to one's self or to others, or so as to remedy perceived deficiencies in the general way one executes those processes.
	<b>Presenting Arguments:</b> To give reasons for accepting some claim, to meet objections to the method, conceptualizations, evidence, criteria or contextual appropriateness of inferential, analytical or evaluative judgments.

Source: Facione (1990, p. 20) The Delphi Report p. 10

Table 15. Self- Regulation and Its Sub-Skills

SKILL	SUB-SKILLS
<b>Self-Regulation:</b> Self consciously to monitor one's cognitive activities, the elements used in those activities, and the results deduced, particularly by applying skills in analysis and evaluation to one's own inferential judgments with a view toward questioning, conforming, validating or correcting either one's reasoning or one's results.	<b>Self-Examination:</b> To reflect on one's reasoning and verify both the results produced and the correct application and execution of the cognitive skills involved; to make an objective and thoughtful meta-cognitive self assessment of one's opinions and reasons for holding them; to judge the extent to which one's thinking is influenced by deficiencies in one's knowledge, or by stereotypes, prejudices, emotions or any other factors which constrain one's objectivity or rationality and to reflect on one's motivations, values, attitudes and interests with a view toward determining that one has endeavored to be unbiased, fair- minded, thorough, objective, respectful of the truth, reasonable, and rational in coming to one's analyses, interpretations, evaluations, inferences, or expressions.
	<b>Self-Correction:</b> Where self-Examination reveals errors or deficiencies, to design reasonable procedures to remedy or correct, if possible, those mistakes and their causes.

Source: Facione (1990, p. 21) The Delphi Report p. 10-11

Besides aforementioned critical thinking skills, there are also induction, deduction, credibility and recognizing assumption skills worth to mentioning in the critical thinking skills.

#### **2.2.4.1.1 Induction and Deduction**

Induction and deduction skills are extremely significant for critical thinking and they are generally studied under the title of reasoning. They are also closely related to making inference. In the inductive reasoning, one is expected to draw a general conclusion from particular facts. In other words, rather than a conclusion, induction starts with premises. In the deductive reasoning, you are expected to come up with a particular conclusion from the general statement (Boostroom, 1992, p. 71).

#### **2.2.4.1.2 Credibility**

Credibility is also related to the evaluation skill. Deciding to believe or not what is said to you or what you are reading. Besides understanding what is said or written, a critical thinker should pay attention to the credibility of the source. The source can be a person or any information in an essay, a seminar or on a newspaper. Boomstroom (1992, p. 57) states that “It is possible to consult experts, but it does not mean that whatever experts say is right. The problem is which source you should believe to find the truth. You should try to find good reasons to believe someone or something”.

#### **2.2.4.1.3 Recognizing Assumptions**

Assumption is a vital concept in critical thinking; therefore, recognizing assumptions is among the main traits of a critical thinker (Boostroom, 1992; Fisher, 2006; Ennis, 2005). Fisher (2006, p. 47) asserts that every argument includes unsaid or in other words assumed beliefs that people believe to be true. For example, suppose that there is a skater who is sitting at the edge of a frozen lake and putting on her skater. Someone tells her “the ice is thawing and another skater had to be rescued when it broke and he fell through earlier today, so it is not advisable to skate there now” (p. 47). In this example, the person assumes that the skater does not want to fall through the ice. It is called assumption and it is a belief taken for granted by people but it is not explicitly stated. To find the truth or decide whether someone or something is right, critical thinkers should be aware of the assumptions made in the arguments so that they can decide if the argument is reasonable.

#### **2.2.4.2 Basic Critical Thinking Strategies**

In line with the critical thinking skills, there are some critical thinking strategies that are widely highlighted in classrooms to foster students' critical thinking. In his book *Developing Creative and Critical Thinking*, Boostrom (1992, p. 73) underlines those main critical thinking strategies such as asking questions, keeping thinking flexible, drawing conclusions, remembering, reading between the lines, imagining, finding relationships, predicting, combining, classifying, and problem solving. He clarifies each strategy mentioned above as follows:

Boostrom (1992) mentions that "asking questions" is a required critical thinking strategy. If you do not ask questions, you cannot come up with anything (p.74). When you ask questions, your mind starts working. Another significant point Boostrom underlines is curiosity that you should have to ask question. He continues that it is you who will stimulate your curiosity by asking yourself questions such as how, why, when, where and what.

"Keeping thinking flexible" is another critical thinking strategy. Under this strategy, Boostrom (1992, p. 59) includes three sub-categories: gathering facts, having a new point of view and finding a procedure.

Boostroom (1992, p. 59) suggests that one of the main strategies of critical thinking is "gathering facts" that is to collect facts, examples and ideas. For instance, if you want to learn people's ideas about something, you need to gather opinions. If you want to write a book about something, you need sound information. In no occasion, you can convince people without gathering facts (p. 59).

Boostrom (1992, p. 60) states that "having a new point of view", in other words, seeing things in a different way is a required thinking strategy. Moreover, he adds that seeing things in different ways is not something you can do only by using your eyes. It is also to see and understand something with your mind, and the thing you see can change according to the direction you look from. Therefore, striving to see things in a different way or at least being open to seeing them in a different way is a significant strategy for thinking (p.60).

Boostrom (1992) puts forth that "finding a right procedure" to solve a problem is another essential strategy for thinking. To do this, you should think about different approaches and come up with the most appropriate one. When you find the right procedure, then it becomes easy to solve a problem that seems difficult at the first glance (p.64).



Boostrom (1992, p. 66) also highlights “drawing conclusion” in thinking by showing the connection between inductions and making an inference. He asserts that making an inference, one also goes beyond the facts and reaches a conclusion. For example, looking at the expression on your friend’s face, you may infer that what you said hurt her feelings. Whenever you come up with a new idea out of the facts, you are making an inference, at the same time you are reasoning inductively since in inductive reasoning, depending on the facts at hand, you are drawing conclusion as well. He adds that in the inductive reasoning, you have premises and conclusions, and there are two significant things to consider while reasoning inductively: 1- you should test the conclusion you draw to find out how well it fits the premises; 2- you should evaluate how reliable and complete the premises you have. Another critical thinking strategy is “remembering”. Boostrom (1992) asserts that remembering is a part of thinking, and it is more than just recalling but while remembering your brain classifies, shapes and structures things. He continues that there are two common ways to memorize and recall in an easier way. The first one is to relate the things you are memorizing to something you know before. The second way to remember and recall easily is to visualize what you are memorizing (p.77).

Boostrom (1992) cites that “reading between the lines” is another strategy to think critically. He continues that there are three steps when you hear or read something. Firstly, you decide what the words mean, secondly if they sound logical and thirdly if you believe them. There are some ways to read between the lines. One way is to be aware of the values of a speaker or writer, and your way of judging will be based on whether you agree with those values. The second way to read between the lines is to be aware of the assumption a speaker or a writer makes. The third way is to draw your attention to your own reactions since prejudice is a huge barrier on the way of critical thinking. Being aware of your own ideas, you can be fair towards others’ ideas. Finally to read between the lines, you should decide on what basis you will appraise other’s ideas, in other words, the standards you will set while you are thinking about people’s ideas (p. 79).

Boostrom (1992, p. 80) claims that “imagining” is a useful strategy of critical thinking. He mentions that creative ideas come abruptly. May be while you are taking a shower or eating just like happened to Sir Isaac Newton who was struck on the head with an apple while sitting under a tree and found the gravity of earth. With the power of imagination, you can come up with new ideas that can be helpful to make sense of the world. Under the imagining strategy, Boostrom (1992) lists four related strategies- finding relationship, predicting, combining and classifying (p. 85).

“Finding relationship” is a sub-strategy that Boostrom (1992, p. 88) puts under the imagining strategy. He mentions that finding relationships is a part of imaginative thinking. Boostrom (1992) states “predicting” as a helpful strategy of critical thinking under the title of imagining strategy and suggests four ways of predicting. The first way is to use natural laws and rules. The second is to weight how likely something will occur. The third and the fourth ways are based on making use of the facts and experiences to make logical predictions (p.88).

“Combining” is another strategy that Boostrom (1992) mentions under the imagining strategy. He asserts that to be imaginative, you don’t need to find a new idea, but combining old ideas in new ways; you can be imaginative as well. He suggests three ways of combining: to put pieces together to see the result, to evaluate and choose the appropriate pieces and exclude others and finally to mix facts, materials or ideas and see the surprising results and find out whether it works (p. 92).

Another strategy under the title of imagining is “classifying”, in other words putting things into groups based on their similarities and differences. Boostrom (1992) offers three ways of classifying: to sort things into groups, to divide something into parts and to decide whether things go together or not (p. 94).

Finally, like the many experts in critical thinking, Boostroom (1992) underlines “problem solving” strategy in critical thinking. He defines having a problem as “you do not know what to do or think” (p. 95). He adds that problems always incorporate uncertainty. Moreover, he suggests seven ways to solve a problem and warns that do not suppose these ways will work in any way, but one should also work out his/her brain to solve a problem (p. 95).

- 1- Define problems (recognize what the problem is).
- 2- Set goals (break a large problem into smaller problems or take various different possibilities into account).
- 3- Represent information (put information into simplest terms, put it into a chart or graph).
- 4- Make progress with the problem (try to see the problem from a new angle).
- 5- Talk about problems (alone or with a group).
- 6- Understand analogies (compare your problem to a different but a similar problem).
- 7- Researches (gather new information and have a systematic study).

In addition to the mentioned skills and strategies, teaching critical thinking, educators widely employ questioning skills. Besides other important figures such as Paul and Elder,

dealing with questioning skills and critical thinking two vital figures appear on the stage- Socrates from the classical period and Benjamin Bloom from the 1600s.

### **2.2.5 Foreign Language Education and Critical Thinking**

Although the concept of critical thinking has not been defined clearly and accurately, there has been a consensus about critical thinking as one of the key issues of any subject areas in education. Foreign language education is one of these areas which highly requires promoting critical thinking skills in learning owing to the fact that language learning is a thinking process. It provides a natural setting for using critical thought to be analyzed and interpreted (Chaffee, 1985, Sacco, 1987; 58; and Flower, 1981, 3). Suhor (1984, p. 23) strikingly emphasized that;

Language as a way of thinking and learning, then, is not merely a pedagogical catchphrase. It is an essential element in every classroom and the most persuasive way of insuring that thinking skills are, in fact, being taught effectively in every subject area.

According to Kumaravadivelu (1993) (as cited in Özçınar, 1996, p. 12), the Communicative Approach, one of the current approaches implemented in foreign language education has similar aims with the critical thinking theory. These are:

1. seeking to promote interpretation, expression and negotiation of meaning, an attempt which requires students to be active in order to be involved in such skills,
2. encouraging students to ask for information, seek clarification, express an opinion, agree/ disagree in order to participate in meaningful interaction,
3. creating learning opportunities in class so that language will develop in its own way,
4. contextualizing linguistic input presented to learners in units of discourse so that students can benefit from the interactive effects of linguistic components.

To sum up, it is conclusive that critical thinking can be developed in integration with foreign language education. Foreign language education fosters critical thinking and critical thinking fosters foreign language education.

### **2.2.6 Relationship between Critical Thinking and Reading Comprehension**

As afore stated, 21<sup>st</sup> century is an "Information Era". This refers to the age in which information is rapidly changing and developing day to day. To be able to keep up with all this change, not only should individuals be able to send and receive messages effectively and negotiate meaning, but they should also be able to think critically on what happens around them. As an individual, human being is constantly receiving a great deal of data

from different sources of information all over the world, this large bulk of information necessitates him/her to select the data through thinking critically. The same is true for language learners. They are constantly exposed to different types of texts which require them to be able to use reading as well as thinking skills simultaneously. As far as language education is concerned, enabling students to become good language learners has always occupied the minds of authorities and they have been always attempting to find easy ways to facilitate it.

Elder and Paul (2004) pointed out that “to learn well, one must read well” (p. 37). Likewise, Cook (1991) regarded reading primarily as a thinking process and highlighted the importance of engaging the students in talking about the text they read while using reading strategies (p. 23). The readers are constantly dealing with a complex interaction between text, setting, reader, reader background, reading strategies, the L1 and L2 and reader decision-making. It necessitates them to be able to evaluate the text critically. In other words, in order to understand the text and facilitate this complex interaction, they need to be critical thinkers; that is, to learn to value their own thinking, to compare their thinking and interpretations with others, to reexamine or reject the parts of the process in which they value their thinking and interpretations with others, and to compare them with others when it is necessary.

One of the goals of reading is comprehension, in other words, understanding. An individual can comprehend a sentence fully without missing a sentence or phrase. However, it does not signify that they have reached the conclusive goal. It becomes meaningless unless they know how to reason on it.

In a classroom, there are many techniques for fostering critical thinking. However, students need to accumulate knowledge in order to produce thoughts on matters and subjects. Mason and Washington indicate the necessity of reading for this purpose. Referring back to Bloom’s taxonomy of educational objectives, the very first stage in the cognitive domain is knowledge, where learners accumulate knowledge, and one way of doing that is by reading.

The importance of reading has been emphasized by many researchers in the field. One of them is Paul. Paul (1993, p. 28) defines reading as the process of the translation of the writer’s thought into meanings that the can understand. He believes that an author encodes messages into words and disseminates these with the help of the book or printed material. Readers use a complicated process to decode these messages for their own understanding. They have to understand such things as the purpose of the book, what issues or problems

are being discussed in the book in order to understand the author's message. The understanding requires paraphrasing what is read or to remember the meaning of sentences that compose the passage is not enough critical understanding in writing and understand the meaning behind the passage. Mason and Washington (1992) say that "understanding which grows out of reflective reconsideration of texts can be approached from many directions, interpreted in many ways" (p. 19). According to Armbuster (as cited in Kurfiss, 1998), an effort is to establish a "model of the meaning of the text" (p. 32)

The accumulation of knowledge through reading enables learners to form good arguments according to Bloom's taxonomy. Students at the end of the learning process come to the evaluation stage, which is approached with the help of the accumulated knowledge and the phases they have gone through to reach this stage. One way to enhance students' background knowledge could be accomplished through improving their reading skills. According to Ruland-Parker (1999), the works of various researchers indicate that classroom activities related to reading, such as the use of advance organizers, comprehension of concepts, concept development, inductive and logical reasoning, representation, elaboration, problem solving, evaluation and metacognitive effective strategies foster students' thinking abilities at the college level. Reading is one of the most powerful tools to activate background and prior knowledge and to promote learner participation in a discussion setting. It helps learners to become part of the learning process, to question and inquire about what they are learning or what is being taught (p. 76). According to research conducted by Commeyras (as cited in Tice, 1993, p. 48) reading lessons have significant impact on student's development in critical thinking lessons. She indicates that these lessons encourage students to refer to the text to clarify information, cover different perspectives and the points of view of vary parties, provide reasons to support interpretations, and evaluate the acceptability of the alternative interpretations. She has found that children who do these things, which she identifies with "critical thinking", improve their reading proficiency. There it is clearly seen that there is an interactive relationship between reading and critical thinking.

### **2.2.7 The Relation between Literature, Foreign Language Teaching and Critical Thinking**

Literature, which was judged as unpractical to use in language classrooms sometime ago due to its difficulty in language, has been considered as an important subject to be studied recently. According to Alagözlü (2006, p. 73), all kinds of literary texts (short stories,

novels, drama, poetry) may be valuable to integrate students into thinking because of their being naturally argumentative. Many educators and authorities in that field have recognized the benefits of the study of literature again. For Erkaya (2005), some instructors “who have integrated literature in the curricula have realized that literature adds a new dimension to the teaching of EFL” (p. 66).

Literature offers a lot of benefits for English language students linguistically, culturally, and critically. Widdowson mocks those who, having banished literature from the curriculum because of its alleged irrelevance to the purpose of the language learning, invent their own brand of fiction to display language usage: “Textbooks are full of fiction. Mr. and Mrs. Brown, son David, daughter Mary pursuing the dreary round of their diurnal life” (1982, p. 205). Students read such texts but do not become humanly engaged in them and do not view them as a meaningful use of language. They discover that “English can be beautiful language” not just a “practical and utilitarian” one. Widdowson (1975, p. 80) therefore suggests that, rather than limiting the focus of literary study to either language usage or cultural content, we should view literature as discourse and the study of literature as “an inquiry into the way a language is used to express a reality other than that is expressed by the conventional means”.

It is really the right way to teach English language by the help of literature written in that language. So, literature and language are complementary. Linguistically, literature helps students not only develop their knowledge of grammar and vocabulary of the target language but also gain a good command of four language skills; reading, writing, listening, and speaking. Literary texts are good sources for students to improve their grammar and vocabulary knowledge; in fact the whole language system in the sense of actual communication.

Apart from its contribution to grammar teaching, literature also contributes to the development of vocabulary knowledge. According to Povey (1979, p. 162), literary works can be used to foster vocabulary knowledge and provide the learner with the “widest variety of syntax, the richest variations of vocabulary discriminations” and also provide examples of language “employed at its most effective, subtle, and suggestive”. If the literary texts serve real life examples of vocabulary items in meaningful contexts, the process of vocabulary learning will turn into an enjoyable activity rather than a tiresome activity with lots of vocabularies to be memorized and forgotten in a short time. According to Barton (2001), if people are able to use a word flexibly in different situations, it shows that the word is really known and can be accurately identified. He also adds “our students’

productive vocabularies grow when we help them develop precision in their definition and usage” (p. 82).

Literature allows students to have a good command of the skills of reading, writing, listening, and speaking. The more the students are actively involved in reading, writing, listening, and speaking in the target language, the more they are informed from the literary text they are studying. For Collie and Slater (1987, p. 48), “a literary text can serve as an excellent prompt for oral work”. In Eradam’s words, “the pleasure students get out of active engagement with literary texts and the interactional role they enjoy as they work with the foreign language trying to make sense of it enables [students] to enrich and improve their foreign language competence, as the pleasure principle will invite/motivate them to respond in the target language, a new territory for them, where their ideas, emotions... find some value” (p.25). As long as students read a literary text and then write down what they have read, they can improve their reading and writing abilities. By the same token, as long as students listen to an interpretation of literary text and then discuss it with their classmates in or out of class, they can improve their listening and speaking skills. Consequently, it can be suggested that literature and language are inseparable in fact they support each other. When students deal with literary works, they reinforce their grammar and vocabulary knowledge as well as their language skills.

Furthermore, literature, which has been in exile for a long time, has critical benefits for the language students apart from its linguistic benefits. As Collie and Slater (1987, p. 50) explain, “engaging imaginatively with literature enables learners to shift the focus of a tension beyond the more mechanical aspects of foreign language system”. Literary texts motivate interactive activities rather than just simple yes/no type of activities. In that way, students will be able to make a personal relationship with texts. Such types of activities do not evaluate the students’ simple comprehension of the literary texts; but, they are given a chance to generate responses which necessitate their direct contribution to the texts. Using literary texts is a powerful way for students to learn the English language, to enhance their understanding of what they read, to make judgments on them, and to evaluate and respond them critically.

As is understood, literature has a very important mission. It allows students to get rid of their present biases and move towards a world in which students, with an open minded perspective, feel empathy with the characters. Thus, students compare the fictional world to their everyday real world. Collie and Slater (1987, p. 2) are very right in their statement: “literature, which speaks to the heart as much to the mind provides material with some

emotional color that can make fuller contact with the learner's own life". If the teacher provides motivating and stimulating literary texts, students will find something from their own lives, which will highly motivate them to study the text thoroughly. In order to put all these into practice and achieve the real meaning of a particular work of literature, there is considerable demand for critical thinking. But at the same time, it is very true to say that it is only by the help of literary texts that students attain different points of view which enhance their critical thinking.

In the study of literature the reader and the text relationship cannot be denied. According to Carrell and Eisterhold (1983, p. 28), reading comprehension is "an interactive process between the reader's background knowledge and the text". It is understood that the act of reading is not a static but a dynamic process because the reader is not just sitting and absorbing knowledge from the text but actively interacting with the text in order to construct meaning based on his prior knowledge, personal choices, and cultural environment. As a result, this interaction is not a one-way but a two-way process. If the existing schemata and the new knowledge or incoming data matches, then complete comprehension occurs. To sum up, reader's personal experience with the text plays a vital role in the meaning making process.





## **CHAPTER 3**

### **METHODOLOGY**

#### **3.0 Introduction**

This chapter comprises the research design, the study group of the research, data collection procedure and instruments; and the analysis and processes of data collection.

#### **3.1 Research Design**

The research was a quasi experimental study since the groups were not formed randomly, and it was implemented in “Literature and Language Teaching I” course in English Language Teaching (ELT) Department of Education Faculty at Gazi University during Fall semester of 2013-2014 Academic year. The research design of this study is presented in figure 2.

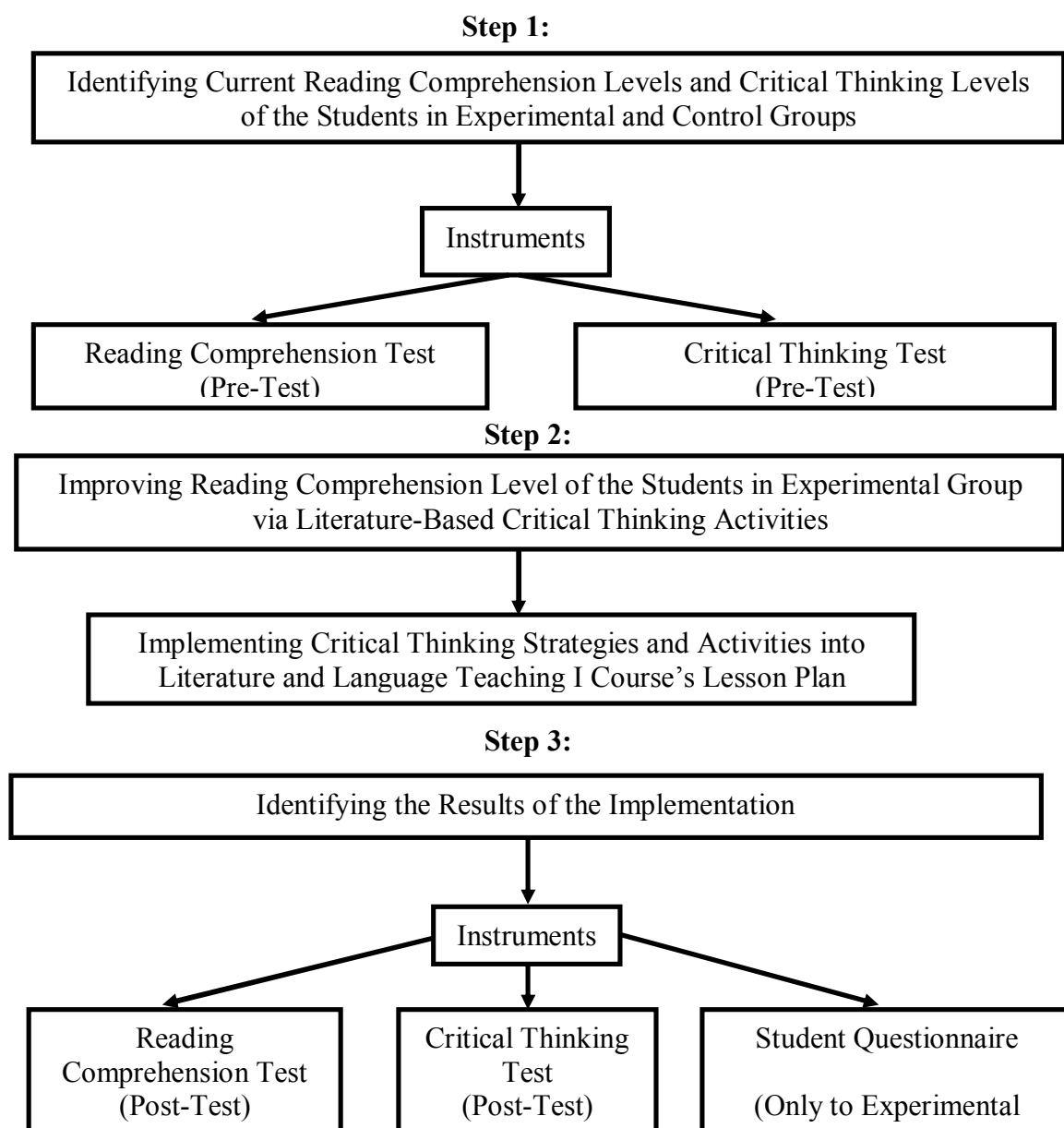


Figure 2. Research Design of the Study

Using quantitative research method, this study aimed to develop reading comprehension levels of teacher trainees at Gazi University ELT Department through literature-based critical thinking activities. At the beginning of the study, the pre - Reading Comprehension Test and pre - Cornell Critical thinking Test were carried out to both experimental and control groups. Then, for the experimental group “Literature and Language Teaching I” course lessons were designed in accordance with literature-based critical thinking strategies. The treatment process lasted 7 weeks. After the treatment process, post Reading Comprehension and Cornell Critical Thinking Tests were applied to both groups. Besides,

student questionnaire was conducted to find out their opinions about the activities implemented into the course.

### **3.2 Sample of the Study**

In the study, purposive and convenient sampling method was used as it was impossible to include all the literature courses in the department. Hence, “Literature and Language Teaching I” course was regarded as the most appropriate course for the implementation. The sample of the research consists of the teacher trainees who took “Literature and Language Teaching I” course in the 2013-2014 fall semester at Gazi University Gazi Education Faculty ELT Department. Group 301 as the experimental group and group 311 as the control group were randomly selected for the study. There were 26 participants in the experimental group while there were 19 in the control group.

The majority of the students in both groups were female. There were 20 female teacher trainees in the experimental group and 17 in the control group. The ages of the students ranged from nineteen to twenty five. The lessons with experimental group were carried out with the activities prepared according to literature-based critical thinking strategies which were integrated into the “Literature and Language Teaching I” course for seven weeks throughout the academic semester. However, the participants in the control group followed the usual syllabus of the course. The students in experimental group were informed about the study they participated in at the beginning of the study, they were asked to sign a document showing their compliances with the study they were involved in.

### **3.3 Data Collection Instruments**

In this study, quantitative data collections were used as instruments. As quantitative instruments, a Reading Comprehension Test and a Critical Thinking Test were used for the purpose of pre-test and post-test in order to see the impact of the treatment on reading comprehension level and critical thinking level of the students who participate in this study. Another quantitative instrument was a questionnaire which was used to identify teacher trainees’ reflections about the activities carried out during the treatment process.

#### **3.3.1 Reading Comprehension Test**

The Reading Comprehension Test consists of 30 multiple-choice questions, the reliability and validity of which have been made is used to measure the students’ reading comprehension skills such as finding the main idea, subordinate idea, judging the text,

making inferences in reading comprehension. This test was adopted from a dissertation which was written in Selçuk University. Three experts of Gazi University English Language Teaching Department were consulted and in the light of their opinions, necessary modifications were made to the test in order to secure the validity. The reliability of the reading comprehension test was redone by means of KR-20 method, and the reliability value was found 0,85. (See Appendix 1).

### **3.3.2 Cornell Critical Thinking Test Level X**

Examining the related literature, Cornell Critical Thinking Test Level X was determined as the critical thinking assessment tool. The Cornell Critical Thinking Test Level X was used as both pre and post test instrument. The test was chosen because it is one of the most widely used tests in similar studies.

Cornell Critical Thinking Tests were developed by Robert H. Ennis in 1962. This test includes 76 multiple-choice questions that evaluate student skill in induction, deduction, credibility and identification of assumptions. The test is intended to be taken within a 50 minute period. Each item on the test has three choices and one keyed answer. In the Cornell Critical Thinking Test Administration Manual, it is mentioned that the reliability of the test is from 0,67 to 0,90 on Cornell Critical Thinking Level X. With respect to *item analysis*, the Critical Thinking Test Administration Manual reports that the difficulty index of 0,95 indicates that 95 % answered the item correctly.

As is mentioned in the Critical Thinking Tests Administration Manual, a test is valid to the extent that it measures what it is supposed to measure. There are three types of validity, criterion-related validity, content-related validity, construct validity. Criterion-related validity is related to the correlations between the test and other tests measuring the same concept; in other words, between Cornell Critical Thinking Test Level X and the other critical thinking tests. As is mentioned in the Critical Thinking Tests Administration Manual, according to seven correlations between Cornell Critical Thinking Level X and the other critical thinking tests, the criterion-related validity is ranged around 0,50 which is a reasonable degree of relationship.

According to the Critical Thinking Test Administration Manual, content-related validity shows that the test is representative of an appropriate body of content that the test is supposed to be assessing (p. 21). Looking for the content-related validity, one should ask the question “Is the body of content appropriate?”; the question deals with the conception of critical thinking ability on which the test is based, whether the conception is satisfactory.

As it is also stated in the manual Smith and Ennis have devoted great time to conceptualizing critical thinking and Ennis is called to be the father of critical thinking in a U.S Office of Education publication and is called as the current guru of critical thinking skills testing in American Association of School Administrators. The researcher knows the difficulty and controversy over the definition of critical thinking as it is a mental concept after reading the related literature review, and he also believes that Ennis's definition reflects the core idea of critical thinking that is offered after studying for a long time by Ennis and his colleagues and he decided to use his definition as the operational definition for his study, so the content validity seems to be established.

Ennis (2005) states in the manual that construct validity is related to critical thinking in the test "because critical thinking is a construct and in the construct validity we are interested in the extent to which the test adequately assesses the extent to which a person is a critical thinker" (p. 34). In other words, "the construct validity of a test depends on 1) the strength of the system of knowledge of which the test is a part and 2) the extent to which the test contributes to and fits in with that system of knowledge, primarily by its ability to explain data" (p. 36); therefore, the content-related and criterion-related validity of the test also prove the construct validity, correlations of Cornell Critical Thinking Level Z with other variables and consistency across groups and setting.

The Turkish version of Cornell Critical Thinking Test was used in this study in order not English to be a hindrance to students in testing their critical thinking and reasoning. For the Turkish version of critical thinking test three experts of Gazi University English Language Teaching Department were consulted and in the light of their opinions, necessary modifications were made to secure the validity. (See Appendix 2).

### **3.3.3 Questionnaire**

In this study, a student questionnaire was used to learn students' reflections on the activities after the implementation of literature-based critical thinking activities

The student questionnaire consisted of five pages (See Appendix 3). In general, the student questionnaire was prepared according to literature review to come up with an idea about the present critical thinking situation in the literature courses. Specifically, it aimed to gain information about the classroom atmosphere, common practices in the literature courses with regard to critical thinking and students' tendency towards being critical thinkers. The questionnaire included forty-seven multiple choice questions and was a five-point Likert scale. To respond to each item in the questionnaire 0 means "never", 1

“rarely”, 2 “sometimes”, 3 “often” and 4 “always”. The first question asked for demographic information and the rest of the questions asked about critical thinking, whether critical thinking was emphasized in the literature courses, activities carried out in the courses, instructor of the course and his/her way of teaching and students’ tendency towards being critical thinkers. This questionnaire was prepared in Turkish since the main purpose of the study is not to test English levels of the students. The student questionnaire was given its final version after consulting three instructors from Gazi University ELT department.

### **3.4 Data Collection Process**

Questionnaire, reading comprehension test, and Cornell Critical Thinking Test Level X were piloted before the actual study to find out the misunderstandings and confusing parts and to make required revision and explanation. The piloting process of the data collection instruments were carried out at the beginning of Spring Semester of the 2012-2013 Academic year. It was before the treatment process and performed in order to see whether enough data can be collected with these instruments or not. After this piloting process, it was observed that the students could understand the questions in reading comprehension and student questionnaires clearly, and answer them without any difficulties. However, most of the subjects said that the questions in critical thinking test were confusing and that they had difficulties in understanding the instructions. Although it was mentioned in the oral directions part in the administration manual, it was again underlined by the researcher that they should base their answers on the information given, most of the subjects asked whether they could add their own opinions and experiences while answering the questions. Therefore, the researcher decided to write this direction on the board in the actual study.

#### **3.4.1 Implementation of Critical Thinking Activities**

As was stated before for the implementation part of the study, group 301 was chosen as the experimental group and critical thinking activities were implemented to “Literature and Language Teaching I” course content. The activities were prepared in line with the literature review, the course content and the Cornell Critical Thinking Test Level X.

#### **3.4.2 Activities Prepared in line with Bloom’s Taxonomy**

As was discussed in Chapter 2, Bloom’s Taxonomy of Cognitive Domain is an instrument that orders critical thinking skills. Brown (2004, p. 78) mentions that with its clear

structure the taxonomy helps the improvement of critical thinking in the classroom in a way that students apply critical thinking skills to any subject and to real life itself. Accordingly, when dealing with critical thinking, it is inevitable to mention Cognitive Level of Bloom's Taxonomy. That is why Bloom's Taxonomy was highlighted in this study and critical thinking activities were prepared in line with the taxonomy. Preparing critical thinking activities in line with Bloom's Taxonomy, all levels are emphasized to help students advance easily from one level to another. To give an example, for the basic two levels, knowledge and comprehension, the students are asked information questions about the authors, their works, literary periods, social and political background of the works. In the application part, they are asked to apply what they learn in new situations; sometimes by finding out the characteristics of a specific period in a work written in that period. For the analysis level, the students are asked reasonable questions related to works that require dividing works into parts to answer. In the synthesis level, the students are expected to create something on their own; to this end, they are asked to produce various works such as designing a cover, or a new ending for a work.

#### **3.4.3 Class Discussion, Pair and Group Work Activities**

Class discussion, pair and group work activities were also highlighted in the study. Through engaging classroom discussions in which students evaluate different points of view and try to support their views, students practice critical thinking skills (Combs, 1992; Paul & Elder, 2001; Halvorsen, 2005). In the study, most of the activities were carried out in pair or group work again to promote critical thinking in the courses. As interaction and discussion are very important to create a critical thinking encouraging atmosphere (Mirioglu, 2002; Halvorsen, 2005), pair and group work are highlighted in preparing critical thinking activities and the students were asked to work in pairs and groups to do the activities.

#### **3.4.4 Activities prepared in line with the Cornell Critical Thinking Test Level**

##### **X**

Although different levels of Bloom Taxonomy encourage critical thinking skills included in the Cornell Critical Thinking Test Level X - for instance, the analysis part promotes recognizing unstated assumptions, logical fallacies in reasoning, distinguishing facts and inferences- the researcher also prepared activities directly related to Cornell Critical Thinking Level X. The activities were prepared in line with the critical thinking skills that



the Cornell Critical Thinking Test Level X is based; namely, induction, deduction, credibility and assumption.

Induction and deduction are regarded as two of the most important critical thinking skills. In line with the inductive and deductive reasoning, the researcher prepared activities that ask students to draw conclusions from particular to general and from general to particular by using various literary works. Moreover, related to deduction and induction activities, students were asked to make inferences from the literary works.

As was discussed in Chapter 2, credibility is a highly required critical thinking skill to be a good critical thinker (Boostrom, 1992, p. 33). Therefore, the researcher prepared credibility activities in which the students were asked to decide whether to believe someone or not in the provided situation related with the literary works studied in “Literature and Language Teaching I” course. Preparing credibility activities, the researcher tried to raise students’ awareness about the importance of the source of the information in deciding whether to believe a claim or not and as the study’s aim was not to give direct critical thinking instruction but incorporation of critical thinking in the curriculum, the students were not given ready-made credibility questions, but instead their questions are encouraged.

Identifying assumptions is also regarded as an important skill in terms of critical thinking. Weil (2004, p. 64) states that whenever we think, we make assumptions that generally come from our habits. Our assumptions are closely related to our history and relationships, so they are also connected to gender, class, culture, power and control. To put it another way, our assumptions are about ourselves, people and the world. Assumptions can be defined as beliefs taken for granted, but they are the beliefs we think we know and they are hardly questioned. At this point, the question of distinguishing between what we know and what we believe appears. Using our assumptions, we may draw wrong conclusions; therefore, to be critical thinkers who come up with a sound reasoning, we should be aware of assumptions of ourselves and of other people. In other words, the hairline between assumption and the truth determines critical thinkers’ route in drawing right conclusions. Believing in the significance of recognizing assumptions in thinking critically, the researcher prepared activities that reveal students’ assumptions about characters or situations. Moreover, students are expected to find out assumptions made in the literary works.

For the detailed information about the critical thinking activities, see Appendix 4.

### **3.4.5 Literary Works Used in the Experiment**

In “Literature and Language Teaching I” course, students were taught short stories by different authors. Short stories are quite practicable in terms of teaching critical thinking.

Fiction enlarges students’ critical thinking abilities by putting forward various situations in front of the students. It is true that critical thinking abilities can be taught by using different kinds of literary texts; such as novels, plays, short stories, and poems. But it is worth noting that the choice of the literary texts plays an important role for using literature in EFL classes. Short stories were chosen intentionally because they have the same literary properties like novels such as plot, setting, characterization, point of view, tone, theme, and main ideas. Their spatial limitation is an advantage also. They can be read at one sitting. This is an important point in its being preferred as more suitable for language students than other literary genres since they provide “extensive exposures to language in which themes are more easily generated” (Murdoch, 1992, p. 3). Short stories are a means of not only offering literary appreciation but also developing critical thinking skills. That is why, Literature and Language Teaching I Course was chosen deliberately since it contains short stories. For the lists of the literary works used in the implementation, please see Appendix 5.

### **3.4.6 Implementation of Activities**

The prepared critical thinking activities were carried out for a period of seven weeks in “Literature and Language Teaching I” course. The instructor of the mentioned course led the class during the implementation. Before each class, the instructor and the researcher came together to discuss which activities should be carried out and how they should be carried out. The prepared activities were incorporated into the curriculum without disturbing the natural course of the lesson. To implement the activities easily, to gather data for the study, and most importantly to have all the students do the given activities, activity papers were prepared for each course in which the students were asked to answer the questions in the written form. First, the activity papers were distributed to the students in which necessary explanations were made to help them do the activities. The students were given time to answer the questions on the activity paper and when they were ready, the activities were done in a class discussion that all the students joined. The students mostly worked in pairs or groups to increase interaction among students and had different points of view together in discussing their answers in the class.

### **3.5 Data Analysis**

The data come from the reading comprehension test, and Cornell Critical Thinking Test was analyzed by the descriptive statistics of mean and standard deviation through SPSS 20.0. (Statistical Program of Social Sciences). The data obtained from student questionnaires were analyzed in the SPSS 20.0 program with descriptive statistics of frequency, percentage and mean. Then, the data obtained at the end of analysis were presented with tables.

## **CHAPTER 4**

### **FINDINGS AND DISCUSSION**

#### **4.0 Introduction**

In this section, the findings of the research and discussion related to these findings are presented. The research questions of the study are used for the findings and discussion.

#### **4.1 Demographic Findings**

In this part, the distribution of participants will be presented according to their gender, age, and high school.

##### **4.1.1 Demographic Findings for the Experimental Group**

26 students attending “Literature and Language Teaching I” course filled out the student questionnaires. The following table shows the gender distribution of the students.

Table 16. Gender Variety for the Experimental Group

Gender	Frequency	Percent
Male	6	23,1
Female	20	76,9
Total	26	100

There are 20 female and 6 male teacher trainees attending the study in the experimental group.

Table 17. Age Variety for the Experimental Group

Age	Frequency	Percent
18-21	21	80,8
22-25	3	11,5
More than 25	2	7,7
Total	26	100

As can be seen in table 17, there are 21 teacher trainees at the age of 18-21, 3 teacher trainees at the age of 22-25, and 2 teacher trainees are older than 25.

Table 18. High School Variety for the Experimental Group

Type of High School	Frequency	Percent
General High School	1	3,8
Anatolian High School	8	30,8
Anatolian Teacher Training High School	16	61,8
Other	1	3,8
Total	26	100

It can be understood from the table 18 that 1 teacher trainee graduated from General high Schools, 8 teacher trainees from Anatolian High Schools, 16 teacher trainees from Anatolian Teacher Training High Schools while there is 1 teacher trainee graduated from another type of high school.

#### 4.1.2 Demographic Findings for the Control Group

19 students attending “Literature and Language Teaching I” course filled out the student questionnaire in the control group. The following table shows the gender distribution of the students.

Table 19. Gender Variety for the Control Group

Gender	Frequency	Percent
Male	2	10,5
Female	17	89,5
Total	19	100

There are 17 female and 2 male teacher trainees attending the study in the control group.

Table 20. Age Variety for the Control Group

Age	Frequency	Percent
18-21	16	84,2
22-25	2	10,5
More than 25	1	5,3
Total	19	100

It can be seen in table 20, there are 16 teacher trainees at the age of 18-21, 2 teacher trainees at the age of 22-25, and 1 teacher trainee who is older than 25.

Table 21. High School Variety for the Control Group

Type of High School	Frequency	Percent
General High School	7	36,8
Anatolian High School	11	57,9
Anatolian Teacher Training High School	1	5,3
Total	19	100

It can be understood from the table 21 that 7 teacher trainees graduated from General high Schools, 11 teacher trainees from Anatolian High Schools, and 1 teacher trainee from an Anatolian Teacher Training High School.

#### 4.2 Results and Discussion Related to the First Research Question

**Research Question 1:** What are the reading comprehension levels of the students in the experimental group and control group before the implementation of literature-based critical thinking strategies?

To find out students' reading comprehension levels before the treatment, a Reading Comprehension Test was employed as a pre-test. The test was applied to both groups. The answers of teacher trainees were analyzed by means of SPSS 20.0. program. The analyses of the pre-test answers of the both groups are presented below with the tables.

#### **4.2.1 Analysis of the Pre-test Reading Comprehension Scores of the Experimental Group and the Control Group**

26 students in the experimental group and 19 students in the control group participated in this pre reading comprehension test.

Table 22. Pre-test Reading Comprehension Scores of the Experimental Group and the Control Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Experimental Group	16,03	26	6,17	1,21
Control Group	18,63	19	5,30	1,21

Reading Comprehension Test is a 30- item, multiple choice test. Each correct answer equals to 1 point that means the highest score in the test is 30.

#### **4.2.2 Discussion of the Pre-test Reading Comprehension Scores of the Experimental Group and the Control Group**

Table 22 shows that the pre-test score mean of the experimental group is 16.03 out of 30 and the control group's pre-test score mean is 18,63 that indicates that groups' reading comprehension levels are close to each other. Considering 30 as the highest score, it can be mentioned that the scores of 16,03 and 18,63 are just higher than the middle point. Although both groups consist of 3<sup>rd</sup> grade teacher trainees, the mean score of control group is slightly higher than the experimental group.

### **4.3 Results and Discussion Related to the Second Research Question**

**Research Question 2:** What are the critical thinking levels of the students in the experimental group and control group before the implementation of literature-based critical thinking strategies?

In order to learn students' critical thinking levels, Cornell Critical Thinking Level X Test was employed as a pre-test. The test was applied to both groups. The answers of the teacher trainees were analyzed by means of SPSS 20.0 program. The analyses of the pre-test answers of the both groups are presented below with the tables.

### 4.3.1 Analysis of the Pre-test Critical Thinking Scores of the Experimental Group and the Control Group

26 students in the experimental group and 19 students in the control group participated in this critical thinking test.

Table 23. Pre-test Critical Thinking Scores of the Experimental Group and the Control Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Experimental Group	44,88	26	6,62	1,29
Control Group	47,15	19	5,4	1,24

Cornell Critical Thinking Test Level X is a 76- item, multiple choice test. Each correct answer equals to 1 point that means the highest score in the test is 76. There were four main sections in the test. Questions number 1 to 25 are about Induction, 26 to 50 about Deduction, 51 to 65 about Credibility, and 66 to 76 about identifying assumptions. The analyses of each section in critical thinking test for both groups were presented in the table below.

Table 24. Sub Section Pre-test Critical Thinking Scores of the Experimental Group and the Control Group

		Experimental Group	Control Group
Section 1 Induction (Questions 1 to 25)	Mean	13,92	13,73
	Sd.	2,57	2,1
	%	55,68	54,92
Section 2 Deduction (Questions 26 to 50)	Mean	12,57	13,31
	Sd.	3,11	3,3
	%	50,28	53,24
Section 3 Credibility (Questions 51 to 65)	Mean	9,92	11,31
	Sd.	2,63	1,6
	%	66,13	75,4
Section 4 Identifying Assumptions (Questions 66 to 76)	Mean	8,46	8,7
	Sd.	1,33	1,03
	%	84,6	87
Whole Test	Mean	44,88	47,15
	Sd.	6,62	5,4
	%	59,05	62,03



#### **4.3.2 Discussion of the Pre-test Critical Thinking Scores of the Experimental Group and the Control Group**

Table 24 points out that the pre-test score mean of the experimental group is 44.88 out of 30 and the control group's pre-test score mean is 47,14 that indicates that groups' critical thinking levels are close to each other. When we take into consideration that 76 as the highest score, it can be said that the scores of 44,88 and 47,15 are slightly higher than the middle point. As aforementioned in Chapter 3, the Turkish version of Cornell Critical Thinking Test was used in this study since the main purpose of the study is to identify students' critical thinking and reasoning levels rather than their reading comprehension levels. Another important thing about this test is that Cornell Critical Thinking test is a long and difficult test and that the students took such kind of a test for the first time. This might also be a considerable factor that affected their performances on the test and accordingly their critical thinking scores.

According to table 24, the teacher trainees in the experimental group have got the highest accuracy percentage (84,6%) in section 4 (Identifying Assumptions), and the lowest accuracy percentage (50,28%) in section 2 (Deduction). Likewise, teacher trainees in control group have got the highest accuracy percentage (87,00%) in section 4 (Identifying Assumptions), and the lowest accuracy percentage (53,24%) in section 2 (Deduction).

#### **4.4 Results and Discussion Related to the Third Research Question**

**Research Question 3:** How can reading comprehension level of the students in ELT Department at Gazi University be improved through literature-based critical thinking strategies?

As was mentioned in Chapter 3, the implementation lasted seven weeks in the experimental group. Before each activity, the researcher and instructors came together and discussed about the activities to implement them in the best way. Moreover, after each activity, the activities and performances of the students were evaluated to do the next activity in a better way. During the implementation, students produced various fascinating works from designing covers to writing poems and new endings for the works. The activities also emphasized real life, induction, deduction and credibility in which the students came up with notable works.

#### 4.5 Results and Discussion Related to the Fourth Research Question

After the implementation of literature-based critical thinking activities for seven weeks in the experimental group, the reading comprehension and the Cornell Critical Thinking test were applied again to both experimental and control groups as the posttest to see if there are any improvements in their reading comprehension and critical thinking scores. In the following part, the results of reading comprehension and critical thinking post-tests are documented in tables and then discussed respectively.

**Research Question 4:** Does teaching literature-based critical thinking strategies cause any differences between the reading comprehension levels of the teacher trainees who were taught these strategies and those who were not?

##### 4.5.1 Analysis of the Post-test Reading Comprehension Scores of the Experimental Group

The same 26 teacher trainees who were pre-tested also participated in the post-test.

Table 25. Post-test Reading Comprehension Scores of the Experimental Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Pre-test	16,03	26	6,17	1,21
Post-test	18,19	26	4,50	0,88

The means of pre-test and post-test scores of the experimental group are displayed in Table 25. The table indicates that while pre-test score mean of the group is 16,03 out of 30, the post-test score mean is 18,19. The pre-test std deviation is 6,17 and the post-test std deviation is 4,50. The results show that there is a difference between the pre-test and post-test scores of the experimental group since the reading comprehension score of the group increases to 18,19 from 16,03.

The results show that there is a difference between the pre-test and post-test scores of the experimental group but in order to see whether there is a statistically significant difference between pre-test and post-test scores of the group after the implementation of the literature-based critical thinking activities, the Paired Samples Test was employed and the test results are shown in Table 26.

Table 26. Statistical Difference between Pre and Post- test Reading Comprehension Scores of the Experimental Group (Paired Samples Test)

	N	Mean	Sd	t	p
Pre-test	26	16,03	6,17	-2,70	0,045
Post-test	26	18,19	4,5		

#### 4.5.2 Discussion of the Post-test Reading Comprehension Scores of the Experimental Group

Table 26 shows that this is a statistically significant difference as  $t=-2,70$ , and  $p < 0,05$ . It means that the results are statistically meaningful. The difference comes from the fact that the post-test scores of the group ( $m= 18,19$ ,  $sd= 4,50$ ) are higher than its pre-test scores ( $m=16,03$ ,  $sd=6,17$ ). Therefore, it can be concluded that there is an improvement in the reading comprehension score means of the experimental group after the implementation of literature-based critical thinking activities. It should also be mentioned that although there is not a big difference between the means of pre-test and post-test scores for the group, it is a noticeable difference for reading comprehension for a seven week treatment. Therefore, it can be concluded that the reading comprehension scores of the experimental group increased after the treatment of the literature-based critical thinking activities and the study is successful in improving students' reading comprehension levels.

#### 4.5.3 Analysis of the Post-test Reading Comprehension Scores of the Control Group

The same 19 teacher trainees who were pre-tested also participated in the post-test.

Table 27. Post-test Reading Comprehension Scores of the Control Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Pre-test	18,63	19	5,30	1,21
Post-test	19,84	19	3,97	0,91

Table 27 points out post-test scores of the control group for reading comprehension test. According to this table, it is seen that the mean score of control group increased from 18,63

to 19,84. It can be noticed that there is also a difference between the pre-test and post-test scores of the control group. However, this difference is not higher than the one in the experimental group.

In order to see whether there is a statistically significant difference between the pre-test and post-test scores of the group after the implementation of the literature-based critical thinking activities, the Paired Samples Test was employed to the control group too and the test results are shown in Table 28.

Table 28. Statistical Difference between Pre and Post- test Reading Comprehension Scores of the Control Group (Paired Samples Test)

	N	Mean	Sd	t	p
Pre-test	19	18,63	5,30	-0,996	0,064
Post-test	19	18,84	3,97		

#### 4.5.4 Discussion of the Post-test Reading Comprehension Scores of the Experimental and Control Groups

As mentioned before, after finding out their existing reading comprehension levels by pre reading comprehension test, the experimental group was exposed to an implementation of literature-based critical thinking activities for seven weeks and after the treatment, the same reading comprehension test was reapplied to both groups. The results were analyzed by the Paired Samples T-Test in SPSS. The Paired Samples T-Test indicated that there is statistical difference between the pre-test and post-test scores of both groups since  $t = -2,70$ ,  $p < 0,05$  for experimental group and  $t = -0,996$ ,  $p > 0.05$  for the control group.

It can be easily noticed that there is an improvement in terms of reading comprehension levels of both the experimental group and control group. However, the difference in the mean score of pre and post reading comprehension tests for the experimental group is higher than the one for the control group. When these results are taken into consideration, it can be claimed that teacher trainees' reading comprehension levels rose via the treatment process. Therefore, it can be inferred that teaching literature-based critical thinking strategies contribute to reading comprehension skills of the students in the experimental group. After all, the post test critical thinking test results must be analyzed in order to interpret the post reading comprehension test better.

#### 4.6 Results and Discussion Related to the Fifth Research Question

**Research Question 5:** Does teaching literature-based critical thinking strategies cause any differences between the critical thinking levels of the teacher trainees who were taught these strategies and those who are not?

##### 4.6.1 Analysis of the Post-test Critical Thinking Scores of the Experimental Group

The same 26 teacher trainees who were pre-tested also participated in the post-test. The post test critical thinking scores of the experimental group are presented in table 29.

Table 29. Post-test Critical Thinking Scores of the Experimental Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Pre-test	44,88	26	6,62	1,29
Post-test	46,80	26	3,82	0,75

The table indicates that while pre-test score mean of the group is 44,88 out of 76, the post-test score mean is 46,80. The pre-test std deviation is 6,62 and the post-test std deviation is 3,82. The results show that there is a difference between the pre-test and post-test scores of the experimental group since the critical thinking scores of the group increased from 44,88 to 46,80.

In accordance with these results, there is a difference between the pre-test and post-test scores of the experimental group. To see whether there is a statistically significant difference between pre-test and post-test critical thinking scores of the group after the implementation of the literature-based critical thinking activities, the Paired Samples Test was employed and the test results are shown in Table 30.

Table 30. Statistical Difference between Pre and Post- test Critical Thinking Scores of the Experimental Group (Paired Samples Test)

	N	Mean	Sd	t	p
Pre-test	26	44,88	6,62	-3,21	0,048
Post-test	26	46,80	3,82		

#### 4.6.2 Analysis of the Post-test Critical Thinking Scores of the Control Group

The same 19 teacher trainees who were pre-tested also participated in the post-test. The post test critical thinking scores of the control group are presented in table 31.

Table 31. Post-test Critical Thinking Scores of the Control Group

Group Name	Mean	N	Standard Deviation	Standard Error Mean
Pre-test	47,15	19	5,40	1,24
Post-test	46,89	19	3,49	0,80

The table points out that while pre-test score mean of the group is 47,15 out of 76, the post-test score mean is 46,89. The pre-test std deviation is 5,40 and the post-test std deviation is 3,89. Unlike the results of the experimental group, there is a decrease in the mean score of pre-test and post-test scores of the control group since the critical thinking scores of the group fell from 47,15 to 46,89.

In accordance with these results, there is a difference between the pre-test and post-test scores of the control group. To see whether there is a statistically significant difference between the pre-test and post-test critical thinking scores of the group after the implementation of the literature-based critical thinking activities, the Paired Samples Test was employed and the test results are shown in Table 32.

Table 32. Statistical Difference between Pre and Post- test Critical Thinking Scores of the Control Group (Paired Samples Test)

	N	Mean	Sd	t	p
Pre-test	19	47,15	5,40	0,192	0,850
Post-test	19	46,80	3,49		

Since the Cornell Critical Thinking Test Level X has four main sections, it will be useful to take a close look at the sub section analyses of results. The following table shows the sub section analyses of the pre and post critical thinking test for both experimental and control group.

Table 33. Sub Section Post-test Critical Thinking Scores  
of the Experimental Group and the Control Group

		Experimental Group	Control Group
Section 1 Induction (Questions 1 to 25)	Mean	14,42	12,73
	Sd.	3,07	2,18
	%	57,68	50,92
Section 2 Deduction (Questions 26 to 50)	Mean	13,53	14,47
	Sd.	2,46	2,65
	%	54,12	57,88
Section 3 Credibility (Questions 51 to 65)	Mean	10,76	10,84
	Sd.	2,1	1,21
	%	71,73	72,26
Section 4 Identifying Assumptions (Questions 66 to 76)	Mean	8,07	8,84
	Sd.	1,59	0,68
	%	80,7	88,4
Whole Test	Mean	46,80	46,89
	Sd.	3,82	3,49
	%	61,57	61,69

#### 4.6.3 Discussion of the Post-test Critical Thinking Scores of the Experimental Group and the Control Group

After a seven weeks treatment of literature-based critical thinking activities to the experimental group, the same critical thinking test was reapplied to both groups as a post test. The highest score for critical thinking test is 76. According to the table 29, the post-test score mean of the experimental group is 46.80 out of 76. It can be observed that there is a 1,82 point difference between the mean scores of pre and post critical thinking tests.

To see whether there is a statistically significant difference between pre-test and post-test critical thinking scores of the group after the implementation of the literature-based critical thinking activities, the Paired Samples Test was employed and the test results are shown in Table 30. The Paired Samples T-Test indicated that there is a statistical difference between the pre-test and post-test scores of experimental group since  $t = -3,65$  and  $p < 0,05$ .

In accordance with the result shown in Table 32, the post-test score mean of the control group is 46.89 out of 76, while the pre-test score mean of the same test is 47,15. According to the paired samples t-test shown in Table 32,  $t$  is 0,192 and  $p > 0,05$ , which means it is not statically meaningful.

According to table 33, the teacher trainees in the experimental group have got the highest accuracy percentage (80,70 %) in section 4 (Identifying Assumptions), and the lowest accuracy percentage (54,12 %) in section 2 (Deduction). Likewise, teacher trainees in the control group have got the highest accuracy percentage (88,40 %) in section 4 (Identifying Assumptions), and the lowest accuracy percentage (50,92 %) in section 1 (Induction).

When taking the statistical results into consideration, it can be noticed that the post critical thinking scores of the experimental group is statistically more meaningful than that of the control group. Therefore, it can be inferred that the critical thinking scores of the experimental group increased after the treatment of literature-based critical thinking activities and the study is successful in improving students' critical thinking levels as well as reading comprehension levels.

#### **4.7 Results and Discussion Related to the Sixth Research Question**

**Research Question 6:** How do the teacher trainees reflect on learning literature-based critical thinking strategies?

In order to see how the students in the experimental group reflect on the literature-based critical thinking activities, a student questionnaire was applied to the same 26 students. The aim of applying a student questionnaire is to gain information about the classroom atmosphere, the common practices in the literature courses with regard to critical thinking and students' tendency towards being critical thinkers. The questionnaire included forty-seven multiple choice questions. The first question was asked for demographic information and the rest of the questions were asked about critical thinking, whether critical thinking was emphasized in the literature courses, activities carried out in the courses, instructor of the course and his/her way of teaching and students' tendency towards being critical thinkers. This questionnaire was prepared in Turkish since the main purpose of the study is not to test English levels of the students. It was given its final version after consulting thesis supervisor and the results from the pilot study. The data obtained from the questionnaires were analyzed by the descriptive statistics through SPSS 20.0 and their frequency, percentages and means were calculated.

##### **4.7.1 Results and Discussion Related to Section 1 (Questions 1 to 15)**

There are 15 questions in this section related to the classroom atmosphere during the implementation of the activities. In the related literature review, classroom atmosphere is regarded as a vital point to encourage critical thinking in classrooms. To promote critical



thinking in classroom, the instructor should establish an atmosphere in which all of the students feel at ease and willingly express their ideas (Mirioglu, 2002; Üstünlüoglu, 2004; Vinson, 2004; Lee, 2006). If students are not comfortable in the lesson, they might hesitate whether to share their ideas with the rest of the class and it will hinder their critical thinking. The analysis of the teacher trainees' answers for the questionnaire was presented in the table below.

Table 34. The Analysis of the Student Questionnaire Section 1

In Literature and Language Teaching I course,		Always		Often		Sometimes		Rarely		Never		X
Question		f	%	f	%	f	%	f	%	f	%	
1. I feel comfortable.		4	15,4	4	15,4	13	50	4	15,4	1	3,8	3,23
2. I can voice my opinions freely.		4	15,4	7	26,9	6	23,1	8	30,1	1	3,8	3,19
3. if I don't agree with what the teacher says, I can easily reveal my disagreement.		1	3,8	7	26,9	9	34,6	6	23,1	3	11,5	2,88
4. students respect each other when they make a mistake.		6	23,1	18	69,2	1	3,8	0	0	1	3,8	4,07
5. my classmate has a totally different idea than that of mine, but I still listen to him/her carefully.		16	61,5	8	30,8	2	7,7	0	0	0	0	5,53
6. I can make use of the knowledge I acquired in the course to support my views outside the classroom.		7	26,9	7	26,9	10	38,5	2	7,7	0	0	3,73
7. we face challenging activities.		3	11,5	4	15,4	16	61,5	3	11,5	0	0	3,26
8. we just memorize the facts.		1	3,8	3	11,5	8	30,8	8	30,8	6	23,1	2,42
9. we depend only on the instructor's point of view.		2	7,7	10	38,5	11	42,3	3	11,5	0	0	3,42
10. we touch on different points of view to reach a compromise.		9	34,6	13	50	2	7,7	2	7,7	0	0	4,11
11. we offer different solutions to solve a problem.		7	26,9	11	42,3	6	23,1	2	7,7	0	0	3,88
12. we break information into parts to figure out a problem.		4	15,4	12	46,2	9	34,6	0	0	1	3,8	3,69
13. we present our opinions by making judgment about the information.		5	19,2	7	26,9	12	46,2	2	7,7	0	0	3,57
14. we compile information together to generate new ideas.		7	26,9	10	38,5	6	23,1	2	7,7	1	3,8	3,76
15. we explain concepts of the course.		9	34,6	12	46,2	4	15,4	0	0	1	3,8	4,07

According to table 34, while the highest mean score ( $x=5,53$ ) goes to “my classmate has a totally different idea than that of mine, but I still listen to him/her carefully.” question, the

lowest score ( $x=2,42$ ) goes to “we just memorize the facts.” question. Furthermore, the students reflected that they touch on different points of view to reach a compromise ( $x=4,11$ ), and that they respect each other when they make a mistake ( $x=4,07$ ). It can be inferred from these results that the classroom atmosphere in the classroom is suitable for critical thinking during implementation.

#### 4.7.2 Results and Discussion Related to Section 2 (Questions 15 to 21)

There are 6 questions in section 2 related to the activities carried out during the implementation. It aimed to find out the opinions of the teacher trainees about the activities that encourage their critical thinking skills such as group and pair work and real life activities. The analysis of their answers was presented in the table below.

Table 35. The Analysis of the Student Questionnaire Section 2

In Literature and Language Teaching I course, we carry out the following activities;		Always		Often		Sometimes		Rarely		Never		X
Question		f	%	f	%	f	%	f	%	f	%	
16. We carry out tasks related to real life.		0	0	4	15,4	13	50	7	26,9	2	7,7	2,73
17. We have class discussions.		9	34,6	14	53,8	2	7,7	0	0	1	3,8	4,15
18. We work in pairs.		0	0	7	26,9	12	46,2	6	23,1	1	3,8	2,96
19. We work in groups.		0	0	6	23,1	10	38,5	8	30,8	2	7,7	2,76
20. We have debates in which two teams try to prove their opposite ideas about a subject.		4	15,4	4	15,4	6	23,1	6	23,1	6	23,1	2,76
21. We try to solve a problem related to a literary text.		1	3,8	4	15,4	14	53,8	6	23,1	1	3,8	2,92

As can be seen in Table 35, teacher trainees had class discussions since it has the highest mean score ( $x=4,15$ ). But the lowest mean score ( $x=2,73$ ) belongs to the activities related to real life. According to their answers, they also worked in pairs ( $x=2,96$ ) and they tried to solve problems related to the literary works ( $x=2,92$ ). To make students think deeply, they should be provided with challenging activities to encourage critical thinking in classrooms. Therefore, it can be concluded from table 35 that the activities carried out during

implementation were fruitful to improve their critical thinking and reading comprehension levels.

### 4.7.3 Results and Discussion Related to Section 3 (Questions 22 to 32)

There are 11 questions in section 3 related to instructor's way of teaching during the implementation. Since the instructor is the leading figure in the classroom, his/her characteristics and way of teaching are of primary importance in promoting critical thinking in classroom. The analysis of their answers was presented in the table below.

Table 36. The Analysis of the Student Questionnaire Section 3

In Literature and Language Teaching I course, the instructor ...		Always		Often		Sometimes		Rarely		Never		X
Question		f	%	f	%	f	%	f	%	f	%	
22. asks me to make connection with the previously learned information.		3	11,5	13	50	9	34,6	1	3,8	0	0	3,69
23. makes me think deeply.		5	19,2	9	34,6	9	34,6	2	7,7	1	3,8	3,57
24. encourages me to ask questions.		2	7,7	5	19,2	13	50	4	15,4	2	7,7	3,03
25. reminds me of the previously learned information.		3	11,5	11	42,3	11	42,3	1	3,8	0	0	3,61
26. helps me to understand the given information.		5	19,2	13	50	7	26,9	1	3,8	0	0	3,84
27. wants me to use the strategies that I learned in the course outside the classroom.		1	3,8	5	19,2	9	34,6	8	30,8	3	11,5	2,73
28. wants me to check the ideas, which I learned in the lesson, whether they are true or not by making use of the given information.		2	7,7	7	26,9	7	26,9	9	34,6	1	3,8	3,00
29. takes my original ideas about the subject s/he presents in the lesson.		4	15,4	7	26,9	9	34,6	4	15,4	2	7,7	3,26
30. gives me time to think when s/he asks a question.		4	15,4	10	38,5	10	38,5	1	3,8	1	3,8	3,57
31. calls on me in class, not waiting for raising my hand.		1	3,8	7	26,9	13	50	3	11,5	2	7,7	3,07
32. stops the lectures and asks thoughtful questions that require deep thinking to answer.		8	30,8	8	30,8	7	26,9	3	11,5	0	0	3,80

Just like in every field of education, instructor occupies the primary position in fostering critical thinking in classroom. Instructors' way of teaching mostly determines the

critical thinking situation in classroom. An instructor is the person who will guide students according to critical thinking principles in the lesson. Some of these principles that the instructor is expected to follow is to make them think deeply, ask them make connection between or among the subjects learned before. S/he, encourages them to ask questions and gives them time to think. The highest values on Table 36 are  $x=3,84$  for helping students to understand the given information in the texts and  $x=3,80$  for stopping the lectures and asking thoughtful questions that require deep thinking to answer. On the other hand, the lowest score is  $x=2,73$  about using these strategies outside the classroom. That indicates that teacher trainees do not agree that the instructor wants them to use the strategies they learned outside the classroom.

#### **4.7.4 Results and Discussion Related to Section 4 (Questions 33 to 47)**

There are 15 questions in section 4 related to teacher trainees' tendency toward being a critical thinker. The analysis of their answers was presented in the table below.

Table 37. The Analysis of the Student Questionnaire Section 4

In general, Question	Always		Often		Sometimes		Rarely		Never		X
	f	%	f	%	f	%	f	%	f	%	
33. when I engage in a difficult task, I easily give up.	4	15,4	0	0	10	38,5	9	34,6	3	11,5	2,57
34. I am interested in finding new solutions.	1	3,8	13	50	10	38,5	1	3,8	1	3,8	3,46
35. I listen to the others carefully.	12	46,2	11	47,3	2	7,7	1	3,8	0	0	4,30
36. I respect other people's ideas.	17	65,4	6	23,1	3	11,5	0	0	0	0	4,53
37. I depend on other people's opinions without thinking on my own.	2	7,7	4	15,4	5	19,2	11	47,3	4	15,4	2,57
38. I look for evidences before accepting ideas.	8	30,8	13	50	4	15,4	0	0	1	3,8	4,03
39. I assess the relevant information to come up with a conclusion.	9	34,6	12	46,2	5	19,2	0	0	0	0	4,15
40. I try to be objective in every occasion.	6	23,1	13	50	6	23,1	1	3,8	0	0	3,92
41. I recognize that my ideas might be mistaken.	10	38,5	11	47,3	2	7,7	3	11,5	0	0	4,07
42. I communicate with others to solve a problem.	7	26,9	14	53,8	5	19,2	0	0	0	0	4,07
43. I try to see the rightness of another's opinion, even if I reject it later.	5	19,2	13	50	6	23,1	0	0	2	7,7	3,73
44. I am open to different perspectives.	16	61,5	8	30,6	2	7,7	0	0	0	0	4,53
45. I ask questions to test ideas.	4	15,4	10	38,5	10	38,5	2	7,7	0	0	3,61
46. I take time to produce original ideas.	6	23,1	6	23,1	11	42,3	2	7,7	1	3,8	3,53
47. reading about a new subject, I try to connect the subject with another subject.	7	26,9	11	42,3	7	26,9	1	3,8	0	0	3,92

Besides instructors' personal traits, students' characteristics should be appropriate for improving their critical thinking skills as well. For instance, they should not give up easily when they are given a difficult task, and they should try to be objective in every situation. The questions in section 4 were asked to teacher trainees to find out whether they are prone to be a critical thinker. The highest value is  $x=4,53$  for respecting other people's ideas and being open to different perspectives. The lowest value, however, is  $x=2,57$  for giving up easily when engaging in a difficult task and for depending on other people's opinions.

According to table 37, it can be concluded that there are not any problems for teacher trainees in terms of being a critical thinker.

#### **4.8 Conclusion**

In this part of the study, findings and discussions were presented in detail. Before the implementation of the activities, pre-reading comprehension and pre-critical thinking tests were employed to both groups. The pre-test reading comprehension mean score was found 16,03 for experimental group, and it was 18,63 for control group. Pre-test critical thinking mean score was 44,88 for experimental group, and 47,15 for the control group. After 7 week treatment process both reading comprehension and critical thinking tests were reemployed. Post-test reading comprehension test mean score was 18,19 for experimental group, and 18,84 for control group. Post-test critical thinking mean score was 46,80 for experimental group, whereas it was 46,89 for control group. When the post reading comprehension and post critical thinking tests results were taken into consideration, it can be observed that there was an increase in terms of mean scores for experimental group. Furthermore, the result was statistically meaningful according to paired sample T-Test scores. Also, the reflections of the students were positive about the activities carried out during the implementation of the activities according to findings obtained from the questionnaire. The analysis results show that the teacher trainees in the experimental group improved their reading comprehension levels as well as their critical thinking levels after the treatment. When the analysis results were regarded as a whole, it can be concluded that the treatment in the course met its objectives.



## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

In this part of the study, the summary is presented first. Then, pedagogical implications and recommendations for further research are included.

#### **5.1 Summary of the Study**

This study aimed at investigating whether implementing critical thinking strategies through literature-based texts is effective for improving reading comprehension levels of ELT department teacher trainees at Gazi University. Two groups from 3<sup>rd</sup> grade ELT Department of Gazi University were chosen randomly as experimental and control groups. Initially, a pre reading comprehension and critical thinking test were applied to the teacher trainees in both groups. Then, literature-based critical thinking strategies were employed while teaching in the experimental group for 7 weeks. After this treatment process, post reading comprehension and critical thinking tests were carried out to both groups. Additionally, a student questionnaire was applied to the teacher trainees in the experimental group in order to see their reflections about the treatment. Finally, the data gathered from the instruments was analyzed, and the results were presented by comparing the experimental and control groups.

The whole semester was fourteen weeks, and the pre tests were conducted in the first week. The treatment process took 7 weeks to be completed. Throughout 7 weeks, critical thinking strategies were taught to the students in the experimental group. The researcher prepared activities in accordance with critical thinking, and had the students participate in them during the treatment process. One week after the treatment process completed, post tests were applied to both groups. Student questionnaire was applied to experimental group after the treatment.

The first research question aimed to find out the current reading comprehension levels of the teacher trainees in both groups before the treatment. In respect of reading



comprehension, a pre-reading comprehension test was given to both groups. The result of the analysis showed that the mean scores of both groups were just higher than the middle point. Although both groups consist of 3<sup>rd</sup> grade teacher trainees, the mean score of control group is slightly higher than the experimental group.

The second research question sought to discover the actual critical thinking levels of the teacher trainees in both groups before the treatment. Cornell Critical Thinking test was applied to both groups. The results indicated that the mean score of the control group is higher than the experimental group. Another interesting finding was that both group had the highest percentage in identifying assumptions and the lowest percentage in deduction.

With the third research question, it was intended to prove whether reading comprehension levels of the teacher trainees in the experimental group could be improved via literature-based critical thinking strategies. The treatment included various critical thinking activities such as problem solving, induction, deduction, and identifying assumption. Preparing the activities, the identified weak points in the present critical situation were also to be improved: the activities were designed to make students think deeply and produce new ideas away from memorization; they also underlined the connection between real life and literary works. The Bloom's Taxonomy was also highlighted in the activities. Moreover, pair-work and group-work were highlighted since the interaction is an important factor in critical thinking. During the implementation, students produced various fascinating works from designing covers to writing poems and new endings for the works. Implementation of the activities lasted seven weeks. After the treatment process, the teacher trainees in both the experimental and control groups were given post reading comprehension and critical thinking tests.

The purpose of the fourth research question was to learn whether teaching literature-based critical thinking strategies caused any differences between the reading comprehension levels of the teacher trainees who were taught these strategies and those who were not. A post-reading comprehension test was applied to both groups and the results were analyzed. The analysis of the results showed that there is a difference in terms of reading comprehension for both the experimental and control group. But the difference between pre and post tests of the experimental group is higher than that of the control group. Furthermore, it can be noticed that the difference between the mean scores of pre and post reading comprehension tests for the experimental group was statistically meaningful, whereas the one for the control group was not when the paired t test analyses is taken into consideration. According to these results, it can be claimed that teacher trainees' reading

comprehension levels rose with the treatment process. Therefore, it can be inferred that teaching literature-based critical thinking strategies contribute to reading comprehension skills of the students in the experimental group.

The fifth research question aimed to figure out whether teaching literature-based critical thinking strategies caused any differences between the critical thinking levels of the teacher trainees who were taught these strategies and those who were not. Post critical thinking test was applied to both groups and the results were analyzed. The analysis of the results pointed out that there was an increase in the critical thinking level of the experimental group, while a decrease was observed in critical thinking mean score of the control group. Moreover, the analysis of paired t test indicated that the increase in the mean score of the experimental group was statistically meaningful. When taking the statistical results into consideration, it can be concluded that the post critical thinking scores of the experimental group is statistically more meaningful than the one of the control group. Consequently, it can be derived that the critical thinking scores of experimental group increased after the treatment of literature-based critical thinking activities and the study is successful in improving students' critical thinking levels as well as reading comprehension levels.

The aim of the final research question was to learn the reflections of the teacher trainees in the experimental group on learning literature-based critical thinking strategies. Specifically, it aimed to gain information about the classroom atmosphere, the common practices in the literature courses with regard to critical thinking, instructor's way of teaching during implementation and students' tendency towards being critical thinkers. Each sub section of the questionnaire was analyzed separately. According to the results of these analyses, classroom atmosphere is suitable for critical thinking during the implementation since the teacher trainees respect and listen to each other opinions' although they have different ideas and touch on different points of view to reach a compromise. They also expressed that they do not just memorize the facts during the lessons. Related to the common practices in the literature course, it can be noticed that teacher trainees performed class discussion, pair and group work activities, which encouraged them to use their critical thinking skills. Therefore, it can be concluded that they were provided with challenging activities and these activities were fruitful to improve their critical thinking and reading comprehension levels. With regard to the instructor's way of teaching, they declared that the course instructor helped them understand the given information in the text and behaved as a facilitator and a role-model. The last section of the

questionnaire was about the teacher trainees' tendency towards being critical thinkers. In accordance with their answers, it can be derived that most of the students were prone to be critical thinkers since they were open to different perspectives and they would not give up easily when engaging in difficult tasks.

In line with all the answers to the research questions of the study, it can be claimed that the study produced very fruitful results. Initially, it proved that it is possible to increase reading comprehension levels through literature-based critical thinking activities. The study also indicated that critical thinking is an inestimable means to increase classroom participation, and to have a student-centered atmosphere in which students are active, and think independently. Finally, critical thinking can be regarded as an indispensable tool to have an ideal education with the ideal instructors who try to guide students in using and producing information rather than just transferring it. Then it would be possible for the students to actively participate in the learning process and search for the truth on their own.

## **5.2 Pedagogical Implications**

To reach information quickly in today's world matters a lot since it spreads and changes continuously. This situation forces every individual to choose the data through thinking critically. Language learners, likewise, are steadily exposed to different types of texts which require them to use their reading as well as thinking skills at the same time. Therefore, an English teacher should teach his or her students to read and comprehend well by using their critical thinking strategies. The starting point of this study intends to investigate the effect of using critical thinking activities through literature-based texts on reading comprehension ability.

The findings of the present study revealed that it is possible to improve reading comprehension through literature-based critical thinking activities. Therefore, this present study suggests that English instructors should emphasize the higher order thinking skills such as application, analysis, synthesis and evaluation instead of memorization. It is also suggested that teachers should lead their students to produce original ideas in which they can come up with practical solutions to problems by combining their imagination and reasoning, and that they should encourage their students to think on questions deeply to find answers.

This present study also suggests that English teachers are supposed to prepare special critical thinking activities like, asking questions, real life, induction, deduction, and assumption activities to promote critical thinking in their lessons. It can also be proposed

that teachers should give sufficient importance to pair work and group discussions since they are quite beneficial to encourage critical thinking in classroom atmosphere. Accordingly, students should also be made aware of the fact that they cannot learn in the real sense unless they are actively involved in the learning process.

Another point that is worth mentioning is related to literature. In general, literature is regarded as a passive activity in which the educators transfer the facts to their students. However, the study showed that literature can be turned into an active process through emphasizing critical thinking.

### **5.3 Recommendations for Further Research**

The results of this study have revealed some suggestions for further study. Improving both reading comprehension and critical thinking are demanding and challenging tasks. It takes a great deal of time to improve these skills. Although this study showed that is possible to improve reading comprehension through critical thinking, it was carried out within 7 weeks treatment period. Therefore, another study conducted in a longer period of time is highly recommended.

In this present study, only short story as a genre was used. Yet, other types of literary texts such as novels, poems or dramas can also be used.

Finally, another study can be conducted to see whether it is possible to improve other language skills, such as speaking or writing, through critical thinking strategies.

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## **APPENDICES**

## APPENDIX 1

### Reading Comprehension Test

#### Instruction

This reading comprehension test was developed with the purpose of evaluating the reading comprehension level of the students at Gazi University Education Faculty English Language Teaching Department. First, read the paragraphs below carefully. Then, answer the questions under each paragraph, and put an “X” for the correct choice on the answer sheet. All answers are to be marked on the separate **Answer Sheet**. Since your score will be the number of items you answer correctly, try to answer each question even if you are not sure that your answer is correct. The duration of this test is **50 minutes**.

Your responses are of the greatest importance to this study. They will be kept strictly confidential and used only for research purposes. Therefore try to answer all the questions carefully and realistically. Thank you for your interest and for your help in advance.

Now you can start the test.

*Golf is believed to originate in Holland but certainly Scotland fostered the game and is famous for it. In fact, in 1457 the Scottish Parliament, disturbed because football and golf had lured young Scots from the more soldierly exercise of archery, passed an ordinance that banned football and golf. James I and Charles I of the royal line of Stuarts were golf enthusiasts, whereby the game came to be known as "the royal and ancient game of golf". The golf balls used in the early games were leather-covered and stuffed with feathers. Clubs of all kinds were fashioned by hand to suit individual-players. The great step in spreading the game came with the change from the feather ball to the present-day ball introduced in about 1850. In 1860, formal competitions began with the establishment of an annual tournament for the British Open championship. There are records of "golf clubs" in the United States as far back as colonial days. However, it remained a rather sedate and almost aristocratic pastime until a 20-year-old Francis Ouimet of Boston defeated two great British professionals, Harry Vardon and Ted Ray, in the United States Open championship at Brookline in 1913. This feat put the game and Francis Ouimet on the front pages of the newspapers and stirred a wave of enthusiasm for the sport.*

**1. According to the passage, it was at one time believed in Scotland that ..... .**

- A) football was a better game than golf for young people
- B) annual tournaments made the game too competitive
- C) golf was having an adverse effect on young people's military skills
- D) young people should be encouraged to take up either golf or archery
- E) the origins of archery were in some way associated with Holland

**2. It is pointed out in the passage that golf ..... .**

- A) was to some extent practiced in colonial America
- B) has been overshadowed by football in recent times
- C) requires a great deal of expensive equipment
- D) receives less newspaper coverage than football
- E) didn't arouse as much enthusiasm as archery did in medieval Scotland

**3. The point is made in the passage that golf has been described as a "royal" game ..... .**

- A) though for the last two centuries no kings have participated in the game
- B) since the professionals of the game are treated with so much respect
- C) as golf clubs are particular about who they accept as members
- D) because two British kings were passionate
- E) which Americans find very annoying

*The economic news from Europe was particularly disappointing in the second half of 2008. Moreover, recent surveys from the region imply little prospect of improvement in the near future. Perhaps the most worrying aspect has been the sharp decline in conditions in Germany - the area's largest and most important economy. Domestic demand in Germany is very weak and, with the global economy also struggling, Germany's manufacturers have not been able to export their way out of trouble as they have done in the past. With the economy in such a weak state, it is no surprise then that European stock markets have followed the US stock markets' downturn over the past 6 months. While individual share prices may be lower and market valuations look attractive, the economy does not.*

*Recovery seems some way off and strong equity performance from Europe's markets seems unlikely in 2009.*

**4. It is pointed out in the passage that the present economic recession in Germany ..**

- A) is actually not as serious as is being experienced in several other European countries
- B) is being overcome by means of increased exports
- C) is more persistent than previous ones have been
- D) should have been foreseen much earlier
- E) has been exaggerated in several surveys recently

**5. The passage points out that Germany's current economic problems .....**

- A) have left the stock markets of Europe unaffected
- B) have led to a worrying decline in the world economy
- C) are far more serious than those of any other country in Europe
- D) stem in part from a drop in domestic sales
- E) are in fact not as alarming as they were once thought to be

**6. According to the passage, the trend in European stock markets .....**

- A) does not reflect the economic situation in Germany
- B) has been roughly the same as that in the US stock markets
- C) improved greatly during the last six months of 2008
- D) is related to the level of domestic demand in Germany
- E) seems to change every six months

*Scientists who study earth's moon have two big regrets about the six Apollo missions that landed a dozen astronauts on the lunar surface between 1969 and 1972. The biggest regret, of course, is that the missions ended so abruptly, with so much of the moon still unexplored. But researchers also lament that the great triumph of Apollo led to a popular misconception: because astronauts have visited the moon, there is no compelling reason to go back. In the 1990s, however, two probes that orbited the moon raised new questions about Earth's airless satellite. One stunning discovery was strong evidence of water ice in the perpetually shadowed areas near the moon's poles. Because scientists believe that comets deposited water and organic compounds on both Earth and its moon, well-preserved ice at the lunar poles could yield clues to the origins of life.*

**7. The point made in the passage is that it may be possible to ..... .**

- A) come to a better understanding of comets through the study of the moon
- B) learn more about the beginnings of life from the ice at the moon's poles
- C) resume Apollo missions as there is evidence of water on the moon
- D) identify the origin of the organic compounds found on the moon
- E) have a full knowledge of the moon without sending anymore astronauts there

**8. According to the passage, even though there were six Apollo missions to the moon roughly thirty years ago, ..... .**

- A) none of them could claim to be successful
- B) man's knowledge of the moon has not increased at all
- C) a very large proportion of the lunar surface remains to date unexamined
- D) it was only the lunar poles that were explored fully
- E) the idea of sending astronauts back to the moon seems even more far-fetched than formerly

**9. A major point made in the passage is that ..... .**

- A) comets hold the secrets of the origins of life in the universe
- B) the six Apollo missions to the moon were a great scientific success
- C) the chances of finding water on the moon are very slim
- D) the probes of the 1990s demonstrated that the lunar landings should have continued
- E) scientists are agreed that there is nothing further to learn about the moon

*The US National Institute of Standards and Technology (NITS) will soon be testing a controversial theory about the collapse of the World Trade Center towers. According to an analysis by a leading fire-safety expert, had the fire-proofing insulation on the towers' steel structures been thicker, the towers would have survived longer and might even have remained standing after they were hit by the hijacked planes. The work is being seized on by lawyers representing victims' families and insurance companies. If confirmed, it could also lead to changes in building codes. NIST is responsible for drawing up the final report on the towers' collapses and recommending if any changes are needed. It is widely accepted that the collapses were caused by the failure of the buildings' steel structure as it was weakened by the heat of the fires.*



**10. As it is pointed out in the passage, it is commonly recognized that the main cause for the collapse of the twin towers ..... .**

- A) will only be understood after the release of a detailed report by NITS
- B) can never be established beyond doubt
- C) was the weakening of the steel structure due to the heat of the fire
- D) was not so much due to the heat of the fires as to the force of the impact of the hijacked planes
- E) is of special interest to insurance companies

**11. It is clear from the passage that ..... .**

- A) the strength of the steel structure of the towers had been questioned when the designs were drawn up
- B) NIST has already made a through study of the collapse of the towers
- C) the reason for the sudden collapse of the two towers is still under debate
- D) the structure of the twin towers was in many respects well below standard
- E) the hijacked planes hit the weakest parts of the twin towers

**12. According to the passage, if the tower collapse theory concerning the fire-proofing insulation proves to be true, ..... .**

- A) this will have, even so, no direct bearing on the fight against terrorism
- B) the victims' families will get no compensation
- C) this will free NITS from all blame
- D) then lawyers will have no grounds for objections
- E) then NITS will probably introduce new building regulations

*The long-expected decline in the dollar is now well under way. For years economists have predicted that America's huge current-account deficit would eventually cause its currency to plunge. So far the dollar's slide has been fairly gradual: it is down by 13% in trade-weighted terms over the past year, though it has dropped by almost twice as much against the euro since its 2001 peak. As the decline seemed to pick up speed this week, John Snow, Obama's Treasury Secretary, declared that he favors a "strong dollar policy". That was surely **the wrong answer**, even leaving aside the debatable issue of whether cabinet secretaries can influence the level of exchange rates. A weaker, not a stronger dollar, is what the world needs now -so long as policymakers elsewhere respond appropriately.*

*America promoted a strong dollar throughout the 1990s, when inflation was still thought to be the main enemy. Today it makes less sense. Even after its recent slide, the dollar seems overvalued. Moreover, with ample space capacity in America, deflation looks a bigger risk than inflation.*

**13. It is pointed out in the passage that the American policy, in the 1990s, for a strong dollar .....**

- A) seems less rational now than it did then
- B) has proved successful in boosting the economy
- C) has been reversed by the Treasury Secretary, John Snow
- D) has frequently been disregarded by American economists
- E) has been a major reason for the decline of the euro

**14. As we understand from the passage, the decline in the value of the American dollar has, .....**

- A) had an adverse effect upon the value of the euro
- B) bolstered American trade
- C) been foreseen by economists over a long period of time
- D) been a major headache for policy makers
- E) followed an unpredictable pattern

**15. In the passage, the phrase "the wrong answer" means .....**

- A) the American government's indifference to the decline of the dollar
- B) the policy of keeping the dollar in the line with the euro
- C) keeping the dollar strong through trade
- D) permitting the current-account deficit to continue
- E) the Treasury Secretary's preference for a strong dollar policy

*It is not unfair to say that the early history of the colonies is, in some respect, the history of the colony of Virginia. For it was from Virginia that many of the ideas came that transformed America from a group of docile colonies into a hotbed of revolutionary fervor. And, it was from this large mid-Atlantic colony that numerous leaders appeared in all fields ranging from politics and agriculture to military affairs and art. It is not surprising, therefore, that four of the first five American presidents were Virginians. G. Washington*

*was born on February 22, 1732 in Westmoreland County, the son of Augustine and Mary Ball Washington. An ambitious person, Augustine had set himself the task of buying land, planting crops, and building mills. By the time he died in 1743, Augustine had become a major Virginia -and had even sent George's two older half-brothers, Lawrence and Augustine, to England even though he did not have to do so. It was at his father's death that the young Washington became the ward of Lawrence, a man of wisdom and love who gave the space and guidance he needed to develop his intellect and manners. In fact, for the next few years, lived with and alternately until finally moving exclusively to the former's estate, Little Hunting Creek –later called Mount Vernon. Particularly enjoying the study of mathematics, the sixteen year old Washington chose surveying as his profession and in 1746 went on a long expedition to survey the five million acre farm of Lord Fairfax in northern Virginia. Having established a name for himself, Washington continued to play his trade until 1751, when he accompanied Lawrence to Barbados. His brother later sought treatment for tuberculosis. Narrowly escaping death from smallpox, George returned with Lawrence in 1752. In July of that year, his beloved brother died, and George inherited Mount Vernon with its 50,000 acres of land. In 1753, he joined the army and fought against the French in the Ohio territory losing an important battle with the French at Fort Necessity on July 3, 1754.*

**16. The main idea of the passage is .....**

- A) The state of Virginia
- B) George Washington and the presidency
- C) The first president of the United States
- D) The early life of George Washington
- E) Endangering life in America

**17. According to the passage, of the following activities Augustine did not engage in .....**

- A) educating his children
- B) constructing places to process flour
- C) agriculture
- D) baseball and rugby
- E) developing cities

**18. It is clear from the passage that during the period of 1747-1750, G. Washington was .....**

- A) leaning to be a soldier
- B) practicing his new found occupation
- C) fighting against enemies
- D) serving as Lord Fairfax's assistant
- E) farming in northern Virginia

*One of the most dangerous drugs for pregnant women to consume is alcohol. Because alcohol is delivered quickly into the blood and passes quickly into the tissues and membranes, the human fetus is particularly vulnerable to its effects. In fact, the negative effects on a fetus are so pronounced that babies born after exposure to alcohol are said to be suffering from fetal alcohol syndrome. As a pregnant woman drinks alcohol, the alcohol is passed into her bloodstream almost simultaneously. Moreover, because the bloodstream of the fetus is inextricably tied to that of the mother, the alcohol passes directly into the bloodstream of the fetus as well. And, what is more, the concentration of alcohol in the fetus is exactly the same as in the mother. For the mother, this concentration is not a problem because her liver can remove one ounce of alcohol from her system per hour. However, the fetus's liver is not completely developed (how developed it is depends on its stage of development). The rate at which it is able to eliminate the alcohol from the blood of the fetus is much slower. Eventually, the alcohol will be returned to the mother's system by passing across the placenta, but this process is slow. By the time this takes place, major neurological damage may have already occurred. Research has shown that as little as one drink of alcohol can produce significant, irreversible damage to the fetus. Babies born after exposure to alcohol generally exhibit facial distortion, inability to concentrate, and difficulty in remembering. Simply speaking, it is imperative that pregnant women avoid alcohol.*

**19. According to the passage, the concentration of alcohol in a fetus compare to that in the mother is that .....**

- A) the concentration is more.
- B) the concentration is less.
- C) the concentration is equivalent.
- D) the concentration cannot be measured.
- E) there is no concentration.

**20. It can be inferred from the passage that the development of a fetal liver depends on ..... .**

- A) how many months pregnant the mother is
- B) how much alcohol the mother has consumed
- C) how large the fetus is
- D) how well the mother has taken care of the fetus
- E) how many kidneys the mother has

**21. In the passage the word "inextricably" has the closest meaning to ..... .**

- A) unexplainably
- B) formerly
- C) forcefully
- D) inseparably
- E) vaguely

*A new hearing device is now available for some hearing-impaired people. This device uses a magnet to hold the detachable sound-processing portion in place. Like other aids, it converts sound into vibrations. But it is unique in that it can transmit the vibrations directly to the magnet and then to the inner ear. This produces a clearer sound. The new device will not help all hearing-impaired people - only those with a hearing loss caused by infection or some other problem in the middle ear. It will probably help no more than 20 percent of all people with hearing problems. Those people who have persistent ear infections, however, should find relief and restored hearing with the new device.*

**22. As we understand from the passage, the author's main purpose is ..... .**

- A) to describe a new cure for ear infections
- B) to inform the reader of a new device
- C) to urge doctors to use a new device
- D) to explain the use of a magnet
- E) to encourage the patients

**23. It is mentioned in the passage that .....**

- A) a new hearing instrument is not able to convey the vibrations directly to the magnet.
- B) the new hearing device has a distinctive treat to send the vibrations directly to the magnet and then to the inside of the ear.
- C) no device has been developed to make people hear better.
- D) the more the economy of a country grows, the better the hearing equipment will be.
- E) recent studies has shown that people cannot hear well provided they use cell phones.

**24. It is clear in the passage that .....**

- A) the people with constant ear infections are to find relief and restored hearing with the new device.
- B) the new device will help all hearing-impaired people.
- C) the new device transforms sound into vibrations unlike other aids.
- D) the other devices differ from the new one in that they can transmit the vibrations directly to the magnet and then to the inner ear.
- E) the recent device will probably help almost all the people with hearing problems.

*There have been seven reasonably distinct regional colonial architectural styles in the United States. The New England colonial, visible in almost 100 surviving 17th century houses, was predominantly of wood construction with hand-hewn oak frames and clapboard siding; its prototypes are to be found mainly in the southeastern corner of England. The Dutch colonial style, centered in the Hudson River Valley, western Long Island and in northern New Jersey, made more use of stone and brick or a combination of these with wood; its prototypes were in Holland and Flanders. The Swedish colonial settlement, established in 1638 along the lower Delaware River, was short duration, but contributed the log cabin as we know it, with round logs notched and protruding at the ends to American architecture. The Pennsylvania colonial style was late in origin and rapidly developed into a sophisticated Georgian mode based on English precedents. The Southern colonial flourished in Maryland, Virginia, and the Carolinas. Story-and-a-half brick houses with large chimneys and decorative brick masonry prevailed. There were also French and Spanish colonial styles -the former on display notably in New Orleans, and the latter stretching across the continent from Saint Augustine to San Francisco.*

**25. According to the passage, the Dutch colonial style differ from the New England colonial style in that ..... .**

- A) the New England colonial type is older than the Dutch colonial type.
- B) the Dutch colonial style uses a variety of building materials.
- C) the New England colonial style was more decorative than the Dutch style.
- D) The Dutch colonial style had a more lasting effect on American architecture.
- E) both of them are of Gothic origin.

**26. According to the passage, the Swedish colonial style is notable because of ..... .**

- A) its contribution of a specific building type to America's architectural landscape
- B) its use of unusual decorative techniques
- C) its use of an unusual combination of building materials
- D) its influence on the architecture of a very large area of the country.
- E) the way it is perceived by the sailors.

**27. The author of the passage implies that .....**

- A) story-and-a-half brick houses with large chimneys and decorative brick masonry were not known at that time.
- B) the New Dutch colonial was particularly of wood construction with hand-hewn oak frames and clapboard siding.
- C) the English colonial settlement established in 1638 along the lower Delaware River.
- D) The Swedish style quickly turned into a developed Georgian mode based on English precedents.
- E) in the USA, people can see seven notably distinct regional colonial architectural styles.

*By the latter half of the 19th century, the emerging industrial order of America was based on steel, and by 1870 the techniques of production, the supply of raw materials, and the home market were sufficiently developed to make the United States the world's greatest steel-producer. A cheap and practical process of making steel by forcing a blast of cold air through **molten** iron to clean it of impurities had been invented by Henry Bessemer, an Englishman, in 1857. A rival patent for the same process was held by one William Kelly, a Kentucky ironmaster who claimed to have made the discovery before Bessemer. The two patents were merged in 1866, and the following year the first steel rails in the country*

*were rolled for commercial use. In 1867 the United States made 1,643 tons of steel ingots; 1897 it made 7,156,957. In the meantime new discoveries of ore deposits in the fabulous Lake Superior district opened exciting prospects for the iron masters. Government surveyors in 1844 had discovered the Marquette Range in Michigan, including "a mountain of solid iron ore, 150 feet high." In 1868 the rich Vermilion Range in Minnesota was discovered, and in 1875 it was tapped by a railroad. Within the next decade the Menominee, the Gogebic, and the Mesabi mines, which together constituted the greatest iron-ore district in the world, were opened up.*

**28. The main idea of the passage is .....**

- A) the United States became the world's largest steel-producing nation by 1870.
- B) there was a rivalry between America and Britain until 1870.
- C) the Lake Superior region became the home for the nation's steel industry.
- D) there were legal obstacles to the development of the steel industry during the mid-19th century.
- E) the steel industry played a key role in the development of the rail system during the 19th century.

**29. The fact that several deposits of iron ore were found in the Lake Superior district is quite significant because .....**

- A) railroad could be built to these deposits since they were close together.
- B) they were all virtually solid deposits of iron ore and thus easy to mine.
- C) this was all American Indian land that the U.S. government could simply claim as national property
- D) it was very expensive to treat this material
- E) their closeness to water made it cheap and easy to move the iron ore.

**30. In the passage, the word "molten" has the closest meaning to .....**

- A) stratified
- B) mottled
- C) liquefied
- D) contaminated
- E) embezzled

This is the end of the test. Check your answers.



## APPENDIX 2

Değerli arkadaşlar,

Gazi Üniversitesi Eğitim Fakültesi İngilizce Öğretmenliği Bölümünde okutulan edebiyat dersleri sırasında uygulanan yaygın Eleştirel Düşünme Stratejilerinin, okuduğunu anlama becerileri üzerindeki etkisini belirlemek amacıyla bir çalışma yürütmektedirim. Bu çalışmayı tamamlayabilmek için sizin değerli katkılarınıza ihtiyaç duyuyorum.

“Cornell Eleştirel Düşünme Testi” sizlerin ne kadar iyi analitik muhakeme yapabildiğinizi tespit etmek üzere tasarlanmış 4 bölümden oluşmakta olup, her bölümün dikkatlice okunması gereken ayrı talimatları mevcuttur. Testin süresi **50 dakikadır**. Tüm yanıtlarınızı size dağıtacağım ayrı bir “Cevap Kâğıdına” işaretleyin. İşaretlemelerinizi yaparken kurşun kalem kullanın. Eğer cevabınızı değiştirmek isterseniz önceki yanıtınızı tamamen silin. Soruları tek tek cevaplayın ve cevaplayamadığınız sorular üzerinde fazla zaman kaybetmeyin. Sureniz bitmeden tüm soruları cevaplamayı bitirerseniz geriye donup cevaplarınızı kontrol edin. Test puanınız doğru cevap sayısına göre hesaplanacağından, yanıtınızın doğru olmadığını düşünseniz bile tüm sorulara yanıt vermeye çalışın.

Sorulara vereceğiniz yanıtlar bu çalışma için büyük önem arz etmekte olup tamamen gizli tutulacak ve sadece bu araştırma için kullanılacaktır. Bu nedenle, tüm soruları dikkatlice ve gerçekçi bir şekilde cevaplayın. Yardımanız ve değerli katkılarınız için şimdiden teşekkür ederim.

Ünal ŞENOL

Gazi Üniversitesi

Eğitim Bilimleri Enstitüsü

## CORNELL ELEŞTİREL DÜŞÜNME TESTİ

### NICOMA'DA KEŞİF

Yıl 2052. Haziran ayının ortası. Yeni keşfedilen Nicoma gezegenine inmek üzere dünyadan hareket eden ikinci ekip olduğunuzu hayal edin. İki yıl önce Nicoma gezegenine inen birinci ekipten hiçbir haber alınamadı. Sizin içinde bulunduğunuz ekip birinci ekibe ne olduğuna dair bir rapor hazırlamak üzere oraya gönderildi.

Elinizdeki kitapçıkta, size ekibinizin Nicoma'da öğrendiği bazı bilgiler sunulacaktır. Sonra size, dikkatlice düşünerek cevap vermeniz gereken sorular sorulacaktır. Bu soruların çözümünde kullanmanız için size yardımcı olacak bazı bilgiler verilecektir.

**SORULARI, SİZE SUNULAN BU BİLGİLERİN DOĞRU OLDUĞUNU KABUL EDEREK CEVAPLAYIN.**

Cevap verirken hiçbir zaman gelişi güzel tahmin yapmayın. Emin olmasanız bile doğru cevabın ne olduğuna dair iyi bir fikriniz varsa problemi cevaplandırın.

Test dört bölümden oluşmaktadır. İlk iki bölümde, bir problemi bir kez cevapladıktan sonra soruya tekrar geri dönmeyin. Şimdi size “başlayabilirsiniz” denilinceye kadar bekleyin.

### BÖLÜM 1

#### BİRİNCİ EKİBE NE OLDU?

Ekibinizin ilk işi Nicoma'ya daha önceden inmiş olan ilk ekipteki kâşiflere ne olduğunu ortaya çıkarmaktır. Ekibiniz Nicoma'ya indi ve iner inmez birinci ekip tarafından yapılmış olan metal kulübeleri buldu. Bu metal kulübeler dış görünüm olarak iyi durumda. Güneşli ve sıcak bir gün. Ağaçlar, kayalar, çimenler ve kuşlara bakıldığında Nicoma, Batı Anadolu'yu andırıyor.

Sen ve doktor kulübelere varan ilk kişilersiniz. Seslendiniz fakat kulübelere çıkamadı. Doktor, **“BELKİ HERKES ÖLMÜŞTÜR.”** dedi. Sen doktorun bu düşüncesinin doğru olup olmadığını bulmaya çalışıyorsun.

Aşağıda size daha önceden öğrenmiş olduğunuz bazı doğru bilgiler listelenmiştir. Senden istediğimiz bu bilgileri kullanarak şu üç durumdan birine karar vermendir.

**A.** Öğrendiğin her bir bilgi, doktorun “ilk ekipteki herkes ölmüş olabilir” düşüncesini **doğruluyor mu?**

**B.** Bu bilgi doktorun düşüncesini **çürütüyor mu?** Yani bu bilgi ilk ekiptekilerin yaşıyor olabileceğini mi gösteriyor?

**C.** Yoksa bu bilgi doktorun fikrini **doğrulamak veya çürütmek için yeterli değil mi?**

Her bir bilgi için cevap kâğıdınıza aşağıdakilerden birini işaretleyin:

- \* Eğer size verilen bir bilgi doktorun Nicoma'ya gelmiş olan birinci ekipteki herkesin ölmüş olduğuna dair düşüncesini **doğruluyorsa A** seçeneğini işaretleyin.
- \* Eğer bu bilgi doktorun düşüncesini **çürütüyorsa B** seçeneğini işaretleyin.
- \* Eğer bu bilgi doktorun düşüncesini **ne destekliyor ne de çürütüyorsa C** seçeneğini işaretleyin.

İşte size testin bu bölümündeki problem türleri ile ilgili örnek bir bilgi.

### 1. (Örnek)

« Birinci kulübeye girdin. Her şey kalın bir toz tabakasıyla kaplı. »

Bu bilgi doktorun herkesin ölmüş olabileceğini söyleyen fikrini destekliyor mu? Tersini mi destekliyor? Yoksa verilen bilgi bunlara karar vermeye yetersiz mi?

**Cevap:** Yukarıdaki bilgi elbette ki doktorun düşüncesini tamamen ispat etmiyor. Ancak biraz destekliyor. Bu nedenle cevap kâğıdına **A** seçeneğini işaretleyiniz.

### 2. (Örnek)

« Ekibinizin diğer üyeleri yakınlarda bir yerde birinci ekibin uzay gemisini buldu. »

**Cevap:** Birinci ekibin uzay gemisinin bulunduğunu bilmek onların ölmüş oldukları düşüncesinin doğru ya da yanlış olduğuna karar vermeniz için bir bilgi içermemektedir. Bu yüzden doğru cevap **C** seçeneğidir. Cevap kâğıdına **C** seçeneğini işaretleyiniz.

Aşağıda bilgiler listesi vardır. Her biri için **A**, **B** veya **C** seçeneğini işaretleyin. Soruları sırasıyla cevaplayın. Dikkatli değerlendirin ve bir soruya cevap verdikten sonra ona bir daha geri dönmeyin. Unutmayın:

- \* Eğer size verilen bir bilgi doktorun Nicoma'ya gelmiş olan birinci ekipteki herkesin ölmüş olduğuna dair düşüncesini **doğruluyorsa A** seçeneğini işaretleyin.
- \* Eğer bu bilgi doktorun düşüncesini **çürütüyorsa B** seçeneğini işaretleyin.
- \* Eğer bu bilgi doktorun düşüncesini **ne destekliyor ne de çürütüyorsa C** seçeneğini işaretleyin.

Şimdi aşağıdaki ifadeleri dikkatlice okuyun ve cevaplarınızı cevap kâğıdına işaretleyin.

3. 10 tane kulübe vardır. İkinci kulübeye giriyorsunuz ve birinci kulübe gibi onun içindeki her şeyin de kalın bir toz tabakasıyla kaplı olduğunu görüyorsunuz.
4. Üçüncü kulübeye giriyorsunuz. Fırının üstünde toz yok.
5. Üçüncü kulübede fırının yanında bir konserve açacağı buldunuz.
6. Üçüncü kulübede, birinci ekip üyelerinden birinin yazmış olduğu, olayların yazıldığı bir günlük buldunuz. Günlük, Erkan AK adlı bir adam tarafından yazılmış. Günlüğe düşülen

son notun tarihi, birinci ekibin gezegene varış tarihinden bir ay sonrası olan 2 Temmuz 2050 gününe aittir.

7. Üçüncü kulübede bulunan iki yatağın da üzerinin kalın bir toz tabakasıyla kaplı olduğunu buldunuz.

8. Erkan AK'ın günlüğüne yazılan ilk notta şöyle yazmaktadır: “2 Haziran 2050. Yorucu bir yolculuktan sonra bugün buraya vardık. İniş alanının yakınına kulübeleri kurduk”

9. Erkan AK'ın günlüğüne yazılan ikinci notta şöyle yazmaktadır: “3 Haziran 2050. Çok miktarda yiyecek stoku var. Burada ördek, sincap ve geyikler var. Bunlar kolayca yakalanabiliyor.”

10. Erkan AK'ın günlüğüne yazılan üçüncü notta şöyle yazmaktadır: “4 Haziran 2050. Yakındaki bir pınarın suyu doktorumuz tarafından test edildi. Doktorumuz suyun içilebilir olduğunu söylüyor. Henüz o sudan içmiyoruz. O suyu Dünyadan getirdiğimiz karaman koyunlarına içirip test edeceğiz.”

11. Erkan AK'ın günlüğüne yazılan son notta şöyle yazmaktadır: “2 Temmuz 2050. Takatim kalmadı, daha fazla dayanamayacağım.”

12. Başka ve titrek bir elyazısı bu son notun altında yer alıyor. Notta şöyle yazıyor: “Bu tarihte Erkan AK ölmüştür.

13. Doktor 10 kulübenin hepsinin içine teker teker baktı. Her birinin için de kalın bir toz tabakasının bulunduğunu rapor etti.

14. Sen ilk üç kulübenin için deki her bir yatağı teker teker inceledin. Battaniye ve çarşafların yataklardan toplanarak düzenli bir şekilde dürülüp dolaplara yerleştirilmiş olduğunu gördün.

15. Doktor diğer bütün kulübelerdeki yatakların da aynı durumda olduğunu rapor etmiştir. Battaniye ve çarşaflar düzgünce katlanıp dolaplara konmuştur.

16. Erkan AK'ın barakasının arkasında bir toprak yığını olduğunu fark ettin. Yakından incelediğinde üzerinde şu sözler yazılı taşı gördün. “Erkan AK, 2 Temmuz 2050. Ruhuna Fatiha.”

17. Birinci ekibin kullandığı kamyon (araç) kayıptır.

18. Onuncu kulübede 15 Mart 2052 tarihli bir not buldunuz. Notta şöyle yazmaktadır: “Bizi aramaya geldiyseniz, hepimiz kamyonla etrafı araştırmaya gidiyoruz. Güneşin doğduğu yere doğru gitmeyi planlıyoruz. (yazan) Nicoma gezegeni kâşifleri komutanı Cemil Yücel.

19. Sayfanın sonuna eklenmiş bir not daha gördünüz: Not: “Bir hafta için de dönmeyi planlıyoruz”.
20. Ekibinizden 8 kişi, sizin ekibe ait kamyonlardan birine binip güneşin doğduğu yere doğru gitmeye başladı. Geniş bir vadide bozuk bir yolda yaklaşık 20 kilometre yol aldınız. Birinci ekibin aracını bir dere kenarında buldunuz. Araç terk edilmiş görünüyor.
21. Sürücü koltuğunda şu notu buldunuz: “Motor bozuldu. Dereden aşağı doğru yürümeyi planlıyoruz. Belki büyük bir gölet vardır. (yazan Yüzbaşı Cemil Yücel).”
22. Sekiz kişiden biri olan araba tamircisi, birinci ekibin kamyonunun motoruna baktı ve motorun durumunun kötü olduğunu söyledi.
23. Arabanın ön tekerleklerinin patlak olduğunu fark ettiniz.
24. Zemin düzgün olduğundan dere boyunca aşağı doğru arabayla gidiyorsunuz. 10 kilometre arabayla gittikten sonra uzakta bir duman yükseldiğini gördünüz. Bilginiz kadarıyla Nicoma gezegeninde hiç yanardağ yok.
25. Kısa bir süre sonra aracınızın çıkamayacağı kadar dik bir yamaca rastladınız. Sekiziniz birden araçtan inip dumana doğru yürümeye başladınız.

## BÖLÜM 2

### NİCOMADAKİ KÖYÜ İNCELEME

Karanlık basmak üzeredir, bu yüzden geceyi kamp kurarak geçiriyorsunuz. Ertesi sabah tekrar yola koyuluyorsunuz. Bir saat yürüdükten sonra ekibiniz taş kulübelerden oluşan bir köye ulaşıyor. Köy boş. Güneş parlıyor. Ekibin lideri olduğunuz için grubun diğer üyeleri öğrendiklerini size rapor ediyor. Her seferinde aynı anda size yazılı olarak iki ayrı rapor veriliyor. İkisini de okuduktan sonra hangisinin daha inandırıcı olduğuna veya her ikisinin de eşit derecede inandırıcı olup olmadığına karar veriyorsunuz.

- \* Eğer size verilen **birinci** raporun daha inandırıcı olduğuna inanıyorsanız cevap kâğıdında **A seçeneğini** işaretleyin.
- \* Eğer **ikinci** raporun daha inandırıcı olduğunu düşünüyorsanız **B seçeneğini** işaretleyin.
- \* Eğer iki raporun da **eşit derecede** inandırıcı olduğuna düşünüyorsanız **C seçeneğini** işaretleyin.

İşte size bir örnek (her bir problem için **İNANDIRICILIĞINA KARAR VERECEĞİNİZ İFADENİN ALTI ÇİZİLMİŞTİR.**)

#### 26. (Örnek)

A. Araba tamircisi köyün yakınından akan dereyi inceliyor ve “Bu suyun içilmesi sakıncalı” diyor.

B. Doktor: “Bu suyu içmenin sakıncalı olup olmadığını henüz bilmiyoruz” diyor.

C. A ve B eşit derecede inandırıcıdır.

**Cevap:** Bu sorunun doğru cevabı **B seçeneğidir**. Çünkü doktor araba tamircisine göre suyun içilmesinin sakıncalı olup olmadığını daha iyi bilebilir. Aşağıda aynı özellikte sorular yer almaktadır. Soruları sırasıyla cevaplayın. Geçtiğiniz soruya geri dönmeyin. Altı çizili ifade hakkında karar vereceğinizi unutmayın.

27. A. Doktor diyor ki: “Suyu içmede sakınca yoktur”.

B. Ekibin asker olan üyelerinden biri “Suyun içilmesi sakıncalıdır” diyor.

C. A ve B eşit derecede inandırıcıdır

28. A. Araba tamircisi “Su temiz görünüyor” diyor.

B. Doktor suyla ilgili testler yaptıktan sonra şöyle diyor: “Su içilebilir.”

C. A ve B eşit derecede inandırıcıdır.

29. A. Askerlerden biri yükselen dumanı fark ediyor. Askere göre duman 100 metre uzaktaki tepenin üstündeki en büyük taş kulübenin hemen arkasından yükseliyor. Diyor ki: “Duman yaklaşık yüz metre ilerdeki bir ateşten yükseliyor.”

B. Bahsedilen kulübenin arkasından yeni gelmiş diğer bir asker ise şöyle diyor:

“Yok be yav bahsettiğiniz ateş çok daha uzak bir yerde.”

C. A ve B eşit derecede inandırıcıdır.

30. A Araba tamircisi taş kulübelerin etrafında hızlı bir tur attıktan sonra en yakın kulübenin için den bir ses geldiğini duydu. “O kulübenin için de biri olmalı” dedi

B. Birkaç dakika önce en yakındaki o kulübenin içini kontrol etmiş olan doktor “O kulübenin için de kimse yok” dedi.

C. A ve B eşit derecede inandırıcıdır

31. A. En yakındaki kulübeyi inceleyen doktor, “Bu kulübeyi gezegene bizden önce inen ilk grup inşa etmiştir” dedi.

B. Gruptaki antropolog (antropologlar, değişik kabilelerin ve ırkların yaşayış biçimlerini ve alışkanlıklarını araştırmakla uğraşırlar) o kulübeyi inceledikten sonra, “O kulübeyi büyük bir ihtimalle bizden önce gezegene inen birinci ekip inşa etmemiştir.” dedi.

C. A ve B eşit derecede inandırıcıdır.

Dumanın nereden geldiğini öğrenmek için grubunuzu en büyük taş kulübenin arkasındaki tepenin üzerine götürüyorsunuz. Uzakta duman çıkan bir ateşin etrafına toplanmış 40 kadar hareketli karartı görünmektedir. Komutanınız, kayıp olan kâşiflerden herhangi birini **ilk gören kişiye büyük bir ödül** vermeyi vaat ediyor. **Eğer onlardan biri gerçekten yaşıyorsa her biriniz onu ilk gören kişi olma şerefine ulaşmak ve ödülü**

**almak istiyorsunuz.** Fakat aynı zamanda dikkatlisiniz çünkü ateş etrafındaki karartılar tehlikeli olabilir. Ekibinizde birkaç tane dürbün var. Güneş hala parlamaktadır. Dürbünlerle ateşte yanmakta olan kütükleri saymak bile mümkündür.

32. A. Dürbünüyle bakan araba tamircisi söyle diyor: “Bronz tenli vücutları kıllı bölgeler olan yaratıklar görüyorum.”

B. Dürbünle bakan antropolog, “Hayır onların vücutlarında kıllı bölgeler yok. Hayvan derisi giymişler” dedi.

C. A ve B eşit derecede inandırıcıdır.

33. A. Araba tamircisi diyor ki: “Zannederim onlardan 40 tane var.”

B. Antropolog diyor ki: “Hayır, bence onlardan 37 tane var.”

C. A ve B eşit derecede inandırıcıdır.

34. A. Antropolog heyecanla şöyle diyor: “Sol tarafta Yüzbaşı Cemil Yücel’in kendisini görüyorum.”

B. Araba tamircisi şu bilgiyi veriyor: “Sağ tarafta Çavuş Seydi ayakta duruyor.”

C. A ve B eşit derecede inandırıcıdır.

35. A. Askerlerden birisi antropologun dürbününü ödünç alıp baktıktan sonra şöyle diyor: “Evet sağdaki çavuş Seydi.”

B. Aynı zamanda araba tamircisinin dürbününü ödünç alan doktor şunu söyler: “Evet sağdaki çavuş Seydi.”

C. A ve B eşit derecede inandırıcıdır.

**Şimdi, eğer soldaki adam Yüzbaşı Cemil Yücel ise ödülü ANTROPOLOG alır. Eğer değilse ödülü ARABA TAMİRCİSİ alır.**

36. A. Doktor sol tarafta duran kişiye dürbünüyle bakar ve şöyle der: “O Yüzbaşı Cemil değil.”

B. Dürbününü askerden geri alan antropolog şöyle der: “Evet O.”

C. A ve B eşit derecede inandırıcıdır.

**Sonra, soldaki adam karartı şeklinde görülen grubun içine girer ve başka birisi onun yerini alır.**

37. A. Doktor söyle diyor: “Yeni katılan kişi, ilk gelen kâşiflerden birisi değil.”

B. Antropolog aynı fikirde olduğu belirtir: “Sen haklısın o, onlardan birisi değil.”

C. A ve B eşit derecede inandırıcıdır.

38. A. Antropolog şöyle devam eder: “İşte bak Yüzbaşı Cemil bize doğru dönmüş ellerini kaşlarının üzerine koymuş bize doğru bakıyor. Bu kişi benim daha önce Yüzbaşı Cemil dediğim kişiyle aynı kişidir.” Onu takip ediyorum.

B. Doktor şöyle diyor: “Evet Yüzbaşı Cemil bize doğru bakıyor. Fakat sol tarafta duran kişi o değildi.” Sol tarafta duran kişi şimdi arkası bize dönük olarak oturuyor. Bende onu takip ediyordum.

C. A ve B eşit derecede inandırıcıdır.

**Doğru bir rapor hazırlayabilmek için grup üyelerine, gördükleri şeylerin sayısı hakkında görüş birliğine varıp varamayacaklarını soruyorsunuz.**

39. A. Doktor mikroskop altında çok sayıda nesneyi saymaya alışkındır. O şöyle söylüyor: “O grup içerisinde tam olarak 39 tane karartı vardır.” Doktor dürbünle bakmaktadır

B. Bir asker şöyle söylüyor: “Hayır onlardan 38 tane var.” O da dürbünle bakmakta.

C. A ve B eşit derecede inandırıcıdır.

40. A. Araba tamircisi doktordan dürbününü geri alır ve sayar: “Evet onlardan 39 tane var” der.

B. Asker tekrar eder: “Hayır, onlardan sadece 38 tane var.”

C. A ve B eşit derecede inandırıcıdır.

Ateşin etrafındaki insanlar kalkar ve köye doğru yürümeye başlar. Sen küçük grubunu yakındaki bir tepe üzerine götürürsün. O noktadan kendiniz görünmeden köyü görebilirsiniz. **Sen şunları bulmaya çalışıyorsun; Bu köy dost bir köy mü? Birinci grup kâşifler tutsak mı edilmiş? Ve kaç tane kâşif hayattadır?** Araba tamircisi insanların ne gördüğünü not almaktadır.

41. A. Askerlerden biri köyde sağa sola gitmekte olan insanları sayar. O asker şu bilgiyi verir: “Köye ateşin etrafından 32 kişi geldi.”

B. Başka bir asker şöyle diyor: “İki kişiyi gözden kaçırmış olmalısın. Büyük kulübenin yanından geçerken onları saydım ve 34 tanesi geri geldi.” Herhangi birisinin başka bir yolla gelmiş olduğunu düşünmüyorum.

C. A ve B eşit derecede inandırıcıdır.

42. A. Antropolog şu bilgiyi verir: “Ateşten geri geldiklerinde onlardan bir tanesi yeşil bir şapka giyiyordu. Şapka giyen bir tek oydu.” Büyük kulübenin yanından geçerken onları dikkatle izledim.

B. Doktor şöyle söylüyor: “Onlardan iki tanesi yeşil şapka giyiyordu. Önce sol taraftakini gördüm. Sonra en sağdakini gördüm.”

C. A ve B eşit derecede inandırıcıdır.



43. A. Bir asker şöyle söylüyor: “Yeşil şapka giyen son bir dakika içerisinde 5 defa birisine konuştu ve işaret etti. Kendisine konuşulan kişi hemen gösterilen yöne doğru koşmaya başladı.”

B. Bir başka asker: “O lider olmalı.” diye ekledi.

C. A ve B eşit derecede inandırıcıdır.

44. A. Antropolog şöyle diyor: “Bak, Yüzbaşı Cemil Yücel’le iki kâşif büyük kulübeyi işaret etmekte olan yeşil şapkalının yanına geliyorlar. Yeşil şapkalı olan onlara içeriye girmelerini emrediyor.”

B. Antropolog ekliyor: “Seydi Çavuş ve başka bir kâşif geliyorlar. Yeşil şapkalı olan büyük kulübeyi işaret ediyor. Onlar da içeri giriyor.”

C. A ve B eşit derecede inandırıcıdır.

45. A. Birkaç kaşif grubu da kulübeye girer. Doktor not almakta olan araba tamircisine sorar: “Sence kulübenin içerisinde kaç kişi oldu? Her biri içeri girdiğinde sana söylemiştim. Bence orada 13 kişi oldu.”

B. Araba tamircisi ise şöyle cevap verir: “Benim notlarıma göre 14 tane.”

C. A ve B eşit derecede inandırıcıdır

46. A Antropolog şöyle söyler: “Yeşil şapkalı olan büyük kulübenin sağ tarafındaki kulübeye giriyor. Üç tanesi de onu takip ediyor.”

B. Doktor şöyle söylüyor: “Bak yeşil şapkalı birisi daha geliyor. Yani kulübenin içindeki liderleri değil, çünkü onlardan iki tane var. Hadi kulübedeki insanları kontrol edelim.”

C. A ve B eşit derecede inandırıcıdır.

47. A Antropolog kulübeye girdikleri esnada onların nasıl birileri olduklarını anlamak için tanımlamaya çalışıyordu. Şöyle dedi: “Ben o kulübenin içine 18 kişinin girdiğini gördüm.”

B. Araba tamircisi karşı çıktı: “Sizin daha önce söylediklerinizle ilgili notlara baktığımda, 17 kişinin içeri girdiğini yazmışız.”

C. A ve B eşit derecede inandırıcıdır.

48. A Bunun üzerine antropolog en büyük kulübeye bakıp şöyle dedi: “Şu iki adamı görüyor musun? Herhalde onlar kâşiflerin başında nöbet tutuyorlar. AA bak! Nöbet değiştiriyorlar. Onlardan yürüyeni kapının karşısında yaklaşık 15 metre uzakta durdu ve kapının hemen yanında dikilen de ona doğru yürümeye başladı.”

**B.** Doktor şöyle dedi: “Şimdiye kadar on değişiklik yaptıklarını gördüm. Fakat sıralamayı yanlış görmüşsün. Kapının yanındaki adam görev bölgesini öteki adam buluştukları noktaya gelmek için yürümeye başlamadan önce zaten terk etmişti.”

C. A ve B eşit derecede inandırıcıdır.

**49.** A Olan biteni izlemekte olan araba tamircisi şöyle diyor: “Bence doktor haklı.”

**B.** Antropolog şöyle diyor: “Bence, o yanılıyor.”

C. A ve B eşit derecede inandırıcıdır.

**50.** A Askerlerden biri şöyle söylüyor: “Şu uzun boylu adama bakın. Ne garip yürüyüşü var. Sol elini daha sol ayağı yere değmeden önce neredeyse sağ omzuna kadar kaldırıyor.”

**B.** Başka bir asker şöyle cevap veriyor: “Evet garip. Ben onu beş dakikadır seyrediyorum fakat sen tam tersini söyledin. O sol elini sağ ayağı yere değdikten sonra sol omzuna doğru kaldırıyor.”

C. A ve B eşit derecede inandırıcıdır.

### **BÖLÜM 3**

#### **NE YAPILABİLİR?**

Ekibinizle birlikte köylülerin dost olup olmadıklarına karar vermeye çalışıyorsunuz. Eğer köylüler dost değilse tutsak olan kâşifleri kurtarmanız gerekli olabilir. Durumu değerlendirmeye çalışıyorsunuz.

Bu bölümdeki problemlerin her biri için **size sunulan bir sebepten hareket ederek karar vermek durumundasınız.** Burada her bir problem için o konuda fikrini söyleyen kişinin söylediklerini **doğru kabul edin.** Sonra A, B, C **seçeneklerinden hangisinin doğru olabileceğine karar verin.** A, B ve C seçeneklerinden birini seçin. Eğer bilmiyorsanız o soruyu boş bırakın. Her bir problemi kendi için de değerlendirin. Bu bölümde bir problemi geçtikten sonra geri dönebilirsiniz. İşte size bir örnek:

#### **51. (Örnek)**

Araba tamircisi şöyle diyor; “Eğer bu şeyler Dünyalı ise bizi hoş karşılayacaklardır. Onlar kesinlikle dünyalı insanlardır.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

**A.** Bu şeyler bizi hoş karşılamayacaklar.

**B.** Bu şeyler dünyalı değil.

**C.** Bu şeyler bizi hoş karşılayacaklar

**Cevap:** Bu sorunun doğru cevabı **C seçeneğidir.** Araba tamircisi ne diyor? “Bu şeyler dünyalı ise bizi hoş karşılayacaklardır. Bu şeyler kesinlikle dünyalıdır.” O halde,

eğer bu şeyler dünyalıysa “bizi hoş karşılayacaklardır” sonucuna ulaşılır. Doğru cevap **C seçeneğidir**. Diğer sorulara geçiniz. Her bir problem için seçeneklerden sadece birinin *en doğru cevap* olduğunu unutmayınız.

**52.** “Eğer bu şeyler dünyalı ise, Nicoma’ya dünyadan başka bir uzay gemisi gelmiş olmalıdır. Bu kâşifler kesinlikle dünyalı insanlardır.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Başka bir uzay gemisi dünyadan Nicoma’ya gelmiştir.
- B. Bu şeyler dünyalı değildir.
- C. Başka bir uzay gemisi dünyadan Nikoma’ya inmemiştir.

**53.** “Eğer bu şeyler dünyalı ise, başka bir uzay gemisi Nicoma’ya inmiş olmalıdır. Fakat başka bir uzay gemisi Nicoma’ya gelmemiştir.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Başka bir uzay gemisi Nicoma’ya inmemiştir.
- B. Bu şeyler dünyalı değildir.
- C. Bu şeyler buraya yanlışlıkla gelmiştir.

**54.** “Her ne zaman devriyeler dolaşsa, gruplar düşmanca davranmaktadır. Şu iki kadın devriyedir.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Bu gruplar dosttur.
- B. Bu gruplar düşmandır.
- C. Eğer gruplar düşmansa, gözetleyiciler kullanılmaktadır.

**55.** “Dünyanın insanları konuşabilir. Bu şeyler dünya insanlarıdır.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Bunlar konuşabilir.
- B. Bunlar konuşmayı bilmiyor.
- C. Eğer bu insanlar konuşabiliyorsa, bunlar dünyalıdır.

**56.** “Eğer bir grup canlı varlık dostça selamlanırsa, o grup dostça davranacaktır. Bu şeyler bir önceki kâşif grubuna dostça davranmamaktadır.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Kâşifler onları dostça selamlamıştır.
- B. Kâşifler onları dostça selamlamamıştır.
- C. Bu canlı varlık grubu, kâşifler onlarla karşılaşmadan önce de dost canlısı değillerdi.

**57.** “Eğer dünyadan bir grup başka bir gezegene inerse, bu bütün dünyaya gazeteler yoluyla duyurulur. Bizim ve bizden önceki grubun Nicoma’ya inmesinden başka

Nicoma'ya hiçbir inme haberi yayınlanmamıştır.” B u düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

A. Eğer gazeteler bir inme haberi yayınlamışsa, öyle bir inme gerçektende olmuştur.

B. Bu canlı yaratık grubu dünyalıdır.

C. Bu canlı yaratık grubu dünyalı değildir.

58. “Bir grup dışarıdan gelen başka insanlara düşmansa onları aç bırakacaklardır. Bizim kâşiflerimiz kesinlikle aç bırakılmamışlardır.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

A. Kâşiflerimiz kesinlikle dosttur.

B. Bu canlı yaratık grubu bizim kâşiflerimize kesinlikle düşmanca davranmaktadır.

C. Bu canlı yaratık grubu bizim kâşiflerimize gerçekten düşmanca davranmamaktadırlar.

59. “Bu grup kâşiflerimize dosttur. Eğer bir grup başka bir canlı grubuna dostça davranıyorsa onları hapsedmeyecektir.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

A. Kâşiflerimiz hapsedilmemiştir.

B. Kâşiflerimiz hapsedilmiştir.

C. Düşman gruplar birbirlerini hapsedmeye çalışırlar.

60. “Nicoma'ya iki inme olayı duyurulmuştur: Bizim ve bizden önceki kâşif grubunun indiği duyurulmuştur. Dünyalı insanların başka gezegenlere her inmesi dünyadaki gazeteler yoluyla duyurulmuştur.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

A. Bu canlı varlık grubu dünyalı değildir.

B. Bu canlı varlık grubu dünyalıdır.

C. Gazeteler hiçbir zaman hata yapmazlar.

61. “Eğer bir grup başka bir canlı varlık grubuna dost ise onları hapsedmeyecektir. Bir grup hapiste değil de böyle bir günde çalışıyor olmalıdır. Kâşiflerimiz çalışmamaktadırlar.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

A. Bu grup kâşiflerimize dostça davranmaktadır.

B. Düşman gruplar birbirlerini hapsedmeye çalışırlar.

C. Bu grup kâşiflerimize düşmanca davranmaktadır.

62. “Bak bak, kâşiflerimizden biri, bir pencereden atlayıp koşarak kaçmaya başladı. Nöbetçilerden birisi, tüfeğini ona doğrultup bağırdığında kaçan kâşif durdu ve ellerini

havaya kaldırdı. Dost bir grup olsalardı, misafirlerinin ayrılmasına izin verirdi. Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Düşman gruplar misafirlerini hapse atacaktırlar.
- B. Bu canlı varlık grubu çok dikkatli davranmaktadır.
- C. Bu canlı varlık grubu düşmancadır.

63. “Eğer kâşif grubumuzla konuşabilirsek, bu canlı varlık grubunun barış yapıp yapmayacağını kesin öğrenebiliriz. Nöbetçiler yer değiştirirken, kulübenin arkasına sessizce gidip kâşif grubumuzla konuşabiliriz.”

Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Bu canlı varlıkların barış yapıp yapmayacaklarını kesin olarak öğrenebiliriz.
- B. Bu canlı varlıkların barış yapıp yapmayacaklarını kesin olarak öğrenemeyiz.
- C. Eğer nöbetçiler çok dikkatli davranırlarsa, sessizce kulübenin arkasına ulaşamayız.

64. “Eğer onlar dünyalı ise iyi silahlanmışlardır. Eğer onlar iyi silahlanmışlarsa, onlara habersiz bir baskın yapılmalıdır. Onlar dünyalıdır, bu kesin.” Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Onlar iyi silahlanmışlardır.
- B. Onlara barışçıl yolla yaklaşılabılır.
- C. Onları şaşırtmalıyız.

65. “Eğer onlara saldırırsak, bazılarını öldüreceğiz. Eğer bazılarını öldürürsek, Nikoma hakkında öğrenebileceğimiz bilgilerden bazılarını kaybetmiş olacağız. Şimdi, Nikoma hakkında hiçbir bilgiden yoksun kalamayız. Bu düşünceye göre, aşağıdaki hangi sonuca varmak en doğrudur?

- A. Onlara saldırmalıyız.
- B. Onların bazılarını öldürmeliyiz.
- C. Onlara saldırmamalıyız.

#### **BÖLÜM 4**

#### **OLUP BİTENİ KOMUTA MERKEZİNE RAPOR ETME VE YAPILACAKLARA KARAR VERME**

Köyü bir saat kadar izledikten sonra, ekibinizi ana kampa geri götürdünüz. Çavuş Selcen’i komutana rapor vermeye gönderdiniz.

Selcen rapor verirken, bazı fikirlerini gerçekten tam olarak söylemese de, bazı şeyleri peşinen doğru kabul ederek ifade etmektedir. Söylediklerinin bazıları varsayımlara

dayalıdır. Sizin işiniz, onun söylediklerinin doğru olabilmesi için neyi peşinen varsaydığını bulmaktır. İşte size bir örnek.

**66. (örnek)**

“Tutsak kâşifler kaçamazlar; çünkü için de bulundukları taş kulübelerin duvarlarını yıkamazlar.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

- A. Kâşifler pencereden atlayamazlar.
- B. Nöbetçiler sürekli tetikte.
- C. Duvarları kırıp çıkmak dışında, kaçış için başka ihtimal yok.

**Cevap:** Bu sorunun doğru cevabı **C seçeneğidir**. Çavuş Selcen’in ne söylediğine dikkat edin. Çavuş Selcen; “Tutsak kâşifler kaçamazlar, çünkü taş duvarları yıkamazlar” diyor. Selcen, söylemese de, **kâşiflerin duvarları kırıp çıkmaktan başka kaçış ihtimallerinin olmadığını** varsayıyor. Seçenekler için de **C seçeneğinde** bahsedilen durum, çavuşun söylediği ifadede yer alan sonuca varmaya an fazla yol açan varsayımdır.

Seçeneklerden sadece birinin **en doğru cevap** olduğunu unutmayın. Tekrarlamak gerekirse, bu bölümde diğer bölümlerden farklı olarak, cevapladığınız bir soruya tekrar geri dönmek serbesttir.

**67.** “Kâşifler esir olduğu için, onlarla konuşmaya kalkarsak yakalanırız”. Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

- A. Nöbetçilere yakalanmadan, esirlerle konuşamayız.
- B. Onlarla konuşursak, konuştuklarımız diğerlerine haber verirler.
- C. Esirlerle konuşursak, bunu başkalarına anlatmazlar.

**68.** “Bu yaratıklarla mantıklı olarak konuşursak, esir arkadaşlarımızı bırakırlar. Her şeyden önce onlar da bir insan, onların salıverilmesi insanlığa bir hizmettir.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

- A. İnsanlara mantıklı bir şekilde konuşulduğunda, insanlar insanlığın yararına davranırlar.
- B. İnsanların yaptığı her şey, insanlığın yararınadır.
- C. İnsanlara bir şey yaptırabilmenin yolu, onlara mantıklı konuşmaktır.

**69.** “Yeşil şapka giyenlerden daha kısa olanı bir bayan. Biliyorum çünkü şapkasını çıkardığında onun uzun saçını gördüm.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

- A. Bütün bayanların uzun saçı vardır.
- B. Sadece bayanların uzun saçı vardır.

C. Yeşil bir şapka giyen bir kişinin bayan olma ihtimali vardır.

70. “Yaklaşık köylülerin yarısının saçları kısa olduğuna göre, en azından köylülerin yarısı erkektir.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Köylülerin yarısı bayandır.

B. Bütün erkeklerin saçları kısa olur.

C. Sadece erkeklerin kısa saçları olur.

71. “Eğer en azından yarısı erkekse, bir çatışma olursa en az yarısıyla savaşmak durumunda kalacağız.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Kadınlar savaşçı değildir.

B. Erkekler savaşçıdır.

C. Hepsi savaşçıysa, hepsini yenemeyiz.

72. “Sadece 10 tane tüfekleri bulunduğuna göre, her seferinde 10 kişiden fazlasını dert etmemize gerek yok.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Tüfekler bize zarar verebilir.

B. Bıçaklar bize zarar veremez.

C. Sadece tüfekler bize zarar verebilir.

73. “Onların sadece 10 tüfeği var. Biliyorum çünkü her devriye nöbetçinin birer tüfeği vardı ve geri kalan sekiz tüfek köyün ortasında bir yerde birbirine dayalı dikilmişti. Tüm görebildiğim buydu.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Sahip oldukları tüm tüfekler görüş alanı için deydi.

B. Birbirine dayanmış olarak bırakılan tüfekler mermiyle doluydu.

C. Tüfekler onların tek silahıdır.

74. “Köylülerin dışarı gönderdikleri hiçbir devriye ekibi yok. Biliyorum çünkü çok dikkatli baktık ve hiçbir tane göremedik.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Devriyeyi sadece takip edildiklerini düşünenler kullanır.

B. Devriyeler dikkatli kişiler tarafından fark edilebilirler.

C. Eğer bir devriyeyi görürseniz, bu onların dikkatsiz olduklarını gösterir.

75. “Köylüler bizim burada olduğumuzu bilmiyor çünkü hiç devriye yok.” Çavuş bu sonuca ulaştığına göre, aşağıdakilerden hangisini peşinen doğru varsayıyor?

A. Eđer bir grup dūřman bir grubun yakınlarda olma ihtimalini biliyorsa, etrafa devriye n bet ileri koyar.

B. Eđer etrafta devriye n bet ileri geziyorsa, devriye n bet ilerinin grubu etrafta bařka bir grubun olduėunu biliyordur.

C. Eđer bir k y devriye n bet ileri g nderiyorsa, bir problem olduėunu tahmin ediyorlardır.

76. “K yl ler d nyalı deėildir,      Nicoma gezegenine d nyalı insanların iniřiyle ilgili hi  bir řey duymadık.”  avuş bu sonuca ulařtıėına g re, ařaėıdakilerden hangisini peřinen doėru varsayıyor?

A. Gezegenlere yapılan t m iniřler duyuruluyor.

B. Bařka gezegenlere insanların yaptıėı b t n iniřler, gezegenlere keřif yapan diėer insanlara duyurulur.

C. D nyadan gelen k řifler, bařka gezegenlerden gelen k řiflerden habersizler.

#### TESTİN SONU

Zamanınız varsa, sadece 51’den den 76. soruya kadar olan son iki b l mdeki sorulara verdiėiniz cevaplarınızı kontrol edip d zeltebilirsiniz. İřte hik yenin geri kalanı. K řifler bir ekibi savařa l zum olmadan esirleri bırakıp bırakamayacakları hakkında konuřmak  zere k yl lerin yanına g ndermeye karar verdi. Ancak aynı zamanda bir  atıřma ihtimaline karřı da hazırlık yapıldı. Bereket versin, k yl ler esirleri bırakmayı kabul etti. K řiflerin kendilerine zarar verme niyetlerinin olmadıėını anladıklarında, esirleri seve seve bıraktılar. Doėrusu bařka bir gezegenden gelen insanlarla tanıřmaktan memnun oldular.

Test bitmiřtir. Cevaplarınızı kontrol ediniz.



**CORNELL ELEŞTİREL DÜŞÜNME TESTİ**  
**CEVAP KAĞIDI**

**KİŞİSEL BİLGİLER**

Adınız soyadınız	:	
Öğrenci numaranız	:	
Sınıf	:	
Edebiyat Dersinin Adı	:	
Tarih	:	
Cinsiyetiniz	:	( ) Kadın ( ) Erkek
Yaşınız	:	( ) 18'den Az ( ) 18-21 ( ) 22-25 ( ) 25'den Fazla
Mezun olduğunuz Lise Türü	:	
		( ) Genel Lise ( ) Mesleki / Teknik ( ) Anadolu Lisesi Lise ( ) Anadolu Öğretmen Lisesi ( ) Bilim Sanat Merkezi ( ) Diğer .....

**BÖLÜM 1**

A	B	C	A	B	C	A	B	C
1. ( )	( )	( )	10. ( )	( )	( )	19. ( )	( )	( )
2. ( )	( )	( )	11. ( )	( )	( )	20. ( )	( )	( )
3. ( )	( )	( )	12. ( )	( )	( )	21. ( )	( )	( )
4. ( )	( )	( )	13. ( )	( )	( )	22. ( )	( )	( )
5. ( )	( )	( )	14. ( )	( )	( )	23. ( )	( )	( )
6. ( )	( )	( )	15. ( )	( )	( )	24. ( )	( )	( )
7. ( )	( )	( )	16. ( )	( )	( )	25. ( )	( )	( )
8. ( )	( )	( )	17. ( )	( )	( )			
9. ( )	( )	( )	18. ( )	( )	( )			

## BÖLÜM 2

	A	B	C		A	B	C		A	B	C
26.	( )	( )	( )	35.	( )	( )	( )	44.	( )	( )	( )
27.	( )	( )	( )	36.	( )	( )	( )	45.	( )	( )	( )
28.	( )	( )	( )	37.	( )	( )	( )	46.	( )	( )	( )
29.	( )	( )	( )	38.	( )	( )	( )	47.	( )	( )	( )
30.	( )	( )	( )	39.	( )	( )	( )	48.	( )	( )	( )
31.	( )	( )	( )	40.	( )	( )	( )	49.	( )	( )	( )
32.	( )	( )	( )	41.	( )	( )	( )	50.	( )	( )	( )
33.	( )	( )	( )	42.	( )	( )	( )				
34.	( )	( )	( )	43.	( )	( )	( )				

## BÖLÜM 3

	A	B	C		A	B	C		A	B	C
51.	( )	( )	( )	56.	( )	( )	( )	61.	( )	( )	( )
52.	( )	( )	( )	57.	( )	( )	( )	62.	( )	( )	( )
53.	( )	( )	( )	58.	( )	( )	( )	63.	( )	( )	( )
54.	( )	( )	( )	59.	( )	( )	( )	64.	( )	( )	( )
55.	( )	( )	( )	60.	( )	( )	( )	65.	( )	( )	( )

## BÖLÜM 4

	A	B	C		A	B	C		A	B	C
66.	( )	( )	( )	70.	( )	( )	( )	74.	( )	( )	( )
67.	( )	( )	( )	71.	( )	( )	( )	75.	( )	( )	( )
68.	( )	( )	( )	72.	( )	( )	( )	76.	( )	( )	( )
69.	( )	( )	( )	73.	( )	( )	( )				

### APPENDIX 3

#### ÖĞRENCİ ANKETİ

Sevgili Arkadaşlar,

Gazi Üniversitesi Eğitim Fakültesi İngilizce Öğretmenliği Bölümü edebiyat dersleri sırasında uygulanan yaygın Eleştirel Düşünme Stratejilerini belirlemek amacıyla bir çalışma yürütmekteyim. Bu çalışmayı tamamlayabilmek için sizin değerli fikirlerinize ve katkılarınıza ihtiyaç duymaktayım.

Sorulara vereceğiniz yanıtlar bu çalışma için son derece önemli olup yanıtlarınızın gizli tutulacağını ve yalnızca söz konusu araştırma için kullanılacağını hatırlatırım. Bu nedenle, lütfen tüm soruları dikkatlice ve gerçekçi bir şekilde cevaplayınız. İlginiz ve yardımlarınız için şimdiden teşekkür ederim.

Ünal ŞENOL  
Gazi Üniversitesi  
Eğitim Bilimleri Enstitüsü  
Yüksek Lisans Öğrencisi

#### ÖĞRENCİ ANKETİ

##### KİŞİSEL BİLGİLER

Adınız soyadınız	:	
Öğrenci numaranız	:	
Sınıf	:	
Edebiyat Dersinin Adı	:	
Tarih	:	
Cinsiyetiniz	:	( ) Kadın ( ) Erkek
Yaşınız	:	( ) 18'den Az ( ) 18-21 ( ) 22-25 ( ) 25'den Fazla
Mezun olduğunuz Lise Türü	:	
		( ) Genel Lise ( ) Mesleki / Teknik ( ) Anadolu Lisesi Lise ( ) Anadolu Öğretmen Lisesi ( ) Bilim Sanat Merkezi ( ) Diğer .....

Lütfen aşağıdaki soruları dikkatlice okuyunuz ve ilgili kutucuğa “√” işareti koymak suretiyle soruları cevaplayınız.

### BÖLÜM I:

Edebiyat ve Dil Öğretimi I dersinde,	Her zaman	Çoğunlukla	Bazen	Nadiren	Asla
1. kendimi rahat hissederim.					
2. düşüncelerimi özgürce ifade edebilirim.					
3. ders öğretmeninin söyledikleriyle aynı fikirde değilsem bunu rahatlıkla ifade edebilirim.					
4. öğrenciler hata yaptıklarında birbirlerine saygı gösterirler.					
5. sınıf arkadaşım benim fikrimden tamamen farklı bir düşünceye sahip olabilir, ama ben yine de onu dikkatlice dinlerim.					
6. ders dışında görüşlerimi desteklemek için derste edindiğim bilgilerden faydalanırım.					
7. bizi zorlayan etkinliklerle karşılaşırız.					
8. sadece ezber yaparız.					
9. ders öğretmenin bakış açısına güveniriz.					
10. fikir birliğine varmak için değişik bakış açılarına değiniriz.					
11. problem çözmek için farklı çözümler öneririz.					
12. sorunu anlamak için bilgiyi parçalara ayırırız.					
13. fikirlerimizi bize sunulan bilgi hakkında hüküm vererek belirtiriz.					
14. yeni fikirler üretmek için bilgileri derleriz.					
15. dersin genel kavramlarını açıklarız.					

### BÖLÜM II:

Edebiyat ve Dil Öğretimi I dersinde aşağıdaki aktiviteleri gerçekleştiririz;	Her zaman	Çoğunlukla	Bazen	Nadiren	Asla

16.	Gerçek hayatla ilgili görevler gerçekleştiririz.
17.	Sınıf içi tartışmalar yaparız.
18.	Sınıftaki eşimizle birlikte çalışırız.
19.	Sınıfta grup çalışmaları yaparız.
20.	Sınıfta iki grubun bir konu hakkında kendi karşıt görüşlerini savunduğu tartışmalar yaparız.
21.	Edebi metinde anlatılan konu ile ilgili problem çözme etkinlikleri yaparız.

### BÖLÜM III:

	Her zaman	Çoğunlukla	Bazen	Nadiren	Asla
Edebiyat ve Dil Öğretimi I dersinde ders öğretmeni ...					
22. daha önce öğrendiğim bilgiler ile bağ kurmamı ister.					
23. derinlemesine düşünmemi sağlar.					
24. soru sormam için beni teşvik eder.					
25. daha önce öğrendiğim bilgileri hatırlatır.					
26. sunulan bilgiyi anlamama yardım eder.					
27. derste öğrendiğim stratejileri ders dışında da kullanmamı ister.					
28. bana sunulan bilgilerden faydalanarak derste öğrendiğim fikirlerin doğru olup olmadığını kontrol etmemi ister.					
29. işlediği dersin konusu ile ilgili olarak benim yaratıcı fikirlerimi alır.					
30. soru sorduğunda bana düşünmem için zaman verir.					
31. elimi kaldırmamı beklemeksizin bana doğrudan soru sorar.					
32. dersi durdurur ve cevaplamak için üzerinde etraflıca düşünülmesi gereken özenli sorular sorar.					

#### BÖLÜM IV:

Genel olarak ...	Her zaman	Çoğunlukla	Bazen	Nadiren	Asla
33. zor bir ödev ile karşı karşıya kaldığımda kolayca pes ederim.					
34. sorunlara yeni çözümler bulmakla ilgilenirim.					
35. başkalarını dikkatlice dinlerim.					
36. başkalarının fikirlerine saygı gösteririm.					
37. kendi düşüncemi düşünmeden baksa insanların fikirlerine güvenirim.					
38. fikirleri kabul etmeden önce kanıt ararım.					
39. bir sonuca varmak için ilgili verileri değerlendiririm.					
40. her durumda tarafsız olmaya çalışırım.					
41. düşüncelerimin yanlış anlaşıldığını fark edebilirim.					
42. sorunları çözmek için başkalarıyla iletişime geçerim.					
43. daha sonra reddetsem bile başkalarının fikirlerinin doğruluğunu görmeye çabalarım.					
44. farklı bakış açılarına açık biriyimdir.					
Genel olarak ...	Her zaman	Çoğunlukla	Bazen	Nadiren	Asla
45. fikirlerimi sınamak için sorular sorarım.					
46. yaratıcı fikirler üretmek için zamanımı kullanırım.					
47. yeni bir konu hakkında okuma yaparken konuyu daha önce bildiğim bir konu ile bağdaştırmaya çalışırım					

Katılımınız için çok teşekkür ederim.

## APPENDIX 4

### CRITICAL THINKING ACTIVITIES FOR “ LITERATURE AND LANGUAGE TEACHING I” COURSE 1<sup>st</sup> WEEK

**Name of the Work** : *Young Goodman Brown* by Nathaniel HAWTHORNE.

**Time Required** : 150 minutes.

**Procedure** : The students are expected to search about the personal and literary life of the author of the short story, and read the story before coming to class. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform the activities. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Knowledge”, “Comprehension”, “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to do the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

The course of the lesson and the activities are prepared in accordance with the literary elements of the short story. They are “Point of View”, “Plot”, “Setting”, “Characters”, “Symbols”, “Themes” and “Main Ideas”. The critical thinking activities are performed consecutively as the lecturer continues his/her lesson with the students.

#### **ACTIVITY 1: Critical Thinking Activities Concerning the Personal and Literary Life of the Author**

**The Purpose of the Activity:** Making students think critically about the personal and literary life of the author of the story by putting Bloom’s taxonomy’s first level into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question** : What do you know about the personal life of the author? (Pair Work)

**2<sup>nd</sup> pair's question** : What do you know about the literary background of the author?  
(Pair Work)

### **ACTIVITY 2: Critical Thinking Activities Concerning the Plot of the Story**

**The Purpose of the Activity:** Making students think critically about the plot of the story by putting Bloom's taxonomy's first three levels into practice through the short story.

#### **Knowledge Level Activity:**

**Question:** Make a list of main events in the short story. (Group Work for all the groups)

#### **Comprehension Level Activities:**

**1<sup>st</sup> pair's question:** Can you describe in your own words the road Young Goodman Brown followed when he started his mysterious journey? (Individual)

**2<sup>nd</sup> pair's question:** Can you describe Young Goodman Brown's companion's physical features in his journey in your own words? (Individual)

### **ACTIVITY 3: Critical Thinking Activities Concerning the Setting of the Story**

**The Purpose of the Activity:** Making students think critically about the setting of the story by putting Bloom's taxonomy levels into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair's question:** Where does the story take place? Find specific proofs from the story.  
(Pair Work)

**2<sup>nd</sup> pair's question:** When does the story take place? Find specific proofs from the story.  
(Pair Work)

#### **Application Level Activity:**

**Question:** Can you find any specific properties in the story peculiar to the period it was written? (Group Work for all the groups)

**Note:** This activity can be done when literary background of the author is studied through a class discussion guided by the instructor.



## 2<sup>nd</sup> WEEK

**Name of the Work** : *Young Goodman Brown* by Nathaniel HAWTHORNE.

**Time Required** : 150 minutes.

**Procedure** : The class had already studied the personal and literary background of the author, plot and setting of the story. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform them. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to carry out the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Characters of the Story**

**The Purpose of the Activity:** Making students think critically about the characters of the story by putting Bloom’s taxonomy analysis level and by associating literature with real life and encourage critical thinking.

#### **Analysis Level Activities:**

**1<sup>st</sup> Question:** Analyze each character in terms of their presentations in the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What is the significance of the names of the characters? (Group Work for all the groups)

#### **Real Life Activity**

**Question:** Put the story in today’s real life context and find suitable modern characters for *Young Goodman Brown*, Faith, and the people living in *Young Goodman Brown*’s town-Salem. (Group Work for all the groups)

### **ACTIVITY 2: Critical Thinking Activities Concerning the Symbols of the Story**

**The Purpose of the Activity:** Making students think critically about the characters of the story by putting Bloom's taxonomy application level and by encouraging them to make inductive reasoning.

**Application Level Activity:**

**Question:** What can be the symbols that have literal meaning but in fact suggest or represent other meanings as well in the story? What are allegorical symbols in the story? (Group Work for all the groups)

**Induction Activity:**

**1<sup>st</sup> Pair's Question:** In the story Faith says to his husband Young Goodman Brown, "Dearest heart, prithee put off your journey until sunrise and sleep in your own bed to-night. A lone woman is troubled with such dreams and such thoughts that she's afeard of herself sometimes. Pray tarry with me this night, dear husband, of all nights in the year." What may this expression want to tell you? (Pair Work)

**2<sup>nd</sup> Pair's Question:** In the story Faith says to his husband Young Goodman Brown, "Then God bless you! And may you find all well when you come back." (Pair Work)

**3<sup>rd</sup> Question:** Comment on the symbols that you have found in the story. What can be their significance when you take the character analyses into consideration? (Group Work for all the groups)

**ACTIVITY 3: Critical Thinking Activities Concerning the Themes and the Main Ideas of the Story**

**The Purpose of the Activity:** Making students think critically about the themes and the main ideas of the story by putting Bloom's taxonomy analysis and synthesis levels into practice through the short story, encouraging them to make deductive reasoning, and practicing how to find assumptions by finding out student's assumptions for the ideal man.

**Analysis Level Activity:**

**1<sup>st</sup> Question:** What do you think can be the themes of the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What do you think can be the main ideas in the story? (Group Work for all the groups)

**Synthesis Level Activity:**

**1<sup>st</sup> pair's question:** Add another character to the story. What kind of character is it? Which part will it play? (Pair Work)

**2<sup>nd</sup> pair's question:** Write a different dialogue for Young Goodman Brown while he is leaving his wife Faith at the beginning of the story. (Pair Work)

**Question:** Design a cover for the story. (Group Work)

**Deduction Activity**

**Question:** Write at least three specific statements related to the message of the story regarding the real life. (Group Work)

**Assumption Activity**

**Question:** If Young Goodman Brown represents the ideal human being, what characters do you want him to have and how do you expect him to behave? (Group Work)

**Your assumption:**

**3<sup>rd</sup> WEEK**

**Name of the Work** : *The White Stocking* By David Herbert LAWRENCE.

**Time Required** : 150 minutes.

**Procedure** : The students are expected to search about the personal and literary life of the author of the short story, and to read the story before coming to class. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform the activities. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Knowledge”, “Comprehension”, “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to do the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

The course of the lesson and the activities are prepared in accordance with the literary elements of the short story. They are “Point of View”, “Plot”, “Setting”, “Characters”, “Symbols”, “Themes” and “Main Ideas”. The critical thinking activities are performed consecutively as the lecturer continues his/her lesson with the students.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Personal and Literary Life of the Author**

**The Purpose of the Activity:** Making students think critically about the personal and literary life of the author of the story by putting Bloom’s taxonomy’s knowledge and application levels into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question** : What do you know about the personal life of the author?

(Pair Work)

**2<sup>nd</sup> pair’s question** : What do you know about the literary background of the author?

(Pair Work)

#### **Application Level Activity:**

**Question:** Can you find any specific properties peculiar to the writer in the story when you take personal life of him into consideration? (Group Work for all the groups)

### **ACTIVITY 2: Critical Thinking Activities Concerning the Plot of the Story**

**The Purpose of the Activity:** Making students think critically about the plot of the story by putting Bloom’s taxonomy’s comprehension and application levels into practice through the short story.

#### **Comprehension Level Activity:**

**Question:** Make a list of the main events in each section of the short story.

(Group Work for all the groups)

### **ACTIVITY 3: Critical Thinking Activities Concerning the Point of view of the Story**

**The Purpose of the Activity:** Making students think critically about the point of view of the story by putting Bloom’s taxonomy’s knowledge and application levels into practice through the short story.

**Knowledge Level Activity:**

**Question:** What is the “Point of View” of the story? (Group Work for all the groups)

**Application Level Activity:**

**Question:** Find specific citation to support your idea about the “Point of View” of the story. (Group Work for all the groups)

**ACTIVITY 4: Critical Thinking Activities Concerning the Setting of the Story**

**The Purpose of the Activity:** Making students think critically about the setting of the story by putting Bloom’s taxonomy comprehension and analysis levels into practice through the short story.

**Knowledge Level Activity:**

**1<sup>st</sup> pair’s question:** Where does the story take place? Find specific proofs from the story. (Pair Work)

**2<sup>nd</sup> pair’s question:** When does the story take place? Find specific proofs from the story. (Pair Work)

**Analysis Level Activity:**

**Question:** What is the contribution of the setting to the story? Is this particular setting important, or could the story have happened at anywhere else? Answer this question by taking the features of the 19<sup>th</sup> century society into consideration. (Group Work for all the groups)

**ACTIVITY 5: Critical Thinking Activities Concerning the Characters of the Story**

**The Purpose of the Activity:** Making students think critically about the characters of the story by putting Bloom’s taxonomy comprehension and analysis levels into practice through the short story, and encourage critical thinking by associating literature with real life.

**Comprehension Level Activity:**

**Question:** Are the characters in the story round or flat? Explain your answer.

**Analysis Level Activities:**

**1<sup>st</sup> Question:** Analyze each character in terms of their presentation in the story?

(Group Work for all the groups)

**2<sup>nd</sup> Question:** Comment on the characters presented in the story by considering the dialogues occurred among them? (Group Work for all the groups)

### **Real Life Activity**

**Question:** Put the story in today's real life context and find suitable modern characters for Elsie Whiston, Ted Whiston, and Sam Adams.

(Group Work for all the groups)

## **4<sup>th</sup> WEEK**

**Name of the Work** : *The White Stocking* By David Herbert LAWRENCE.

**Time Required** : 150 minutes.

**Procedure** : The class had already studied the personal and literary background of the author, plot, setting and characters of the story. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform them. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for "Application", "Analysis", and "Synthesis" levels of Bloom's Taxonomy. They also contain "Real life", "Induction", "Deduction", and "Assumption" activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to carry out the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Symbols of the Story**

**The Purpose of the Activity:** Making students think critically about the symbols of the story by putting Bloom's taxonomy application level and encouraging critical thinking by making inductive reasoning.

#### **Application Level Activity:**

**Question:** What can be the symbols or imageries that have literal meaning but in fact suggest or represent other meanings as well in the story? (Group Work for all the groups)

**Induction Activity:**

**1<sup>st</sup> Pair's Question:** Read this excerpt taken from the story. *"...With a little flash of triumph, she lifted a pair of pearl earrings from the small box, and she went to the mirror. There, earnestly, she began to hook them through her ears, looking herself sideways in the glass. Curiously concentrated and intent she seemed as she fingered the lobes of her ears, her head bent on one side. Then the pearl earrings dangled under her rosy, small ears. She shook her head sharply, to see the swings of the drops. They went chill against her neck, in little sharp touches. Then she stood still to look at herself, bridling her head in the dignified fashion. Then she simpered at herself. Catching her own eye, she could not help winking at herself... She made a grimace and grin. But she was drawn to the mirror again, to look at her earrings."*

What do you derive from this scene? (Pair Work)

**2<sup>nd</sup> Pair's Question:** Read this excerpt taken from the story. *"...She wore her earrings all morning, in the house. She was self-conscious, and quite brilliantly winsome, when the baker came, wondering if he would notice. All the tradesmen left her door with a glow in them, feeling elated, and unconsciously favoring the delightful little creature, though there had been nothing to notice in her behavior. She was stimulated all the day. She did not think about her husband. He was the permanent basis from which she took these giddy little flights into nowhere. At night, like chickens and curses, she would come home to him, to roost."*

What do you derive from this scene? (Pair Work)

**ACTIVITY 2: Critical Thinking Activities Concerning the Themes and Main Ideas of the Story**

**The Purpose of the Activity:** Making students think critically about the themes and the main idea of the story by putting Bloom's taxonomy analysis and synthesis levels into practice, encouraging critical thinking by making deductive and inductive reasoning, and practicing how to find assumptions in the story.

**Analysis Level Activity:**

**1<sup>st</sup> Question:** What do you think can be the themes of the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What do you think can be the main ideas of the story? (Group Work for all the groups)

**Synthesis Level Activity:**

**1<sup>st</sup> pair's question:** Suppose that you are Elsie Whiston, and you received these Valentine presents from Sam Adams. How would you behave? (Pair Work)

**2<sup>nd</sup> pair's question:** Suppose that you are Ted Whiston, and your wife, Elsie, received these Valentine presents from Sam Adams. How would you behave? (Pair Work)

**Deduction Activity**

**Question:** Write at least three specific statements related to the message of the story regarding the real life. (Group Work)

**Induction Activity**

**Question:** What apprehensions do you derive from the story about the 19<sup>th</sup> century social life of England? (Group Work)

**Assumption Activity**

**Question:** Read the statements taken from the story and come up with an assumption from the given statement. (Group Work)

**1<sup>st</sup> statement:** *"They've not forgot you", said the postman impudently.*

**Your assumption:**

**2<sup>nd</sup> statement:** *Whiston had made the fire burn, so he came to look for her. When she heard him, she started round looking quickly, guiltily.*

**Your assumption:**

**3<sup>rd</sup> statement:** *"I'm a lucky man!" Sam said, scribbling his initials. "I was born with an amourette in my mouth."*

**Your assumption:**

**4<sup>th</sup> statement:** *She expected his lips on her bare shoulder, and waited. Yet they were not alone, they were not alone. It was cruel.*

**Your assumption:**

**5<sup>th</sup> statement:** *She had not the faintest intention of having anything to do with Sam Adams, but once a little brooch was in her possession, it was hers, and she did not trouble her head for a moment how she had come by it.*



**Your assumption:**

## **5<sup>th</sup> WEEK**

**Name of the Work** : *Shooting an Elephant* By George ORWELL.

**Time Required** : 150 minutes.

**Procedure** : The students are expected to search about the personal and literary life of the author of the short story, and to read the story before coming to class. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform them. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Knowledge”, “Comprehension”, “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, “Credibility” and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to carry out the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

The course of the lesson and the activities are prepared accordance with the literary elements of the short story. They are “Point of View”, “Plot”, “Setting”, “Characters”, “Symbols”, “Themes” and “Main Ideas”. The critical thinking activities are performed consecutively by the students as the lecturer continuous his/her lesson.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Personal and Literary Life of the Author**

**The Purpose of the Activity:** Making students think critically about the personal and literary life of the author of the story by putting Bloom’s taxonomy’s knowledge level into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question** : What do you know about the personal background of the author?

(Pair Work)

**2<sup>nd</sup> pair’s question** : What do you know about the literary background of the author?

(Pair Work)

## **ACTIVITY 2: Critical Thinking Activities Concerning the Plot of the Story**

**The Purpose of the Activity:** Making students think critically about the plot of the story by putting Bloom's taxonomy's comprehension, application and analysis levels into practice through the short story.

### **Comprehension Level Activity:**

**Question:** Summarize the story in your own words. (Group Work for all the groups)

### **Application Level Activity:**

**Question:** How can you relate the story with the biography of the author?

(Group Work for all the groups)

### **Analysis Level Activity:**

**Question:** What is the climax of the story? (Group Work for all the groups)

## **ACTIVITY 3: Critical Thinking Activities Concerning the Point of view of the Story**

**The Purpose of the Activity:** Making students think critically about the point of view of the story by putting Bloom's taxonomy's knowledge and application levels into practice through the short story.

### **Knowledge Level Activity:**

**Question:** Who is telling us the story?(Group Work for all the groups)

### **Application Level Activity:**

**Question:** Find specific citations to support your idea about the "Point of View" of the story. (Group Work for all the groups)

## **ACTIVITY 4: Critical Thinking Activities Concerning the Setting of the Story**

**The Purpose of the Activity:** Making students think critically about the setting of the story by putting Bloom's taxonomy comprehension level into practice through the short story.

### **Knowledge Level Activity:**

**1<sup>st</sup> pair's question:** Where does the story take place? Find specific proofs from the story.

(Pair Work)

**2<sup>nd</sup> pair's question:** When does the story take place? Find specific proofs from the story.  
(Pair Work)

### **ACTIVITY 5: Critical Thinking Activities Concerning the Characters of the Story**

**The Purpose of the Activity:** To make students think critically about the characters of the story by putting Bloom's taxonomy comprehension and analysis levels into practice through the short story, and to encourage critical thinking by making use of students' experiences and observation to be aware of the reliability of the sources before accepting the source's argument.

#### **Comprehension Level Activity:**

**Question:** Are the characters in the story round or flat? Explain your answer.

#### **Analysis Level Activities:**

**Question:** Analyze each character in term of their presentation in the story?

(Group Work for all the groups)

#### **Credibility Activity**

**Question:** If you had been the narrator of the story, to whom would you have consulted to gather reliable information in order to find out where the elephant was?

(Group Work for all the groups)

### **ACTIVITY 6: Critical Thinking Activities Concerning the Symbols of the Story**

**The Purpose of the Activity:** Making students think critically about the symbols of the story by putting Bloom's taxonomy application level and encouraging critical thinking by making inductive reasoning.

#### **Application Level Activity:**

**Question:** What can be the symbols or imageries that have literal meaning but in fact suggest or represent other meanings as well in the story? (Group Work for all the groups)

#### **Induction Activity:**

**1<sup>st</sup> Pair's Question:** Read this excerpt taken form the story. *"...For at that time I had already made up my mind that imperialism was an evil thing the sooner I chucked up my*

*job and got out of it the better. Theoretically and secretly of course I was all for the Burmese all against their oppressors, the British.”*

What do you derive from this scene? (Pair Work)

**2<sup>nd</sup> Pair’s Question:** Read this excerpt taken from the story. “...*And it was at this moment, as I stood there with the rifle in my hands, that I first grasped the hollowness, the futility of the white man’s dominion in the East.*”

What do you derive from this scene? (Pair Work)

### **ACTIVITY 7: Critical Thinking Activities Concerning the Themes and Main Ideas in the Story**

**The Purpose of the Activity:** Making students think critically about the themes and the main ideas in the story by putting Bloom’s taxonomy analysis and synthesis levels into practice, encouraging critical thinking by making deductive reasoning, and practicing how to find assumptions in the story.

#### **Analysis Level Activity:**

**1<sup>st</sup> Question:** What do you think can be the themes of the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What do you think can be the main ideas of the short story? (Group Work for all the groups)

#### **Synthesis Level Activity:**

**Question:** Change the setting from Burma to Europe and present time, and create a new story. Suppose that the elephant killed a European. How would the plot of the story be in that case? (Group Work)

#### **Deduction Activity**

**Question:** Come up with a general statement about imperialism after reading the story. (Group Work)

#### **Assumption Activity**

**Question:** Read the statements taken from the story and come up with an assumption from the given statement. (Group Work)

**1<sup>st</sup> statement:** *No one had the guts to raise a riot, but if a European woman went through the bazaars alone somebody would probably spit betel juice over her dress.*

**Your assumption:**

**2<sup>nd</sup> statement:** *When a nimble Burman tripped me up on the football field and the referee (another Burman) looked the other way, the crowd yelled with hideous laughter. This happened more than once.*

**Your assumption:**

**3<sup>rd</sup> statement:** *The owner was furious, but he was only an Indian and could do nothing.*

**Your assumption:**

**4<sup>th</sup> statement:** *Among the Europeans opinion was divided. The older men said I was right, the younger men said it was a damn shame to shoot an elephant for killing a coolie, because an elephant was worth more than any damn the coolie had been killed.*

**Your assumption:**

## **6<sup>th</sup> WEEK**

**Name of the Work** : *Hills Like White Elephants* By Ernest HEMINGWAY.

**Time Required** : 150 minutes.

**Procedure** : The students are expected to search about the personal and literary life of the author of the short story, and to read the story before coming to class. Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform them. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Knowledge”, “Comprehension”, “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, “Credibility” and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to carry out the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

The course of the lesson and the activities are prepared accordance with the literary elements of the short story. They are “Point of View”, “Plot”, “Setting”, “Characters”,

“Symbols”, “Themes” and “Main Ideas”. The critical thinking activities are performed consecutively by the students as the lecturer continues his/her lesson.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Personal and Literary Life of the Author**

**The Purpose of the Activity:** Making students think critically about the personal and literary life of the author of the story by putting Bloom’s taxonomy’s knowledge level into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question** : What do you know about the personal background of the author?

(Pair Work)

**2<sup>nd</sup> pair’s question** : What do you know about the literary background of the author?

(Pair Work)

### **ACTIVITY 2: Critical Thinking Activities Concerning the Plot of the Story**

**The Purpose of the Activity:** Making students think critically about the plot of the story by putting Bloom’s taxonomy’s comprehension and analysis levels into practice through the short story.

#### **Comprehension Level Activity:**

**Question:** Make a short summary of the story in your own words. (Group Work for all the groups)

#### **Analysis Level Activity:**

**Question:** Which sentence can be the dénouement of the story? (Group Work for all the groups)

### **ACTIVITY 3: Critical Thinking Activities Concerning the Point of view of the Story**

**The Purpose of the Activity:** Making students think critically about the point of view of the story by putting Bloom’s taxonomy’s knowledge and application levels into practice through the short story.

#### **Knowledge Level Activity:**

**Question:** What is the “Point of View” of the story? (Group Work for all the groups)

#### **Application Level Activity:**

**Question:** Find specific citations to support your idea about the “Point of View” of the story. (Group Work for all the groups)

#### **ACTIVITY 4: Critical Thinking Activities Concerning the Setting of the Story**

**The Purpose of the Activity:** Making students think critically about the setting of the story by putting Bloom’s taxonomy comprehension and analysis levels into practice through the short story.

##### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question:** Where does the story take place? Find specific proofs from the story. (Pair Work)

**2<sup>nd</sup> pair’s question:** When does the story take place? Find specific proofs from the story. (Pair Work)

##### **Analysis Level Activity:**

**Question:** What contribution is made to the story by its setting? Is this particular setting important, or could the story have happened at anywhere else? (Group Work for all the groups)

#### **ACTIVITY 5: Critical Thinking Activities Concerning the Characters of the Story**

**The Purpose of the Activity:** To make students think critically about the characters of the story by putting Bloom’s taxonomy comprehension, analysis and evaluation levels into practice through the short story.

##### **Comprehension Level Activity:**

**Question:** Are the characters in the story round or flat? Explain your answer.

##### **Analysis Level Activity:**

**Question:** Compare and contrast the protagonist and the antagonist of the story? (Group Work for all the groups)

##### **Evaluation Level Activity:**

**Question:** Do you think that the girl will accept to go through the operation? Find evidences from the story to support your idea. (Group Work for all the groups)

#### **ACTIVITY 6: Critical Thinking Activities Concerning the Symbols of the Story**

**The Purpose of the Activity:** Making students think critically about the symbols of the story by putting Bloom's taxonomy application level and by encouraging by making inductive reasoning.

**Application Level Activity:**

**Question:** What can be the symbols or imageries that have literal meaning but in fact suggest or represent other meanings as well in the story? (Group Work for all the groups)

**Induction Activity:**

**1<sup>st</sup> Pair's Question:** Read this excerpt taken from the story. *It's really an awfully simple operation, Jig,' the man said. 'It's not really an operation at all.'*

What do you derive from this scene? (Pair Work)

**2<sup>nd</sup> Pair's Question:** Read this excerpt taken from the story. *"The girl was looking off at the line of hills. They were white in the sun and the country was brown and dry.*

*'They look like white elephants,' she said.*

*'I've never seen one,' the man drank his beer.*

*'No, you wouldn't have.'"*

What do you derive from this scene? (Pair Work)

**ACTIVITY 7: Critical Thinking Activities Concerning the Themes and the Main Ideas of the Story**

**The Purpose of the Activity:** Making students think critically about the themes and the main ideas of the story by putting Bloom's taxonomy analysis level into practice.

**Analysis Level Activity:**

**1<sup>st</sup> Question:** What do you think can be the themes of the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What do you think can be the main ideas of the short story? (Group Work for all the groups)

**7<sup>th</sup> WEEK**

**Name of the Work** : *A Day Saved By* Graham GREENE.

**Time Required** : 150 minutes.

**Procedure** : Students are expected to search about the personal and literary life of the author of the short story, and to read the story before coming to the class.



Firstly, the class is divided into groups of four. For the group activities, four of them work together and for the pair activities each two of the group members become pairs and perform them. Two different activity papers are delivered to the groups. Each pair is given a different type of activity paper in the groups.

The papers contain different activities for “Knowledge”, “Comprehension”, “Application”, “Analysis”, and “Synthesis” levels of Bloom’s Taxonomy. They also contain “Real life”, “Induction”, “Deduction”, “Credibility” and “Assumption” activities, which are designed by taking Cornell Critical Thinking Test into consideration. After the distribution of the papers, the instructor wants students to carry out the activities. At least one student from the groups joins each activity, and pairs and groups shared their answers with the class and discussion takes place.

The course of the lesson and the activities are prepared accordance with the literary elements of the short story. They are “Point of View”, “Plot”, “Setting”, “Characters”, “Symbols” and “Themes”. The critical thinking activities are performed consecutively by the students as the lecturer continuous his/her lesson.

### **ACTIVITY 1: Critical Thinking Activities Concerning the Personal and Literary Life of the Author**

**The Purpose of the Activity:** Making students think critically about the personal and literary life of the author of the story by putting Bloom’s taxonomy’s knowledge level into practice through the short story.

#### **Knowledge Level Activity:**

**1<sup>st</sup> pair’s question** : What do you know about the personal background of the author?

(Pair Work)

**2<sup>nd</sup> pair’s question** : What do you know about the literary background of the author?

(Pair Work)

### **ACTIVITY 2: Critical Thinking Activities Concerning the Plot of the Story**

**The Purpose of the Activity:** Making students think critically about the plot of the story by putting Bloom’s taxonomy’s application and analysis levels into practice through the short story.

#### **Application Level Activity:**

**Question:** How can you relate the story with the biography of the author?

(Group Work for all the groups)

**Analysis Level Activity:**

**Question:** What is the climax of the story? (Group Work for all the groups)

**ACTIVITY 3: Critical Thinking Activities Concerning the Point of view of the Story**

**The Purpose of the Activity:** Making students think critically about the point of view of the story by putting Bloom's taxonomy's knowledge and application levels into practice through the short story.

**Knowledge Level Activity:**

**Question:** What is the "Point of View" of the story? (Group Work for all the groups)

**Application Level Activity:**

**Question:** Find specific citation to support your idea about the "Point of View" of the story. (Group Work for all the groups)

**ACTIVITY 4: Critical Thinking Activities Concerning the Setting of the Story**

**The Purpose of the Activity:** Making students think critically about the setting of the story by putting Bloom's taxonomy knowledge and evaluation levels into practice through the short story.

**Knowledge Level Activity:**

**1<sup>st</sup> pair's question:** Where does the story take place? Find specific proofs from the story. (Pair Work)

**2<sup>nd</sup> pair's question:** When does the story take place? Find specific proofs from the story. (Pair Work)

**Evaluation Level Activity:**

**Question:** Do you completely believe that the events really happened in the story? (Group Work for all the groups)

**ACTIVITY 5: Critical Thinking Activities Concerning the Characters of the Story**

**The Purpose of the Activity:** To make students think critically about the characters of the story by putting Bloom's taxonomy analysis and evaluation levels into practice through the story.

**Analysis Level Activity:**

**Question:** Compare and contrast the protagonist and the antagonist of the story?

(Group Work for all the groups)

**Evaluation Level Activity**

**Question:** Do you think that there is a similarity between the characters in the story and the author of the story? (Group Work for all the groups)

**ACTIVITY 6: Critical Thinking Activities Concerning the Symbols of the Story**

**The Purpose of the Activity:** Making students think critically about the symbols of the story by putting Bloom's taxonomy application level, and encouraging critical thinking by making inductive reasoning.

**Application Level Activity:**

**Question:** What can be the symbols or imageries that have literal meaning but in fact suggest or represent other meanings as well in the story? (Group Work for all the groups)

**Induction Activity:**

**1<sup>st</sup> Pair's Question:** Read this excerpt taken from the story. *"I ask you, what does a day saved matter to him or to you? A day saved from what? For what? Instead of spending the day travelling, you will see your friend a day earlier, but you cannot stay indefinitely, you will travel home twenty-four hours sooner, that is all. But you will fly home and again save a day? Saving it from what, for what? You will begin work a day earlier, but you cannot work on indefinitely. It only means that you will cease work a day earlier. And then, what? You cannot die a day earlier. So you will realize perhaps how rash it was of you to save a day, when you discover how you cannot escape those twenty-four hours you have so carefully preserved; you may push them forward and push them forward, but some time they must be spent..."*

What do you derive from this scene? (Pair Work)

**2<sup>nd</sup> Pair's Question:** Read this excerpt taken from the story. *"It was as if they gave a deliberate display of their unity and companionship. My friend — I call him my friend, but he was really no more than an acquaintance and was my friend only for so long as we both were drunk — sat in the middle of them all, and I could tell from the way his lips were moving that he was telling them many things which he had never told me."*

What do you derive from this scene? (Pair Work)

### **ACTIVITY 7: Critical Thinking Activities Concerning the Themes and the Main Ideas of the Story**

**The Purpose of the Activity:** Making students think critically about the themes and the main idea of the story by putting Bloom's taxonomy analysis level into practice, and encouraging critical thinking by making deductive reasoning, and practicing how to find assumptions in the story.

#### **Analysis Level Activity:**

**1<sup>st</sup> Question:** What do you think can be the themes of the story? (Group Work for all the groups)

**2<sup>nd</sup> Question:** What do you think can be the main idea of the short story? (Group Work for all the groups)

#### **Deduction Activity**

**Question:** Write at least three specific statements related to the messages in the story regarding the real life. (Group Work)

#### **Assumption Activity**

**Question:** Read the statements taken from the story and come up with an assumption from the given statement. (Group Work)

**1<sup>st</sup> statement:** *"The friend said to him, 'When do you leave?' He said, 'At two from Dover.' You may be sure I felt my pocket to make sure the ticket was there."*

**Your assumption:**

**2<sup>nd</sup> statement:** *"I had planned everything. I was going to talk to him."*

**Your assumption:**

**3<sup>rd</sup> statement:** *"I told him that I was Robinson; he meant to give me a card, but while he was looking for one he drank another glass of wine and forgot about it."*

**Your assumption:**

**4<sup>th</sup> statement:** *"You can smell me, you can touch me, you can hear me, I am not a shadow: I am Fotheringay, Wales, Canby, I am Robinson."*

## **APPENDIX 5**

### **THE LIST OF THE LITERARY WORKS USED IN THE IMPLEMENTATION IN “LITERATURE AND LANGUAGE TEACHING I” COURSE**

1.     *Young Goodman Brown* by Nathaniel HAWTHORNE.
2.     *The White Stocking* by David Herbert LAWRENCE.
3.     *Shooting an Elephant* by George ORWELL.
4.     *Hills Like White Elephants* by Ernest HEMINGWAY.
5.     *A Day Saved* by Graham GREENE.